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Course Descriptions

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361 Social Sciences 1 Building
(831) 459-3320
<http://anthro.ucsc.edu/>

[Faculty | Program Statements](#)

Lower-Division Courses

1. Introduction to Biological Anthropology. F

Study of evolution illustrated by Pleistocene hominid fossils and variation in living human groups. Behavior and evolution of primates examined as they contribute to the understanding of human evolution. Required for all anthropology majors. (Formerly Introduction to Human Evolution.) (General Education Code(s): SI, IN.) The Staff

2. Introduction to Cultural Anthropology. S

A number of different peoples are studied and a variety of approaches to the nature of the culture and to the study of specific cultures presented. Required for all anthropology majors. (General Education Code(s): CC, IS.) M. Wolf-Meyer

3. Introduction to Archaeology. W

Overview of ways of learning about the human past beyond the scope of written history. Reviews development of archaeology, fundamental methods and theories, and archaeology's contribution to understanding human origins, the emergence of farming, and the origins of complex societies. (General Education Code(s): SI, IS.) J. Monroe

42. Student-Directed Seminar.

Seminars taught by upper-division students under faculty supervision. (See course 192.)

The Staff

81A. Mexican Folklorico Dance (2 credits). F

Provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklorico dance. Students taught choreographed dances from various regions of Mexico and also learn dance techniques (tecnica) and stage make-up application. Additional workshops and lectures offered to supplement class. Open to all students; no previous experience required. (Also offered as Latin American&Latino Studies 81A. Students cannot receive credit for both courses.) May be repeated for credit. (General Education Code(s): PR-C, A.) O. Najera Ramirez

81B. Mexican Folklorico Dance (2 credits). W

Second course in series. Provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklorico dance. (Also offered as Latin American&Latino Studies 81B. Students cannot receive credit for both courses.) May be repeated for credit. (General Education Code(s): PR-C, A.) O. Najera Ramirez

81C. Mexican Folklorico Dance (2 credits). S

Third course in series. Provides instruction in the aesthetic, cultural, and historical

- [Community Studies](#)
- [Computer Engineering](#)
- [Cowell College](#)
- [Critical Race and Ethnic Studies](#)
- [Crown College](#)
- [Digital Arts and New Media](#)
- [Earth and Planetary Sciences](#)
- [Ecology and Evolutionary Biology](#)
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- [Electrical Engineering](#)
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- [Kresge College](#)
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- [Latin American and Latino Studies](#)
- [Legal Studies](#)
- [Linguistics](#)
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- [Molecular, Cell, and Developmental Biology](#)
- [Music](#)
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- [Social Documentation](#)
- [Sociology](#)
- [Spanish](#)
- [Spanish for Heritage Speakers](#)
- [Stevenson College](#)
- [Technology and Information](#)

dimensions of Mexican folklorico dance. (Also offered as Latin American&Latino Studies 81C. Students cannot receive credit for both courses.) Prerequisite(s): course 81A or 81B. May be repeated for credit. (General Education Code(s): PR-C, A.) O. Najera Ramirez

81J. Introduction to Visual Culture Lab (2 credits). *

Optional digital photography lab. Students learn to compose shots, download photos, resize them, and put them into a meaningful sequence. Concurrent enrollment in Anthropology 80J required. Enrollment limited to 36. S. Errington

93. Field Study. F,W,S

Supervised research or organized projects on anthropological topics for lower-division students. Conducted either on or off campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100. History and Theory of Physical Anthropology. F

Provides an historical overview from the 18th century to the present of race, ape-human relationships, and human nature. Emergence of an evolutionary framework and of fossil, genetic, and primate information becomes the basis for reformulating ideas about human biology within anthropology. Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. The Staff

101. Human Evolution. F

Study of human evolution covering the last five million years. Examines the fossil evidence and emphasizes the reconstruction of behavior from the paleontological and anatomical evidence. Prerequisite(s): course 1. Offered in alternate academic years. The Staff

102A. Human Skeletal Biology. F,S

Presents basic human osteology allowing students to identify skeletal material by element. Emphasizes the dynamic nature of bone by integrating anatomy with a discussion of bone physiology within the context of the human life cycle. Prerequisite(s): course 1. Enrollment limited to 16. The Staff

103. Forensic Anthropology. *

Covers the basic analysis of human skeletal remains for the medicolegal profession. Assessment of age, sex, ancestry, and general physical characteristics, trauma, and disease are discussed. Addresses the legal responsibilities of the anthropologist. Online lectures with in-class discussion sections, quizzes, and exams. Prerequisite(s): course 102A. Enrollment restricted to juniors and seniors. A. Galloway

103B. Forensic Anthropology and Bioarchaeology. S

Introduces the analysis of human remains from forensic or archaeological contexts. Covers the whole range of morphological, morphometric, histological, genetic, and biochemical methods applied in bone-based anthropological analyses. Prerequisite(s): course 102A. Enrollment by permission of instructor. Enrollment limited to 25. The Staff

104. Human Variation and Adaptation. S

Explores the major environmental factors (temperature, altitude, diet, and disease); how they are perceived by the human body; the physiological, micro- and macroanatomical responses; and how behavior and culture can modify the impact of these stresses. Course 1 is highly recommended as preparation. (Formerly Human Adaptability.) L. Fehren-Schmitz

105. Human Paleopathology. *

Examines paleopathology beginning with ancient hominid populations and proceeding to modern populations. Uses both the skeletal evidence and historical documentation when available. Considers evolutionary, cultural, and biological factors. Topics include: osteological diagnosis of infectious disease; trauma; nutritional deficiencies; dental disease; and developmental defects. Prerequisite(s): course 1; course 102A recommended. The Staff

106. Primate Behavior and Ecology. *

The nature of primate social systems and social bonds is examined in the light of

Management UCDC Program Writing Program Theater Arts Yiddish	<p>evolutionary and ecological concepts. Students cannot receive credit for this course and course 206. Prerequisite(s): course 1. The Staff</p> <p>107. Methods and Research in Molecular Anthropology. W Introduces the molecular analyses of anthropological questions and explores the intersection of genetics and anthropology. Covers the basic principles of molecular and population genetics as they relate to the study of humans. Prerequisite(s): courses 1 and 104. Course 102A is recommended. Enrollment by permission of instructor. Enrollment limited to 15. L. Fehren-Schmitz</p> <p>109. Evolution of Sex. * Provides a physical anthropology understanding of the evolution of sex. Focuses on genetics and the alterations in allele associations that take place as a result of sexual processes. Prerequisite(s): course 1. The Staff</p> <p>110A. Public Life and Contemporary Issues. * How can cultural anthropology help us to understand current events unfolding locally, nationally, and globally? Students learn how to "read" newspapers differently—that is, through the lens of cultural analysis. The world of everyday politics and society, as it unfolds in debates happening right now, forms the topical substance of the course. (Formerly course 4.) (General Education Code(s): IM.) A. Mathews</p> <p>110B. From Indiana Jones to Stonehenge: Archaeology as Popular Culture. * Addresses the "meaning" of archaeology as generated in television, movies, literature, newspapers, and even National Geographic. Students engage with several case-studies illustrating how archaeology is portrayed in popular culture. (General Education Code(s): IM.) C. Blackmore</p> <p>110G. Barrio Popular Culture. S Introduces students to a broad sampling of verbal and nonverbal forms of Mexican folklore. Concentrates on experiencing these forms through texts, film, and if possible, performances. Attention to how these forms have been used by scholars to comment on Mexican culture is an underlying theme. Knowledge of Spanish is useful but not required. (Formerly course 80G.) (General Education Code(s): CC, E.) O. Najera Ramirez</p> <p>110H. Acoustic Culture. * Explores relationships between culture and the acoustic worlds, including environmental, verbal, and musical, which humans inhabit. How can paying attention to cultures of listening and sound-making help us think about cultural life and experience in new ways? (Formerly course 80H.) (General Education Code(s): CC.) D. Brenneis</p> <p>110K. Culture through Food. W Examines anthropology of food and politics of eating. Cultural and social uses of food in rituals of solidarity or fasting, identities and meanings of food for individuals, and consumption in the global context are key components of study. (Formerly course 80K.) (General Education Code(s): CC.) N. Chen</p> <p>110L. Anthropology of Love and Intimacy. F Seeks to understand the various political and personal meanings of intimacy, in particular the intimacy of what is commonly thought of as "love." (General Education Code(s): PE-H.) The Staff</p> <p>110O. Postcolonial Britain and France. W Examines politics and culture of postcolonial Britain and France. Topics include: immigration from South Asia and North Africa; racism and anti-racism; minority difference and citizenship practices, with special attention to Muslim minorities. Readings include social theory, ethnographies, novels, and films. (Formerly course 130O.) (General Education Code(s): CC, E.) M. Fernando</p> <p>110P. India and Indian Diaspora through Film. F Explores several themes of relevance in contemporary India and Indian diaspora, concentrating on anthropological research and various documentary and popular Bollywood films. Through films and ethnographies, students analyze the nature of anthropological contributions to the study of Indian societies. (Formerly course 80P.) (General Education Code(s): CC, E.) A. Pandey</p>
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110R. Discourses in American Religions and Their Role in Public Life. *

Introduces dominant discourses about major American religions and their role in public life, with particular attention to intersecting differences, such as race, sex/gender, and disability, and to shifting religious/political boundaries. Visual and textual media, political commentary, and popular ethnographies are analyzed. (General Education Code(s): IM.) D. Rutherford, S. Harding

110T. Motherhood in American Culture. F

Examines the "culture wars" around motherhood in the United States with a focus on the political mobilization of normative ideas about the correct way to mother, from the moment of conception on. Special attention is given to the historical construction of deviant motherhood among marginalized groups. (Formerly course 80T.) (General Education Code(s): ER.) M. Moodie

110V. Anthropology of Violence and Conflict. F

Examines human patterns of violence in times of explicit warfare as well as during alleged peace, ultimately questioning the historical distinction between one and the other. (General Education Code(s): PE-H.) C. Schuetze

111. Human Ecology. S

Reviews the environmental, physiological, behavioral, and cultural ways that humans interact with their physical surroundings. The effects of human culture on the environment and of the environment on the shape of human culture is emphasized. L. Fehren-Schmitz

112. Life Cycles. *

Examines the human life cycle using an evolutionary framework. Examines key aspects of the human life stages using findings and concepts from developmental biology, physiology, nutrition, evolutionary ecology, and life-history theory. Prerequisite(s): course 1. The Staff

113. Tutoring Writing in Anthropology (2 credits). F

Trains students to tutor writing in undergraduate anthropology courses; supports and guides them during the quarter they are tutoring. Enrollment by interview only.

Prerequisite(s): satisfaction of the Composition requirement. J. Todd

119. Indigenous Visual Culture. *

Examines the relationship between visual cultures and indigenous peoples. First, class discusses what is visual anthropology. Second, class examines the relationship between museums and indigenous peoples. Third, class examines ethnographic photography and indigenous uses of photography. Fourth, class examines the uses of ethnographic film, and then its relationship to indigenous peoples. Finally, class examines indigenous uses of film. R. Ramirez

120. Culture in Film. W

Introduces current and historical issues in visual anthropology, using film as a medium with which to represent culture. Raises questions about visual representation and advocacy in the context of global inequalities. Prerequisite(s): course 2 or 80J or Film 20A or 20B, or History of Art and Visual Culture 10D, 10E, 10F or 10G. (General Education Code(s): IM.) S. Errington

120L. Culture in Film Laboratory (2 credits). *

This lab in video production is to train students in Culture in Film. The video lab, through lectures, demonstrations, hands-on instruction, and review of students' work will enable students enrolled in Culture in Film to learn the fundamentals of film/video pre-production, production, and post-production skills. Portfolio review prior to enrollment and concurrent enrollment in course 120 required. Enrollment limited to 15. The Staff

121. Socialism. *

Ethnography-based course that examines the social worlds of socialism, with particular focus on state socialism. Topics include: social problems that inspired socialist movements; implementation and experience of socialism in daily life; and significance of class, race, nation, science, technology, rationality. M. Caldwell

122. Postsocialism. *

Examines the demise of socialist systems. Addresses the political, social, cultural, and economic experiences of everyday life that led to that demise, what new social inequalities have arisen since, and how citizens use the socialist past to critique the present. L. Rofel

123. Psychological Anthropology. *

An introduction to some of the central theoretical issues in psychological anthropology.

Psychoanalytic, cognitive, and relativist perspectives on the link between person and society are discussed and compared. Prerequisite(s): course 2. D. Linger

124. Anthropology of Religion. *

Study of the phenomenon of religion as manifested in ethnographic literature, with special attention to traditional and recent modes of analysis of religious behavior. Special topics include myth, religious healing, witchcraft and sorcery, ritual, and millenarian movements.

The Staff

126. Sexuality and Society in Cross-Cultural Perspective. *

The meaning and social processes associated with sexuality in selected societies.

Examination of variations in sexual expressions and control of sexuality, and in economic and political organizations, highlights the interrelationship of sex and society.

Prerequisite(s): course 2. The Staff

127. Ethnographies of Capitalism. S

Challenges approaches to capitalism that treat it as socioeconomic relations separable from "culture." Readings include ethnographies demonstrating the inextricability of cultural meanings from capitalist practices. Topics include capitalism's relationship to colonialism, nationalism, socialism, gender, and the commodification of aesthetics. L. Rofel

128. Contemporary American Evangelical Cultures. S

Study of contemporary, American, born-again Protestant discourse using ethnographic materials and interpretive theories. Topics include biblical literalism, Christian conversion and self-fabulation, charismatic gifts, preaching, sacrificial giving, prosperity theology, apocalypticism, creationism, pro-family and pro-life rhetoric, and televangelism. (Formerly Born-Again Religion and Culture.) S. Harding

129. Other Globalizations: Cultures and Histories of Interconnection. *

The history of social and cultural interconnections at a global scale. Anthropological approaches to the study of cultural encounter are used to investigate topics such as trade, religion, and citizenship and to evaluate shifting concepts of civilization and barbarism.

Prerequisite(s): course 2. A. Tsing

130. Ethnographic Area Studies.

130A. Peoples and Cultures of Africa. *

Survey of sub-Saharan societies. Analysis of principles of social organization and factors of cultural unity of selected western, eastern, central, and southern African peoples.

(General Education Code(s): CC, E.) The Staff

130B. Brazil. *

Examines Brazilian culture and its link to interpersonal relationships, religion, politics, and psychological experience. Prerequisite(s): course 2. (General Education Code(s): CC, E.) The Staff

130C. Politics and Culture in China. *

Joins substantive information "about" Chinese society and culture with debates in social theory and rethinks conventional wisdom about colonialism and modernity. Topics include representations of "Chineseness," class revolution, Chinese diaspora, popular culture, family and kinship, nationalism, history/memory, race and gender. (General Education Code(s): CC, E.) L. Rofel

130E. Culture and Politics of Island Southeast Asia. F

Southeast Asia includes a variety of societies exhibiting many ecological adaptations, religions, marriage systems, and experiences with colonial powers. Case studies of particular societies, chosen to reveal variety, are examined comparatively. Emphasis on religion and social organization. Prerequisite(s): course 2. (General Education Code(s): CC, E.) S. Errington

130F. African Diasporas in the Americas. *

Focuses on African diasporas of the Caribbean, United States, and Latin America. Themes include: theorizing diaspora, historical formations, slavery, analytical approaches to cultures of the African diaspora, religion, music, comparative identity formation and

racism, gender dynamics, social movements, and transnationalism. (General Education Code(s): CC, E.) M. Anderson

130G. Asian Americans in Ethnography and Film. *

Critically examines category of Asian Americans. Addresses historic representations of Asians and Asian Americans in ethnographic research and film. Explores contemporary issues of race, culture, and politics through ethnographic practice and cultural production. (General Education Code(s): E.) N. Chen

130H. Ethnography of Russia and Eastern Europe. *

Introduces students to the ethnography of Eurasia, with special attention to the lived experience and legacy of state socialism in this region. Topics include new ideas of personhood, changing economic practices, public health, and international development. (General Education Code(s): CC, E.) M. Caldwell

130I. Cultures of India. W

An examination of anthropological studies of tribal, rural, and urban cultures of India and a look at changes taking place in India. Prerequisite(s): course 2. Offered in alternate academic years. (General Education Code(s): CC, E.) The Staff

130J. Politics and Statemaking in Latin America. *

Introduction to ethnohistory and political anthropology of one or more Latin American countries: Typically Mexico and one other country. Students explore how contested concepts such as indigeneity, nation or state come to gain credibility and are deployed in contemporary politics. (General Education Code(s): CC.) A. Mathews

130L. Ethnographies of Latin America. S

A broad introduction to issues and areas of cultural production and transformation in the Caribbean, Mexico, and Central and South America. Colonial, neocolonial, class, ethnic, gender, religious, ecological, and political relations intersect as represented in ethnographies and film. Prerequisite(s): course 2. (General Education Code(s): CC, E.) G. Delgado-P

130M. Inside Mexico. *

Examines various communities within the Republic of Mexico as represented in ethnographic texts and other forms of cultural production, particularly music and dance. Emphasis on the interplay between the concept of regionalism and national identity. Previous course work in Mexican culture and/or history strongly recommended. Some reading in Spanish is required. (General Education Code(s): CC, E.) O. Najera Ramirez

130N. Native Peoples of North America. W

A survey of Native American cultures and experience during the past century, with emphasis on Pueblo cultures of the American Southwest. (General Education Code(s): ER, E.) T. Pandey

130T. Religion and Politics in the Muslim World. *

Analyzes post-colonial forms of Islam, with particular attention to Muslim societies and cultures in the Middle East, North Africa, and Europe. Emphasizes the relationship between power, knowledge, and representation in anthropological approaches to Islam and Muslims. (Formerly Anthropological Approaches to Islam.) (General Education Code(s): CC, E.) M. Fernando

130U. Central America. F

Draws on political, economic, and anthropological perspectives to analyze the key role of transnationalism and neoliberalism in contemporary Central America. Key topics include: the aftermath of revolutions; labor and gender; indigenous movements and multiculturalism; and transnational migration and governance. M. Anderson

130V. Ethnography of Russia. *

Examines daily life in Russia and affiliated formerly Soviet Republics through historical and cultural comparison. Topics include: socialist and postsocialist daily life; 20th- and 21st-century Russian empire building; cultural politics; economic systems; state-citizen relations; citizenship regimes; labor and leisure; and religion. M. Caldwell

130W. Ethnography of Eastern Europe. *

Examines daily life in Eastern Europe, especially how residents in this region have

navigated the transition from state socialism to accession to the European Union. Topics include: the legacies of state socialism; cultural politics; new economies; consumption; the European Union; new forms of governance; and political activism. M. Caldwell

130X. Special Topics in Ethnography. F,W,S

This course on special topics in ethnography will be taught on a rotating basis by various faculty members. Precise focus of each year's courses will vary according to the instructor and will be announced by the department. May be repeated for credit. The Staff

131. Women in Cross-Cultural Perspective. W

Examines the diversity of women's as well as men's roles, experiences, and self-conceptions in a number of societies to explore how women and men shape, and are shaped by, particular forms of social life. Prerequisite(s): course 2. R. Ramirez

131H. Russian-Language Readings Course: Readings in Anthropology of Russia (2 credits). *

Contemporary topics and readings in anthropology of Russia and the former Soviet Union. All readings, films, and other materials are in Russian. Discussions are in English. Accompanies course 130H, Ethnography of Russia and Eastern Europe. Prerequisite(s): course 130H and proof of Russian proficiency in reading and writing. Enrollment by permission of instructor. Enrollment limited to 10. M. Caldwell

132. Photography and Anthropology. *

Moving historically from woodcuts and paintings to the World Wide Web, but emphasizing the invention and development of documentary photography, this course explores the world of images depicting society and culture. Major theoretical approaches to "reading" pictures will be emphasized, and students must produce a final project incorporating visual images. Prerequisite(s): course 2 or History of Art and Visual Culture 10D or 10E or 10F or 10G or Art 30. (General Education Code(s): IM.) S. Errington

132L. Photography and Anthropology Laboratory (2 credits). *

This still photography lab trains students in the basic operations and techniques of the camera and the creation of a set of still photographs to use for social documentation. It includes lectures, demonstrations, hands-on instruction, and a continuous review of the students' work in progress. It does not include darkroom work. Concurrent enrollment in course 132 required. Enrollment restricted to anthropology majors. Enrollment limited to 30. S. Errington

133. Narratives of the Popular. *

Addresses the increasing importance of popular culture as the terrain upon which to address issues of culture and power. Emphasizes an ethnographic approach to popular culture as sociocultural phenomena. Students learn about a variety of activities including television and film viewing, music, fashion, photography, postcards, comic books, and urban spatial relations and architecture. S. Harding

134. Medical Anthropology: An Introduction. F

Cross-cultural study of health, disease, and illness behavior from ecological and ethnomedical perspectives. Implications for biomedical health care policy. Students cannot receive credit for this course and course 254. Prerequisite(s): course 2. N. Chen

135A. Cities. *

Examines cities from an anthropological perspective. Reviews pertinent social scientific literature of the 19th and early 20th centuries. Surveys the concepts and methods used by contemporary anthropologists to investigate urban phenomena. N. Chen

136. The Biology of Everyday Life. *

Addresses cross-cultural attitudes to the human body and its everyday biological concerns: sleeping, eating, breathing, sex, and defecation. Prerequisite(s): course 2. M. Wolf-Meyer

137. Consuming Culture. *

Explores consumption as a cultural form. Beginning with theories of capitalism and exchange, it then focuses on sites and modes of consumption and display such as department stores, museums and zoos, advertisements and photography, cultural tourism. M. Caldwell

138. Political Anthropology. *

The ideas, in selected non-Western societies, about the nature of power, order, social cohesion, and the political organization of these societies. (Also offered as Legal Studies 138. Students cannot receive credit for both courses.) Offered in alternate academic years. T. Pandey

139. Language and Culture. W

Examination of language system and language use in relationship to cultural contexts of communication in Western and non-Western societies. Topics include the Sapir-Whorf linguistic relativity hypothesis; linguistic constructions of gender; speech variation in relation to class, ethnicity, and national identity; and the emergence of self in communicative acts. Prerequisite(s): course 2. The Staff

140. Art, Artists, Artifacts. *

Studies the ways of interpreting non-Western art, both in the context of the Western art world and in the context of the societies that produced the art forms. The Staff

141. Anthropology of Developing Countries: Environment, Water, Entropy. *

Focuses on developing countries, those countries experiencing fast deruralization and ecological crises. Students learn the reach of entropic interconnectiveness given the fact that forms of inequality organize the system. Readings illustrate the theories and methods anthropologists use to approximate cultural realities to readers, scholars, and activists. Prerequisite(s): course 2. G. Delgado-P

142. Anthropology of Law. *

An ethnographically informed consideration of law, dispute management, and social control in a range of societies including the contemporary U.S. Topics include conflict management processes, theories of justice, legal discourse, and relations among local, national, and transnational legal systems. (Also offered as Legal Studies 142. Students cannot receive credit for both courses.) Enrollment restricted to anthropology and legal studies majors. D. Brenneis

143. Performance and Power. F

Explores relationships between power and performance forms and media, both "traditional" and emergent. Links aesthetics with politics, and recent transcultural exchanges with local circumstances and consequences. Prerequisite(s): course 2 or any other Anthropology course. D. Brenneis

144. Anthropology of Poverty and Welfare. *

Examines phenomena of poverty and welfare in cross-cultural perspective with an emphasis on critical ethnographies and social analyses of social pathologies, economic systems, and community. Topics include informal economies, labor, household systems, social-support networks, and public policies. M. Caldwell

145X. Special Topics in Socio-Cultural Anthropology. F,W,S

Taught annually on a rotating basis by faculty members. Each year's topic varies by instructor and is announced by the department. May be repeated for credit. The Staff

146. Anthropology and the Environment. W

Examines recent approaches to study of nature and the environment. Considers historical relationship between nature, science, and colonial expansion as well as key issues of contemporary environmental concern: conservation, environmental justice, and social movements. Prerequisite(s): course 2. (General Education Code(s): PE-E.) A. Mathews

148. Gender and Global Development. *

Uses the critical tools of feminist theory and cultural anthropology to look at how global development discourses and institutions mobilize, reinforce, and challenge systems of gender-based inequality. Topics include non-governmental organizations (NGOs), development practice, microcredit, and technocrat cultures. (Formerly Gender and Development.) (Also offered as Feminist Studies 148. Students cannot receive credit for both courses.) M. Moodie

150. Communicating Anthropology. F

Encourages anthropology majors to explore different means of communicating anthropology with much attention to individual writing and presentation skills. Intensive work on library research; recognizing, comparing, and making arguments; and analyzing

ethnographies, articles, reviews, and films. Prerequisite(s): two of the following courses: 1, 2, or 3; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to sophomore and junior anthropology majors. (General Education Code(s): W.) T. Pandey

151. Workshop in Ethnography. *

Through demonstration, practice, and participation, acquire skills in collecting and analyzing cultural data. Work with members of other cultures and with each other to learn to identify significant cultural patterns. Lectures and readings provide added perspective and a theoretical base. Prerequisite(s): course 2. Enrollment limited to 20. M. Wolf-Meyer

152. Survey of Cultural Anthropological Theory. W

Major figures, ideas, and writings in 19th- and 20th-century cultural anthropology surveyed. Students cannot receive credit for this course and course 252. Prerequisite(s): course 2 and satisfaction of the Entry Level Writing and Composition requirements; enrollment restricted to anthropology majors. (General Education Code(s): W.) M. Wolf-Meyer

153. Medicine and Colonialism. *

Addresses the overlapping relationship between medicine and colonialism in the 19th century, with attention to post-colonial theory and contemporary studies of post-colonial medical pluralism in the 20th century. Prerequisite(s): courses 2 and 134. M. Wolf-Meyer

154. Multimedia Ethnography. *

Students learn the fundamentals of photography or video production and audio recording in order to create mini-ethnographies. Prerequisite(s): courses 1, 2, and 3. Concurrent enrollment in course 154L is required. Enrollment restricted to anthropology majors. (General Education Code(s): PR-C.) S. Errington

154L. Multimedia Laboratory (2 credits). *

Designed to instruct in aesthetics and technical production of a short digital slideshow. Using iMovie3 editing program, produce a digital slideshow incorporating sound (narration, music, and sound effects) and still images. Concurrent enrollment in course 154 required. S. Errington

156. The Politics of Memory. F

Examines the intersection of traumatic memories and politics. Memories have historical, social, cultural, psychological, and political dimensions. Focuses most closely on the political consequences of and responses to divisive, troubling histories. (Also offered as Politics 156. Students cannot receive credit for both courses.) Enrollment restricted to anthropology and politics majors. V. Stanzel, D. Linger

157. Modernity and Its Others. *

Beginning with the conquest of the Americas, considers how Western thinkers have explained seemingly "irrational" ways of being and thinking (like witchcraft, human sacrifice, and bodily mutilation), and asks how we interpret beliefs and practices radically different from our own. M. Fernando

158. Feminist Ethnographies. *

Considers the relationship between anthropology and feminism. Provides historical perspective on gender inequalities in the discipline as well as the emergence of feminist anthropology. Students read and engage with examples of feminist ethnography from a variety of regions and subfields. M. Moodie

159. Race and Anthropology. F

Examines concept of race in anthropology. Begins with histories of race in anthropology; turns to contemporary analysis of racism, identity formation, and diaspora; and concludes with current debates on the validity of "race" as an object of analysis. (General Education Code(s): ER.) M. Anderson

160. Reproductive and Population Politics. *

Examines reproductive and population politics across the globe, with a focus on feminist and ethnographic analyses of the stakes of various actors, from states to religious bodies to non-governmental organizations, in questions of who reproduces and in what circumstances. M. Moodie

161. The Anthropology of Food. *

Critically examines food as a fundamental aspect of social and cultural life and key concept in the development of anthropological theory and methods. Topics include: power relationships; community building; exchange and reciprocity; symbolism; cultural rules and rituals; globalization; and memory. M. Caldwell

162. Anthropology of Displaced Persons. *

Examines the causes, consequences, forms, and experiences of human movement, displacement, and abandonment. Topics include: migration, refugees, forced displacement, environmental displacement, tourism, transnational communities, and other displaced populations. M. Caldwell

163. Kinship. S

Provides a critical survey of debates, old and new, in the study of kinship. Readings range from classical treatments to recent reformulations that use kinship as a lens for exploring intimacy, memory, futurity, embodiment, commodification, and power. Students cannot receive credit for this course and course 263. D. Rutherford

164. The Anthropology of Dance. *

An intense reading seminar which critically reviews anthropological works in dance ethnography and dance theory. Recommended for anthropology majors. Prerequisite(s): course 2. Enrollment limited to 25. O. Najera Ramirez

166. States, Bureaucracies , and Other Cosmological Propositions. *

Investigates the cosmologies of states and bureaucracies and the practices through which officials or rulers seek to produce order, knowledge, or stability. Looks at paperwork, nationalist and court rituals, practices of mapping and classification, forms of citizenship. A. Mathews

170. History of Archaeological Theory. F

Historical review of prehistoric archaeology from antiquarianism to the present. Emphasis on development of archaeological theory and its relation to evolutionary and anthropological theory. Students cannot receive credit for this course and course 270. Prerequisite(s): course 3; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to anthropology and Earth sciences/anthropology combined majors. Recommended for juniors. (General Education Code(s): W.) J. Habicht Mauche

171. Materials and Methods in Historical Archaeology. *

In this intensive, hands-on course, students learn the step-by-step processes involved in conducting laboratory research on historic artifacts. Students study the ins and outs of analyzing, cataloging, and dating historic artifacts. Enrollment limited to 20. C. Blackmore

172. Archaeological Research Design. *

Introduces theories and methods for recovering and analyzing archaeological data. Critically explores the nature of archaeological evidence and how archaeologists know what they know. Strongly recommended for those contemplating further studies in archaeology. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 3, and one upper-division archaeology course. Strongly recommended for those contemplating further studies in archaeology. Enrollment limited to 25. Offered in alternate academic years. (General Education Code(s): W.) C. Blackmore

173. Origins of Farming. F

Survey of the ecological and archaeological evidence for the origins of plant and animal domestication in Africa, Eurasia, and the Americas. Discussion will center on the preconditions of this drastic alteration in human ecology and its consequences in transforming human societies. Open to nonmajors. Students cannot receive credit for this course and course 273. Enrollment restricted to juniors and seniors. Offered in alternate academic years. D. Gifford-Gonzalez

174. Origins of Complex Societies. *

Deals with evidence and theories concerning the origins of complex society; the transition from egalitarian, foraging societies to the hierarchical, economically specialized societies often referred to as "civilizations." Focuses on both Old World and New World cultures. Students cannot receive credit for this course and course 174. Prerequisite(s): course 3. C.

Blackmore

175A. Early African Archaeology. *

Archaeological history of Africa from the first 2.5 million-year-old artifacts to the emergence of African pastoralism and farming. Disciplinary models and assumptions critically examined in their historic and political contexts. Students cannot receive credit for this course and course 275A. (Formerly African Archaeology: 2.5 Million BP to Farming.) Prerequisite(s): course 3 or by permission of instructor. Enrollment restricted to junior and senior anthropology and Earth sciences/anthropology combined majors. Enrollment limited to 45. D. Gifford-Gonzalez

175B. African Complex Societies. *

Introduces the evolution of African kingdoms and states from the emergence of farming communities to initial contact with Europe. Particular attention paid to the origins of social inequality and the evolution of centralized polities. Students cannot receive credit for this course and Anthropology 275B. Prerequisite(s): course 3; course 175A strong recommended. J. Monroe

176A. North American Archaeology. F

Development of Native cultures in North America. Topics include peopling of the New World, early foragers, spread of agriculture and complex societies in the Southwest and Eastern Woodlands, and review of cultural developments in the West and Far North. Prerequisite(s): course 3 or consent of instructor. The Staff

176B. Meso-American Archaeology. W

Review of the archaeological and ethnohistorical evidence for the origins and development of pre-Columbian civilizations in Meso-America including the Olmec, Maya, Zapotec, Mixtec Teotihuacan, Toltec, Tarascan, and Aztec. Prerequisite(s): course 3. C. Blackmore

176C. Archaeology of the American Southwest. *

Outlines the development of native cultures in the American Southwest from Paleo-Indian times (Ca. 11,5000 B.C.) through early European contact (ca. A.D. 1600). Topics include the greater environment; early foraging culture; the development of agriculture and village life; the emergence and decline of regional alliances; abandonment and reorganization; and changes in social organization, external relations, and trade. Prerequisite(s): courses 3 and 176A. J. Habicht Mauche

176D. Colonial Encounters in the Americas. S

Uses archaeological case studies to explore processes of cultural confrontation, resistance, and transformation among Native American groups in the wake of European colonial expansion in the Western Hemisphere during the late 15th through mid-19th centuries. Prerequisite(s): courses 2 and 3. (General Education Code(s): ER.) J. Habicht Mauche

176E. Archaeology of the Pacific Northwest. F

Explores some of the important issues surrounding the anthropological and archaeological study of the Pacific Northwest Coast—a roughly 1,800-kilometer-long shoreline that stretches from Yakutat Bay in Alaska to Cape Mendocino in California. Prerequisite(s): course 3. J. Daehnke

177. European Conquest of the Americas. *

Uses ethnographic, archaeological, and historical sources to examine the clash of cultures between Native Americans and Europeans during the 15th through 19th centuries. Focuses on the social, political, and demographic impacts of contact on Native American societies. Prerequisite(s): courses 2 and 3. Enrollment limited to 34. J. Habicht Mauche

178. Historical Archaeology: A Global Perspective. W

Introduces archaeology of European colonialism and the early-modern world. Topics include historical archaeological methods; the nature of European colonial expansion in New and Old Worlds; culture contact and change; and power and resistance in colonial societies. Students cannot receive credit for this course and Anthropology 278.

Prerequisite(s): course 3 or consent of instructor. J. Monroe

180. Ceramic Analysis in Archaeology. *

Focuses on theories and techniques used by archaeologists to bridge the gap between the recovery of ceramic materials and their interpretation within cultural contexts. Topics include the origins of pottery, production methods, classification and typology, seriation,

functional analysis, materials analysis and description, organization of production, trade, and the analysis of style. Students are billed a course materials fee. Students cannot receive credit for this course and course 280. Prerequisite(s): course 3. Concurrent enrollment in course 180L required. Enrollment restricted to anthropology majors. J. Habicht Mauche

180L. Ceramic Analysis Laboratory (2 credits). *

Practicum in ceramic materials analysis and description. Students perform material experiments in materials selection and processing, hand-building techniques, and open-pit firing. Demonstrations of standard techniques of attribute analysis and the mineralogical and chemical characterization of ceramic materials are presented. Students cannot receive credit for this course and course 280L. Prerequisite(s): course 3. Concurrent enrollment in course 180 required. Enrollment restricted to anthropology majors. Enrollment limited to 16. J. Habicht Mauche

182A. Lithic Technology. *

Introduction to lithic and ceramic analysis in archaeology. Includes lab analysis, discussions of classification and typology, and exploration of the concept of style as it relates to ceramics and lithics in archaeology. Prerequisite(s): course 3. Enrollment limited to 20. The Staff

184. Zooarchaeology. W

Lectures and seminar on archaeological faunal analysis. Topics include mammalian evolution and osteology, vertebrate taphonomy, reconstruction of human diet from faunal remains, foraging strategy theory, data collection and management, and methods of quantitative analysis. Students cannot receive credit for this course and course 284. Prerequisite(s): course 3; concurrent enrollment in course 184L is required. D. Gifford-Gonzalez

184L. Zooarchaeology Laboratory (2 credits). W

Practical laboratory in archaeological analysis, with demonstrations and exercises on human-caused modifications to animal bones and non-human modifications to animal bones. Prerequisite(s): course 3 and concurrent enrollment in course 184. Enrollment restricted to anthropology majors and combined Earth and planetary sciences/anthropology majors. Enrollment limited to 45. D. Gifford-Gonzalez

185. Osteology of Mammals, Birds, and Fish. S

Practicum in archaeological faunal analysis. Students learn to identify bones of all larger mammal species of central California plus selected bird and fish species. Students cannot receive credit for this course and course 285. Prerequisite(s): courses 184 or 102 or Biology 138/L or Earth Sciences 100 or Environmental Studies 105/L, and permission of instructor. Enrollment limited to 16. Offered in alternate academic years. The Staff

187. Cultural Heritage in Colonial Contexts. S

Critical examination of the definitions of "cultural heritage," its development as a concept, and the various laws, charters, and conventions that shape our management of the past in the present. The focus is on heritage in comparative colonial contexts. J. Daehnke

188. Practicum in Archaeology (2 credits). *

Introduces practical skills in archaeological materials identification of stone, shell, bone, and other materials; curation; and database management. Students receive entry-level training with once-weekly class meetings and 5 hours per week of hands-on instruction. Prerequisite(s): courses 1, 2, and 3. Enrollment limited to 10. May be repeated for credit. D. Gifford-Gonzalez

190X. Special topics in Archaeology–Physical Anthropology. *

Special topics in archaeology–physical anthropology are taught annually on a rotation basis by various faculty members. The precise focus of each year's course varies according to the instructor and is announced by the department. Prerequisite(s): courses 1 and 3. May be repeated for credit. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. The Staff

193. Field Study. F,W,S

Students submit petition to sponsoring agency. The Staff

194. Senior Seminar.**194A. Anthropology of Dead Persons. ***

Explores the cultural meanings of dead bodies and dead persons, including memorialization; the body in the United States legal system; cadavers in education and research; dead persons in mass disasters and human-rights cases; and repatriation of the dead. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements, and courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment by permission of instructor. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements, and courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 16. (General Education Code(s): W.) A. Galloway

194B. Chimpanzees: Biology, Behavior, and Evolution. *

Explores studies on wild and captive chimpanzees with reference to other apes and humans. Topics include sociality, tool using, locomotion, traditions, and life history; social and physical dimensions of growth and development; language studies, genetics, and applications to human evolution. Prerequisite(s): courses 1, 2, and 3; satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

194C. Feminist Anthropology. *

Considers feminist perspectives on the human past, archaeologists' perspectives on feminist theory, and the impact of gender, feminist, and critical social theory on archaeology as a profession. Students cannot receive credit for this course and course 279. (Formerly Feminism and Gender in Archaeology.) Prerequisite(s): courses 1, 2, and 3, and satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to seniors. Enrollment limited to 20. (General Education Code(s): W.) C. Blackmore

194D. Tribes/Castes/Women. *

Examines historical constructions and contemporary deployments of the categories that have structured popular and anthropological understandings of social life in South Asia, particularly those of "tribe," caste," and "women." Students gain familiarity with the mobilization of these categories in contemporary political movements across India. Prerequisite(s): courses 1, 2, and 3. Satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Moodie

194E. Belief. *

Focuses on problems and opportunities raised by the concept of belief. Students work to develop an anthropological understanding of belief as practiced, then put it to use in analyzing episodes from the NPR series "This I Believe." Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) D. Rutherford

194F. Memory. *

Intensive and fast-paced seminar focusing on theoretical and ethnographic studies of memory as a means for dealing with the past. Examines how ordinary people and societies have coped with the past through acts of selective remembering and forgetting. Prerequisite(s): courses 1, 2, and 3; satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Caldwell

194G. Politics and Secularism. *

Examines secularism as political doctrine and practice of government. Topics include: transformation of religion by secularization; forms of inclusion/exclusion enacted by secularism; relationship between secularism and colonial rule. Case studies drawn from Europe, South Asia, United States, and the Middle East. Prerequisite(s): courses 1, 2, and 3, and satisfaction of the Entry Level Writing and Composition requirements; enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Fernando

194H. Paleoanthropology. *

Detailed overview of the evidence for the origin and evolution of humans with emphasis on reconstructing the paleobiology of extinct hominids. Discussion of individual groups of ancient hominids from the Miocene apes to anatomically modern humans. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

194I. Consumption and Consumerism. S

Investigates cultural analysis of consumer society, commodities, and consumer practices. Students develop their own research projects. Themes include: critiques of consumer society; symbolic analysis of goods, consumption as resistance, anthropologies of marketing, culture jamming; consumption and (post) colonialism. Prerequisite(s): courses 1, 2, and 3; satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Anderson

194K. Reading Ethnographies. *

Explores issues in the representation of culture through reading and discussing ethnographies. Recent experimental ethnographies open topics including the relation between fieldwork and writing, textual strategies, and the politics of ethnographic writing and research. Prerequisite(s): courses 1, 2, and 3; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) A. Tsing

194L. Archaeology of the African Diaspora. *

Senior seminar on African diaspora archaeology. Draws on archaeological, historical, and anthropological perspectives to examine the cultural, social, economic, and political lives of Africans and their descendants in the New World and West Africa from the 15th through 19th centuries. Prerequisite(s): courses 1, 2, 3 and an upper division course in archaeology; satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) J. Monroe

194M. Medical Anthropology. *

Focuses on critical issues in the social sciences of health and healing. Designed for students pursuing graduate work in medical anthropology and/or public health. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, 3, and 134. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) N. Chen

194N. Comparison of Cultures. W

Seminar for upper-division students interested in theories and methodology of social and cultural anthropology. Devoted to critical discussion of different methods of comparison practiced in anthropology. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) T. Pandey

194O. Masculinities. F

Considers the social construction of men and masculinities in a variety of ethnohistorical contexts as well as the unique contribution enabled by anthropological methods, particularly ethnographic fieldwork, to the study of gender and power. Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Moodie

194P. Space, Place, and Culture. *

Examines ways anthropologists have studied relationship between space, place, and culture. Covers early formulations acknowledging people in different cultural contexts ascribe particular meanings to places and to the concept of space and then traces the ways these questions have come to the fore in more recent scholarship. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements.

Enrollment restricted to senior anthropology majors. Enrollment limited to 20.
(General Education Code(s): W.) M. Wolf-Meyer

194Q. Race, Ethnicity, Nation. *

Provides students with theoretical and methodological approaches to studying the relationships between race, ethnicity, and nation, with a comparative focus on the United States, Latin America, and Europe. Students use ethnographic methods and/or discourse analysis to develop individual research projects. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and courses 1 and 2 and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20.

(General Education Code(s): W.) M. Anderson

194R. Religion, Gender, Sexuality. *

Examines religion in relation to gender and sexuality. Examines how gender, sexuality, and religion intersect in notions of civilization, progress, and modernity in the contemporary and colonial periods. Particular attention paid to Islam, Christianity, and Hinduism. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and courses 1 and 2 and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Fernando

194S. Hearing Culture: The Anthropology of Sound. *

Explores relationships between culture and acoustic worlds--environmental, verbal, and musical--within which we live. How sound is shaped by human belief and practice and the role sound plays in cultural and social life, both past and present. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) D. Brenneis

194T. Poverty and Inequality. *

Through ethnographies about homelessness, food deprivation, and unemployment, examines the institutions through which poverty is recognized, the systems of morality shaping debates about need and appropriate behavior, and the effects of community responses to poverty. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Caldwell

194U. Environmental Anthropology: Nature, Culture, Politics. *

Presents key readings in environmental anthropology focusing on environmental conflicts. Students guided in developing research paper on a society environment topic of their choice. Class is writing intensive with in-class discussion and final presentations. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) A. Mathews

194V. Picturing Cultures. S

A historical, analytical, and practical exploration of the uses of still and moving pictures in ethnographic representations, research, and production. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3; and course 80J, 120, 132, or 154. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) S. Errington

194W. The Anthropology of Social Movements. *

Focuses on the anthropology of social movements, especially the impact that global capital provokes on peripheral Latin American societies and the ways these respond through the organizing of social movements validating alternative worldviews that coalesce around issues pertaining to indigeneity, the environment, gender, and concepts of human dignity. Prerequisite(s): courses 1, 2, and 3, and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) G. Delgado-P

194X. Women in Politics: A Third World Perspective. W

Focuses cross-culturally on the status of women in the Third World and their formal

and informal participation in politics. Also discussed are organized efforts, through participation in both national and autonomous movements, for women's rights.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) A. Pandey

194Y. Archaeologies of Space and Landscape. *

Examines contemporary archaeological perspectives on space and landscape. Focuses on how archaeology can contribute to an appreciation of the economic, cultural, and political factors that shape human perception, use, and construction of the physical world. Prerequisite(s): courses 1, 2, 3, and an upper-division archaeology course; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) J. Monroe

194Z. Emerging Worlds. S

Addresses encounters and contact zones between cultures that give rise to "emerging worlds." "Emerging worlds" refers to the cultural heterogeneity and diversity created within world-making networks, geographies, innovations, and meanings, moving us beyond ideas about vanishing, autonomous cultures. Prerequisite(s): courses 1, 2, and 3, and satisfaction of the Entry Level Writing and Composition requirements.

Enrollment restricted to senior anthropology majors. Enrollment limited to 20.

(General Education Code(s): W.) S. Harding

195A. Senior Thesis Seminar. F

Covers the basics like the planning and organization of research; writing research proposals; the publication and presentation of scientific research results; the recapitulation of laboratory methods; and intensification of specific recent research discussions in anthropology. Prerequisite(s): courses 1 and 107, and either course 101, or course 104, or course 105. Enrollment is restricted to senior anthropology majors and by permission of the instructor. Enrollment limited to 10. L. Fehren-Schmitz

195B. Senior Thesis Research (3 credits). W

Students conduct the research projects they proposed in course 195A. Students have weekly group meetings with the research supervisor. Prerequisite(s): course 195A.

Enrollment restricted to senior anthropology majors. Enrollment limited to 10. L. Fehren-Schmitz

195C. Senior Thesis Capstone (3 credits). S

Students finalize their research projects and write their thesis in the form of a research paper that is in publishable form so it can be submitted to a relevant journal or conference. Prerequisite(s): course 195B. Enrollment restricted to senior anthropology majors.

Enrollment limited to 10. L. Fehren-Schmitz

196C. Traveling Cultures. *

Considers why traveling cultures have posed a threat, often met with violence, to regimes of rule, particularly modern nation-states. Also explores the unique problems that conducting research with mobile communities poses for the ethnographer. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Moodie

196D. Food and Medicine. F

Examines the intersections of food, medicine, and culture with special focus on nutrition, cultural knowledge, industrial foodways, genetically modified organisms (GMOs), ethnopharmacology, food safety, and biosecurity. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and courses 1, 2, and 3. Enrollment limited to 20. (General Education Code(s): W.) N. Chen

196E. Pastoralists Past and Present. *

Senior seminar treating the history and modern situation of the world's herding peoples.

Readings draw on ethnographic, historical, archaeological, and ecological literatures.

Students are coached in writing a 25-page research paper on a topic related to this theme.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment

limited to 20. (General Education Code(s): W.) D. Gifford-Gonzalez

196F. The Anthropology of Things: Gift, Sign, Commodity, Tool. *

Examines some approaches used by anthropologists and other thinkers to bring things into focus: as gifts, signs, commodities, and tools. Explores whether, by taking things seriously, anthropologists might learn to be empirical in new ways. Students cannot receive credit for this course and course 225. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) D. Rutherford

196G. Advanced Topics in Folkloristics. *

Examines selected topics and issues in the field of folklore: specific topics vary each quarter. For students with a demonstrated interest in folklore and/or popular culture. Prerequisite(s): courses 1, 2, and 3; and satisfaction of the Entry Level Writing and Composition requirements; and a course in folklore and/or popular culture is strongly recommended. Enrollment limited to 20. (General Education Code(s): W.) O. Najera Ramirez

196H. Global History and the Longue Duree. *

Emerging anthropological approaches to global history, with an eye to historical frameworks of 500 years or more. Course requires engagement with advanced theoretical concepts and challenging historical texts. Intensive seminar format. Students cannot receive credit for this course and course 269. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and courses 1, 2, and 3. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. (General Education Code(s): W.) M. Moodie

196I. Hard Problems. S

Explores interrelated, long-standing, difficult problems in human theory. Considers why these problems are so forbidding; what makes them significant; why they are "hard"; and whether hard problems come in different varieties or strengths. Prerequisite(s): courses 1, 2, and 3; and satisfaction of the Entry Level Writing and Composition requirements.

Enrollment limited to 20. (General Education Code(s): W.) D. Linger

196J. Imagining America. S

Explores sites of heritage and the politics of cultural memory in the American context. Focuses on public representation and interpretation at places where multiple views of history come into conflict. Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. J. Daehnke

196K. Settler Colonialism. W

Provides seniors in anthropology a capstone experience. Settler colonialism is an all-encompassing, land-centered project that revolves around the elimination of the Native. This course revolves around a series of ethnographies and histories about settler colonialism. Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior anthropology majors. Enrollment limited to 16. R. Ramirez

196L. Archaeology of the American Southwest. *

Outlines the development of native cultures in the American Southwest from Paleo-Indian times (ca. 11,500 B.C.) through early European Contact (ca. A.D. 1600). Prerequisite(s): courses 1, 2, and 3 and satisfaction of the Entry Level Writing and Composition requirements. Course 178 strongly recommended. Enrollment restricted to senior anthropology majors. Enrollment limited to 20. J. Habicht Mauche

196M. Modernity and its Others. F

Examines how Western modernity has interpreted various forms of radical difference, beginning with the 15th-century conquest of the New World. Considers historical and contemporary examples of how Western thinkers have explained "irrational" beliefs and practices (e.g., witchcraft, human sacrifice, devil-worship). Prerequisite(s): courses 1, 2, and 3; and satisfaction of the Entry Level Writing and Composition requirements.

Enrollment restricted to seniors. Enrollment limited to 20. M. Fernando

197. Laboratory Tutorial. F,W,S

Independent laboratory research on selected topics in archeology and physical anthropology. Interview with appropriate instructor required. May be repeated for credit.
The Staff

197F. Laboratory Tutorial (2 credits). F,W,S

Independent laboratory research on selected topics in archaeology and physical anthropology. Interview with appropriate instructor required. Enrollment restricted to anthropology majors. May be repeated for credit. D. Gifford-Gonzalez, J. Habicht Mauche, C. Blackmore, J. Monroe, A. Galloway

198. Independent Field Study. F,W,S

Off-campus field study. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198G. Independent Field Study (3 credits). F,W,S

Off-campus field study. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Theoretical Foundations of Physical Anthropological Research. *

Provides historical and theoretical foundation of physical anthropology. Grounds students in the changing frameworks and perspectives during the last 150 years regarding questions in human biology, evolution, nature, and culture, by examining texts and scientific journals. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

200A. Core Graduate Course (10 credits). F

Introduces history, ethnography, and theory of cultural anthropology with emphasis on awareness of construction of anthropological canon and areas of conflict within it, leading up to contemporary debates on a variety of issues. Two-term course: students must enroll in both quarters. Enrollment restricted to anthropology graduate students. Enrollment limited to 12. A. Mathews

200B. Core Graduate Course. W

Introduces history, ethnography, and theory of cultural anthropology with emphasis on awareness of construction of anthropological canon and areas of conflict within it, leading up to contemporary debates on a variety of issues. Multiple-term course; students must enroll in both quarters to receive academic credit. Enrollment restricted to anthropology graduate students. Enrollment limited to 12. M. Fernando

201. Human Evolution. *

Provides an overview of the first five million years of human evolution and a framework for studying evolution and reconstructing the human past. Emphasizes that all lines of evidence must be included: hominid fossils, archaeology, paleoecology, and molecular data. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

202A. Skeletal Biology. *

Focuses on human skeletal biology, the identification of elements, physiology of hard tissue formation, growth, and maintenance. Students are required to show competence in skeletal identification to pass this class. Prerequisite(s): course 102A or permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 5. The Staff

206. Primate Behavior. *

An overview of primate evolution and review of the major groups of primates in terms of their ecological, locomotor, dietary, and social adaptations. Theoretical frameworks, such as behavioral ecology, sexual selection, and life history, are evaluated from long-term studies of primate behavior. Students cannot receive credit for this course and course 106. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

208A. Ethnographic Practice. S

Introduces graduate students to the practice of fieldwork. Students design and carry out a quarter-long research project exploring a range of methods and producing an analytical case study. Readings and discussion emphasize both methodological critique and

successful implementation. Concurrent enrollment in course 208L is required; enrollment restricted to anthropology graduate students. Enrollment limited to 15. M. Moodie

208L. Video Laboratory (2 credits). *

Provides students with hands-on training with a variety of audiovisual equipment. Through lectures, demonstrations, hands-on field exercises, and review of students' media exercises, students learn the fundamentals of photography, video production, and audio recording in the field. Concurrent enrollment in course 208A required; enrollment restricted to anthropology graduate students. Enrollment limited to 15. N. Chen

210R. Religion in American Politics and Culture. *

Introduces dominant discourses about major American religions and their role in public life with particular attention to intersecting differences, such as race, sex/gender, and disability and to shifting religious/political boundaries. Visual and textual media, political commentary, and popular ethnographies are analyzed. Enrollment restricted to graduate students. Enrollment limited to 15. D. Rutherford, S. Harding

211. Human Ecology. *

Reviews environmental, physiological, behavioral, and cultural ways that humans interact with their physical surroundings. Effects of human culture on the environment, and of the environment on the shape of human culture will be emphasized. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

212. The Human Life Cycle. *

Examines the human life cycle using an evolutionary framework. Examines key aspects of the human life stages using findings and concepts from developmental biology, physiology, nutrition, evolutionary ecology, and life history theory. These stages include: gestation, infancy, childhood, juvenile and adolescent periods, and senescence. Each stage of the life cycle is compared and contrasted with the developmental life of nonhuman primates and mammals. Other related topics include developmental plasticity and epigenetics.

Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

219. Religions, States, Secularities. *

Examines theories and case studies at the intersection of religion, states, and secularity. Topics include: secularism as a political doctrine; state and social regulation of religion and religious normativity; secular cultural practices; and lines of secular/religious entanglement and conflict. Enrollment restricted to graduate students. Enrollment limited to 15. S. Harding

220. Cartographies of Culture. *

Examines, theoretically and ethnographically, how societies and their cultures are created and reified through spatializing practices, including border-making, mapping, landscape aesthetics, globalization, time/history/memory, movement, and other locating activities. Enrollment restricted to graduate students. Enrollment limited to 15. M. Caldwell

225. The Anthropology of Things: Sign, Gift, Commodity, Tool. *

Examines some approaches used by anthropologists and other thinkers to bring things into focus: as gifts, signs, commodities, and tools. Explores whether, by taking things seriously, anthropologists might learn to be empirical in new ways. Students cannot receive credit for this course and course 196F. Enrollment restricted to graduate students. Enrollment limited to 15. J. Habicht Mauche

228. Grant Writing. F

Devoted entirely to writing grant proposals. Students either work on their graduate education fellowships or their doctoral dissertation grants or both. Reading materials consist of granting agency documents plus examples of successful applications. Enrollment restricted to anthropology graduate students. Enrollment limited to 15. May be repeated for credit. C. Shaw

229. Constructing Regions. W

Discusses centrality of the idea of "regions" in studies of culture, the history of "locating" social theory, and debates about area studies. Students develop area of transregional bibliographies. Primarily for second- or third-year anthropology graduate students reading "area" literatures. Enrollment restricted to graduate students. Enrollment limited to 15. M. Anderson

230. Photography and Image Culture. S

Visuality as epistemology, image-consumption, and the political and representational possibilities stemming from digitization and the World Wide Web are increasingly important issues in the humane sciences. Offers historical and critical background and the possibility of hands-on practice using visual material in current research. (Formerly Image Culture.) Enrollment restricted to graduate students. Enrollment limited to 15. S. Errington

231. Intimacy and Affective Labor. *

Examines recent work on the role of intimacy and affective labor in value production, political mobilization, and transnational capital linkages. Special attention given to how these terms are invoked to answer methodological and narrative concerns in ethnographic writing. Enrollment restricted to graduate students. Enrollment limited to 15. M. Moodie

232. Bodies, Knowledge, Practice. *

Contemporary social theory and science both focus on bodies as critical sites of inquiry and the production of knowledge. Explores these theoretical intersections and constructions of the body with new ethnographic works. Questions how race, gender, and culture are inscribed through bodily practice, imagery, and phenomenology. Enrollment restricted to graduate students. Enrollment limited to 15. N. Chen

234. Feminist Anthropology. *

Examines how feminist anthropology creates its objects of knowledge by focusing on questions of method and representation. The class reads across these traditional objects-- women and gender, for example--to highlight the epistemological and political stakes of feminist work in anthropology. Enrollment restricted to graduate students. Enrollment limited to 15. M. Moodie

235. Language and Culture. W

An examination of language system and language use in relationship to cultural contexts of communication in Western and non-Western societies. Also examines the complex role which linguistic inquiry and models have played in broader theories of culture. Enrollment restricted to graduate students. Enrollment limited to 15. D. Brenneis

236. On Insults. *

What is the role of insult in social and legal life (from play to jokes to ritual to war and from blasphemy to defamation to hate speech)? Emphasizes philosophical, anthropological, psychoanalytic, and legal approaches to the issues. Enrollment restricted to graduate students and by permission of instructor. (Formerly Philosophy 290Y.) (Also offered as History of Consciousness 236. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. J. Neu

238. Advanced Topics in Cultural Anthropology. F

Advanced topics in cultural anthropology. Current topics in anthropological theory and ethnography taught on a rotating basis by various faculty members. Precise focus of each seminar varies and will be announced by the department. Enrollment restricted to graduate students. Enrollment limited to 15. V. Stanzel

241. Social Justice. *

Explores theoretical and methodological issues in the field of social justice with an emphasis on ethnographic analysis. Topics include: rights, obligations, justice, equality, compensation, and ethics. Enrollment restricted to graduate students. Enrollment limited to 15. M. Caldwell

243. Cultures of Capitalism. W

Introduction to selected themes in political economy, stressing the work of Marx. Topics include the development of capitalism, colonialism, dependency, world systems, state formation, class consciousness, commodity fetishism, the nature of late capitalism, post-modernism, and the aesthetics of mass culture. Through political economy's interlocutors, raises questions about gender, race and ethnicity, and post-structuralist critiques. Enrollment restricted to graduate students. Enrollment limited to 15. L. Rofel

246. Race in Theory and Ethnography. *

Explores theoretical and methodological approaches to the cross-cultural study of "race," with an emphasis on historical and ethnographic analysis. Main approaches considered include Foucauldian, Gramscian, diaspora theory and the everyday poetics and politics of

race. Enrollment restricted to graduate students. Enrollment limited to 15. M. Anderson

247. Critical Perspectives on Nutrition. *

Examines emerging critiques on the science, communication, and practice of nutrition using multidisciplinary approaches. Special attention is given to the effects of modern nutrition. Enrollment restricted to graduate students. Enrollment limited to 15. J. Guthman

248. Shadowy Dealings: Anthropology of Finance, Money, and Law. *

Moves from a brief introduction to classic economic anthropology to recent work on histories of money and capitalism and cultures of financial markets, of accounting, and of legal and illegal trading practices. Enrollment restricted to graduate students. Enrollment limited to 15. A. Mathews

249. Ecological Discourses. *

Explores narratives of nature and their practical consequences in contests over "wild places" and their resources. Readings focus on the histories of forests and on analytic frameworks—ecology, social history, interpretation, cultural studies—with which to investigate competing constructions of the environment. Enrollment restricted to graduate students. Enrollment limited to 15. A. Tsing

252. Survey of Cultural Anthropological Theory. W

Major figures, ideas, and writing in 19th- and 20th-century cultural anthropology surveyed. Students cannot receive credit for this course and course 152. Enrollment restricted to graduate students. Enrollment limited to 15. M. Wolf-Meyer

253. Advanced Cultural Theory. F

Examines cultural anthropology's interdisciplinary practices of knowledge formation at an advanced level. Drawing on various types of theoretical texts, the course elaborates on the relationship between culture and power, taking up different themes each time it is taught. Enrollment restricted to graduate students. Enrollment limited to 15. L. Rofel

254. Medicine and Culture. *

Surveys medicine cross-culturally, with particular focus on power, tradition, and theories of embodiment. Students cannot receive credit for this course and course 134. Enrollment restricted to graduate students. Enrollment limited to 15. M. Wolf-Meyer

258. Experimental Cultures. *

Addresses the use of experiments in anthropological research, theory, and writing. Enrollment restricted to graduate students. Enrollment limited to 15. M. Wolf-Meyer

259. Regulating Religion/Sex. *

First examines the regulation of religion and the normalization of sex/sexuality as parallel modalities of secular rule in the production of modern citizens and subjects. Ultimately inquires into the relationship between "proper" religion and "proper" sexuality in secular state formations. Enrollment restricted to graduate students. Enrollment limited to 15. M. Fernando

260. Anthropology of Freedom. *

Examines conceptualizations and practices of freedom across geographical space and historical time. Readings drawn from Greek philosophy, Islamic, Christian, and Buddhist religious traditions. Enlightenment philosophy, liberal and neo-thought, and contemporary ethnographies. Enrollment restricted to graduate students. M. Fernando

261. Replication, Mimesis, and Fakery. *

Replicas, copies, and fakes anchored conceptually by the authentic/original enable the marketing of cultural commodities like arts and crafts, especially since the advent of photography. Course explores these commercial and signifying processes in the global art and culture market. Enrollment restricted to graduate students. Enrollment limited to 15. S. Errington

262. Documenting Cultures. *

Follows the history of film and ethnography, media and methodology into the birth of cinema and anthropology in the early 20th century. Students learn theories of representation and media, conduct ethnographic research, and prepare a short film. Enrollment restricted to graduate students. Enrollment limited to 15. M. Wolf-Meyer

263. Kinship. S

Provides a critical survey of debates, old and new, in the study of kinship. Readings range from classical treatments to recent reformulations that use kinship as a lens for exploring intimacy, memory, futurity, embodiment, commodification, and power. Students cannot receive credit for this course and course 163. Enrollment restricted to graduate students. Enrollment limited to 15. D. Rutherford

267A. Science and Justice: Experiments in Collaboration. *

Considers the practical and epistemological necessity of collaborative research in the development of new sciences and technologies that are attentive to questions of ethics and justice. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as, Biomolecular Engineering 268A, Feminist Studies 268A, and Sociology 268A. Students cannot receive credit for more than one course.) Enrollment limited to 15. J. Reardon

267B. Science and Justice Research Seminar.

Provides in-depth instruction in conducting collaborative interdisciplinary research. Students produce a final research project that explores how this training might generate research that is more responsive to the links between questions of knowledge and questions of justice. Prerequisite(s): Sociology 268A, Biomolecular Engineering 268A, Feminist Studies 268A, or Anthropology 267A. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Biomolecular Engineering 268B, Feminist Studies 268B, and Sociology 268B. Students cannot receive credit for more than one course.) Enrollment limited to 15. The Staff

268A. Rethinking Capitalism. W

Readings include works by speakers at UCSC's "Rethinking Capitalism Initiative." Topics are: (1) financialization versus commodification (how options-theory has changed capitalism); (2) material markets (how this theory performs); and (3) valuation and contingency (how economies make worlds). (Also offered as History of Consciousness 268A. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. R. Meister

268B. Rethinking Capitalism. S

Course 268A addressed changes in the theory and practice of capitalism as derivatives markets have become increasingly central to it. This course, which can be regarded as either background or sequel, concerns questions that surround recent debates about derivatives from the standpoint of broader developments in law, culture, politics, ethics, ontology, and theology. What would it mean to see questions of contingency and value as a challenge to late-modern understandings of these modes of thought? (Also offered as History of Consciousness 268B. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. R. Meister

269. Global History and the Longue Duree. *

Emerging anthropological approaches to global history. Considers both 500-year and much longer historical frameworks. For the former, the evidence of documents, both European and non-European, is particularly important. For the latter, archaeological and evolutionary approaches are essential. Students cannot receive credit for this course and course 196H. Enrollment restricted to graduate students. Enrollment limited to 15. A. Tsing

270. History of Archaeology. F

Historical review of prehistoric archaeology from antiquarianism to the present. Emphasis on the development of archaeological theory, its relation to evolutionary and anthropological theory, and themes ongoing over time. Students cannot receive credit for this course and course 170. Enrollment restricted to graduate students. Enrollment limited to 15. J. Habicht Mauche

272. Advanced Archaeological Research. S

Introduces graduate students to archaeological research design. Topics include: middle range theory; multistage research strategies; sampling strategies and appropriate field methodology; and issues specific to particular scales of archaeological analysis (artifact, household, site, region). Enrollment restricted to graduate students. Enrollment limited to 15. C. Blackmore

273. Origins of Farming. F

Survey of the ecological and archaeological evidence for the origins of plant and animal

domestication in Africa, Eurasia, and the Americas. Discussion will center on the preconditions of this drastic alteration in human ecology and its consequences in transforming human societies. Students cannot receive credit for this course and course 173. Enrollment restricted to graduate students. Enrollment limited to 15. D. Gifford-Gonzalez

274. Origins of Complex Societies. *

The origins of complex society: the transition from egalitarian foraging societies to the hierarchical, economically specialized societies often referred to as "states" or "civilizations." Focuses on both Old World and New World cultures. Students may not receive credit for this course and course 174. Enrollment restricted to graduate students. Enrollment limited to 15. C. Blackmore

275A. Seminar on Early African Archaeology. *

Tutorial on archaeology of Africa, from 2.5 million years ago to emergence of African pastoralism and farming. Weekly examination of disciplinary models and assumptions in historic context, emphasizing overarching themes in prehistoric archaeology. Students cannot receive credit for this course and course 175A. (Formerly Tutorial on African Archaeology.) Enrollment restricted to graduate students or by consent of instructor. Enrollment limited to 15. D. Gifford-Gonzalez

275B. Tutorial in Archaeology of African Complex Societies. *

Graduate tutorial on the archaeology of precolonial African kingdoms and states. Particular attention paid toward the origins of social inequality and the evolution of centralized politics. Students cannot receive credit for this course and course 175B. Prerequisite(s): Enrollment restricted to graduate students. Enrollment limited to 15. J. Monroe

276A. Advanced Topics in North American Archaeology. *

In-depth examination of development of Native cultures in North America from end of last ice age to time of European contact. Focuses on specific regional trajectories and problems of social change. Enrollment restricted to graduate students. Enrollment limited to 15. J. Habicht Mauche

276B. Mesoamerican Archaeology. W

Examines the pre-Columbian cultures of Mesoamerica and reviews the archaeological and ethnohistorical evidence related to the origins and development of cultures including the Olmec, Maya, Zapotec, Mixtec, and Aztec. Students cannot receive credit for this course and course 176B. Enrollment restricted to graduate students. Enrollment limited to 15. C. Blackmore

278. Tutorial on Historical Archaeology. W

Tutorial on archaeology of European colonialism and the early-modern world. Focuses on the nature of European colonial expansion in New and Old Worlds; culture contact and change; and power and resistance in colonial societies. Students cannot receive credit for this course and course 178. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

279. Feminism and Gender in Archaeology. *

Considers feminist perspectives on the human past; archaeologists' perspectives on feminist theory; and the impact of gender, feminist, and critical social theory on the archaeological profession. Students cannot receive credit for this course and course 194C. Enrollment restricted to graduate students. Enrollment limited to 15. C. Blackmore

280. Advanced Ceramic Analysis. *

Advanced graduate seminar that focuses on techniques and theories used to bridge the gap between the recovery of ceramic remains from archaeological contexts and their interpretation with respect to various anthropological issues and problems. Students cannot receive credit for this course and course 180. Enrollment restricted to graduate students. Concurrent enrollment in Anthropology 280L required. Enrollment limited to 5. J. Habicht Mauche

280L. Advanced Ceramic Analysis Laboratory (2 credits). *

Emphasizes advanced techniques of ceramic analysis, including materials selection and processing, hand-building, and open-pit firings. Standard techniques for describing and measuring formal and technological attributes of pottery also presented. Students cannot

receive credit for this course and course 180L. Enrollment restricted to graduate students. Concurrent enrollment in Anthropology 280 required. Enrollment limited to 5. J. Habicht Mauche

282. Household Archaeology. *

Explores the theoretical and methodological challenges faced by archaeologists excavating ancient households. Students examine the social, economic, and political characteristics of households and investigate how they intersect and support the social and physical aspects of communities. Enrollment restricted to graduate students. Enrollment limited to 15. C. Blackmore

284. Tutorial in Zooarchaeology. W

Lectures and seminar on archaeological faunal analysis. Topics include: mammalian evolution and osteology; vertebrate taphonomy; reconstruction of human diet from faunal remains; foraging strategy theory; data collection and management; and methods of quantitative analysis. Students cannot receive credit for this course and course 184. (Formerly Zooarchaeological Research Design.) Enrollment restricted to graduate students. D. Gifford-Gonzalez

285. Osteology of Mammals, Birds, and Fish. *

Practicum in vertebrate osteology, covering all larger mammal species of central California, plus selected bird and fish species, and topics in evolution and ecology of selected taxa. Students cannot receive credit for this course and course 185. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

287. Advanced Topics in Archaeology. *

A graduate seminar on advanced theoretical or methodological topics pertinent to advanced graduate student and faculty interests. Enrollment restricted to graduate students or by consent of instructor. Enrollment limited to 12. J. Monroe

292. Graduate Colloquium (2 credits). F,W,S

Designed to offer an institutionalized mechanism for the presentation of research papers and teaching efforts by faculty and advanced graduate students. Enrollment restricted to graduate students. May be repeated for credit. The Staff

294N. Comparison of Cultures. W

Seminar for students interested in theories and methodology of social and cultural anthropology devoted to critical discussion of different methods of comparison practiced in anthropology. Enrollment restricted to graduate students. Enrollment limited to 15. T. Pandey

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. The Staff

298. Advanced Laboratory Apprenticeship. F,W,S

Supervised tutorial in specialized analytic methods in archaeology or physical anthropology. Students collaborate on laboratory research with a departmental mentor or, with advisor's consent, with researchers on or off campus, preparing a manuscript for publication or an extensive literature review. Permission of instructor required. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Prerequisite(s): petition on file with sponsoring agency. The Staff

* Not offered in 2014-15

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Lower-Division Courses

3. Precalculus for Science and Engineering.

Includes inequalities, linear and quadratic equations, functions (linear, quadratic, rational, power, exponential, logarithms, trigonometric), and analytic geometry, with application to science and engineering. Students cannot receive credit for both this course and

Mathematics 3. Mathematics 3 can substitute for course 3. Prerequisite(s): score of 200 or higher on the mathematics placement examination (MPE), or Mathematics 2. (General Education Code(s): MF, Q.) The Staff, P. Garaud, B. Mendes

5. Statistics. F,W,S

Introduction to statistical methods/reasoning, including descriptive methods, data-gathering (experimental design and sample surveys), probability, interval estimation, significance tests, one- and two-sample problems, categorical data analysis, correlation and regression. Emphasis on applications to the natural and social sciences. Students cannot receive credit for this course if they have already received credit for course 7.

(General Education Code(s): SR, IN, Q.) The Staff, H. Lee, A. Kottas, R. Morris, B. Mendes, J. Katzenelson, A. Rodriguez, B. Sansó

6. Precalculus for Statistics. W

Reviews and introduces mathematical methods useful in the elementary study of statistics, including logic, real numbers, inequalities, linear and quadratic equations, functions, graphs, exponential and logarithmic functions, and summation notation. (Formerly course 2, Pre-Statistics.) Prerequisite(s): Mathematics 2 or mathematics placement examination (MPE) score of 200 or higher or higher. (General Education Code(s): MF, Q.) B. Mendes, The Staff

7. Statistical Methods for the Biological, Environmental, and Health Sciences. F,W,S

Case-study-based introduction to statistical methods as practiced in the biological, environmental, and health sciences. Descriptive methods, experimental design, probability, interval estimation, hypothesis testing, one- and two-sample problems, power and sample size calculations, simple correlation and simple linear regression, one-way analysis of variance, categorical data analysis. (Formerly Statistical Methods for the Biological and Environmental Sciences.) Prerequisite(s): score of 300 or higher on the mathematics placement examination (MPE), or course 2 or 3 or 6 or 11A or 15A or Mathematics 3 or 11A or 19A. Concurrent enrollment in course 7L is required. (General Education Code(s): SR, IN, Q.) The Staff, H. Lee, A. Rodriguez, J. Lee, D. Draper, R. Prado

7L. Statistical Methods for the Biological, Environmental, and Health Sciences Laboratory (2)

- [Community Studies](#)
- [Computer Engineering](#)
- [Cowell College](#)
- [Critical Race and Ethnic Studies](#)
- [Crown College](#)
- [Digital Arts and New Media](#)
- [Earth and Planetary Sciences](#)
- [Ecology and Evolutionary Biology](#)
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- [Russian](#)
- [Science Communication](#)
- [Social Documentation](#)
- [Sociology](#)
- [Spanish](#)
- [Spanish for Heritage Speakers](#)
- [Stevenson College](#)
- [Technology and Information](#)

credits). F,W,S

Computer-based laboratory course in which students gain hands-on experience in analysis of data sets arising from statistical problem-solving in the biological, environmental, and health sciences. Descriptive methods, interval estimation, hypothesis testing, one-and two-sample problems, correlation and regression, one-way analysis of variance, categorical data analysis. (Formerly Statistical Methods for the Biological and Environmental Sciences Laboratory.) Prerequisite(s): score of 300 or higher on the mathematics placement examination (MPE), course 2 or 3 or 6 or 11A or 15A or Mathematics 3 or 11A or 19A. Concurrent enrollment in course 7 is required. H. Lee, R. Prado, J. Lee, A. Rodriguez, D. Draper

10. Mathematical Methods for Engineers I. F,S

Applications-oriented course on complex numbers and linear algebra integrating Matlab as a computational support tool. Introduction to complex algebra. Vectors, bases and transformations, matrix algebra, solutions of linear systems, inverses and determinants, eigenvalues and eigenvectors, and geometric transformations. Students cannot receive credit for this course and for courses 10A or Mathematics 21. Prerequisite(s): score of 400 or higher on the mathematics placement examination (MPE), or course 3, or Mathematics 3. (General Education Code(s): MF, Q.) The Staff, H. Wang, Q. Gong, J. Katzenbach, N. Brummell, B. Mendes

10A. Basic Mathematical Methods for Engineers I (3 credits). F,S

Applications-oriented course on complex numbers and linear algebra integrating Matlab as a computational support tool. Introduction to complex algebra. Vectors, bases and transformations, matrix algebra, solutions of linear systems, inverses and determinants. Students cannot receive credit for this course and courses 10 or Mathematics 21. Prerequisite(s): score of 400 or higher on the mathematics placement examination (MPE), or course 3, or Mathematics 3. The Staff, H. Wang, Q. Gong, J. Katzenbach, N. Brummell, B. Mendes

10B. Mathematical Methods for Engineers IB (2 credits).

Can only be taken by students who need a transition from course 10A to course 10. Students cannot receive credit for this course and for course 10 or Mathematics 21. Prerequisite(s): course 10A. Enrollment by permission of instructor only. The Staff

11A. Mathematical Methods for Economists I. F,W,S

Introduction to mathematical tools and reasoning, with applications to economics. Topics are drawn from differential calculus in one variable and include limits, continuity, differentiation, elasticity, Taylor polynomials, and optimization. Students cannot receive credit for both this course and Mathematics 11A or 19A or Applied Mathematics and Statistics 15A. (Also offered as Applied Mathematics and Statistics 11A. Students cannot receive credit for both courses.) (Also offered as Economics 11A. Students cannot receive credit for both courses.) Students who have already taken Mathematics 11A or 19A should not take this course. Prerequisite(s): score of 300 or higher on the mathematics placement examination (MPE), Applied Math and Statistics 2, 3, or 6, or Mathematics 3. (General Education Code(s): MF, IN, Q.) J. Katzenbach, B. Mendes

11B. Mathematical Methods for Economists II. F,W,S

Mathematical tools and reasoning, with applications to economics. Topics are drawn from multivariable differential calculus and single variable integral calculus, and include partial derivatives, linear and quadratic approximation, optimization with and without constraints, Lagrange multipliers, definite and indefinite integrals, and elementary differential equations. Students cannot receive credit for both this course and Mathematics 11B or 19B or Applied Math and Statistics 15B. (Also offered as Economics 11B. Students cannot receive credit for both courses.) Prerequisite(s): course 11A , Economics 11A, Mathematics 11A, or Mathematics 19A. (General Education Code(s): MF, IN, Q.) J. Katzenbach

15A. Case-Study Calculus I.

Case-study-based, first-quarter introduction to single-variable calculus, with computing labs/discussion sections featuring contemporary symbolic, numerical, and graphical computing tools. Case studies drawn from biology, environmental sciences, health sciences, and psychology. Includes functions, mathematical modeling, limits, continuity, tangents, velocity, derivatives, the chain rule, implicit differentiation, higher derivatives, exponential and logarithmic functions and their derivatives, differentiating inverse

Management UCDC Program Writing Program Theater Arts Yiddish	<p>functions, the mean value theorem, concavity, inflection points, function optimization, and curve-sketching. Students cannot receive credit for this course and course 11A or Economics 11A or Mathematics 11A or 19A. Prerequisite(s): course 3 or Mathematics 3 or score of 300 or higher on the mathematics placement examination (MPE) or by permission of instructor. (General Education Code(s): MF, IN, Q.) P. Garaud, B. Mendes</p> <p>15B. Case-Study Calculus II. Case-study based, second-quarter introduction to single-variable calculus, with computing labs/discussion sections featuring symbolic numerical, and graphical computing tools. Case studies are drawn from biology, environmental science, health science, and psychology. Includes indefinite and definite integrals of functions of a single variable; the fundamental theorem of calculus; integration by parts and other techniques for evaluating integrals; infinite series; Taylor series, polynomial approximations. Students cannot receive credit for this course and course 11B or Economics 11B or Mathematics 11B or 19B. Prerequisite(s): course 15A or 11A or Economics 11A or Mathematics 11A or 19A. (General Education Code(s): MF, IN, Q.) The Staff, P. Garaud, B. Mendes</p> <p>20. Mathematical Methods for Engineers II. W,S Applications-oriented class on ordinary differential equations (ODEs) and systems of ODEs using Matlab as a computational support tool. Covers linear ODEs and systems of linear ODEs; nonlinear ODEs using substitution and Laplace transforms; phase-plane analysis; introduction to numerical methods. Students cannot receive credit for this course and for courses 20A or Mathematics 24. Prerequisite(s): Mathematics 19B, and course 10 or 10A or Mathematics 21. (General Education Code(s): MF.) Q. Gong, J. Katzenelson</p> <p>20A. Basic Mathematical Methods for Engineers II (3 credits). W,S Applications-oriented class on ordinary differential equations (ODEs) and systems of ODEs integrating Matlab as a computational support tool. Covers linear ODEs and systems of linear ODEs; nonlinear ODEs using substitution and Laplace transforms. Students cannot receive credit for this course and for courses 20 or Mathematics 24. Prerequisite(s): Mathematics 19B, and course 10 or 10A or Mathematics 21. Q. Gong, J. Katzenelson</p> <p>20B. Mathematical Methods for Engineers IIB (2 credits). Can only be taken by students who need a transition from course 20A to course 20. Students cannot receive credit for this course and for course 20 or Mathematics 24. Prerequisite(s): course 20A. Enrollment by permission of instructor only. The Staff</p> <p>80A. Gambling and Gaming. F,S Games of chance and strategy motivated early developments in probability, statistics, and decision theory. Course uses popular games to introduce students to these concepts, which underpin recent scientific developments in economics, genetics, ecology, and physics. (General Education Code(s): SR, T7—Natural Sciences or Social Sciences, Q.) H. Lee, A. Rodriguez, B. Mendes, A. Kottas</p> <p>80B. Data Visualization. W Introduces the use of complex-data graphical representations to extract information from data. Topics include: summary statistics, boxplots, histograms, dotplots, scatterplots, bubble plots, and map-creation, as well as visualization of trees and hierarchies, networks and graphs, and text. (General Education Code(s): SR.) A. Rodriguez</p> <h2>Upper-Division Courses</h2> <p>100. Mathematical Methods for Engineers III. Applications-oriented course on complex analysis and partial differential equations using Maple as symbolic math software support. In addition, introduces Fourier analysis, special functions, and asymptotic methods. Students cannot receive credit for this course and Physics 116B or Physics 116C. Prerequisite(s): course 20, or by permission of instructor. Enrollment limited to 25. The Staff</p> <p>107. Introduction to Fluid Dynamics. F Covers fundamental topics in fluid dynamics: Euler and Lagrange descriptions of continuum dynamics; conservation laws for inviscid and viscous flows; potential flows; exact solutions of the Navier-Stokes equation; boundary layer theory; gravity waves. Students cannot receive credit for this course and Applied Mathematics and Statistics 217. (Also offered as Physics 107. Students cannot receive credit for both courses.) Prerequisite(s): Mathematics</p>
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107 or Physics 116C or Earth and Planetary Sciences 111. N. Brummell, The Staff

114. Introduction to Dynamical Systems. W

Introduces continuous and discrete dynamical systems. Topics include: fixed points; stability; limit cycles; bifurcations; transition to and characterization of chaos; fractals. Examples are drawn from sciences and engineering. Students cannot receive credit for this course and course 214. (Formerly course 146.) Prerequisite(s): course 20 or 20A, or Mathematics 21 and Mathematics 24, or Physics 116B. Enrollment restricted to sophomores, juniors and seniors. (General Education Code(s): MF.) P. Garaud, D. Milutinovic, Q. Gong

115. Stochastic Modeling in Biology.

Application of differential equations, probability, and stochastic processes to problems in cell, organismal, and population biology. Topics include life-history theory, behavioral ecology, and population biology. Students may not receive credit for this course and course 215. Prerequisite(s): course 131, a university-level course in biology, and operational knowledge of a programming language; or consent of instructor. The Staff

118. Estimation and Introduction to Control of Stochastic Processes. S

Provides practical knowledge of Kalman filtering and introduces control theory for stochastic processes. Selected topics include: state-space modeling; discrete- and continuous-time Kalman filter; smoothing; and applications in feedback control. Students learn through hands-on experience. Students cannot receive credit for this course and course 218. Enrollment by permission of instructor. (General Education Code(s): SR.) D. Milutinovic

131. Introduction to Probability Theory. F

Introduction to probability theory and its applications. Combinatorial analysis, axioms of probability and independence, random variables (discrete and continuous), joint probability distributions, properties of expectation, Central Limit Theorem, Law of Large Numbers, Markov chains. Students cannot receive credit for this course and course 203 and Computer Engineering 107. Prerequisite(s): course 11B or Economics 11B or Mathematics 11B or 19B. (General Education Code(s): SR, Q.) R. Prado, D. Draper, B. Sansó, A. Kottas

132. Classical and Bayesian Inference. W

Introduction to statistical inference at a calculus-based level: maximum likelihood estimation, sufficient statistics, distributions of estimators, confidence intervals, hypothesis testing, and Bayesian inference. Students cannot receive credit for this course and course 206. (Formerly Statistical Inference.) Prerequisite(s): course 131 or Computer Engineering 107. (General Education Code(s): SR.) A. Kottas, A. Rodriguez, D. Draper, J. Lee

147. Computational Methods and Applications. W

Applications of computational methods to solving mathematical problems using Matlab. Topics include solution of nonlinear equations, linear systems, differential equations, sparse matrix solver, and eigenvalue problems. Prerequisite(s): course 10 or 10A, or Mathematics 21. Knowledge of differential equations is recommended (course 20 or 20A, or Mathematics 24). (General Education Code(s): MF.) H. Wang

156. Linear Regression.

Covers simple linear regression, multiple regression, and analysis of variance models. Students learn to use the software package R to perform the analysis, and to construct a clear technical report on their analysis, readable by either scientists or nontechnical audiences. (Formerly Linear Statistical Models.) Prerequisite(s): course 132 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 30. (General Education Code(s): W.) H. Lee

198. Independent Study or Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Study or Research (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Research and Teaching in AMS (3 credits). F

Basic teaching techniques for teaching assistants, including responsibilities and rights;

resource materials; computer skills; leading discussions or lab sessions; presentation techniques; maintaining class records; and grading. Examines research and professional training, including use of library; technical writing; giving talks in seminars and conferences; and ethical issues in science and engineering. Enrollment restricted to graduate students. A. Kottas, The Staff

202. Linear Models in SAS.

Case study-based course teaches statistical linear modeling using the SAS software package. Teaches generalized linear models; linear regression; analysis of variance/covariance; analysis of data with random effects and repeated measures. Prerequisite(s): course 156 or 256, or permission of instructor. Enrollment restricted to graduate students. B. Mendes

203. Introduction to Probability Theory. F

Introduces probability theory and its applications. Requires a multivariate calculus background, but has no measure theoretic content. Topics include: combinatorial analysis; axioms of probability; random variables (discrete and continuous); joint probability distributions; expectation and higher moments; central limit theorem; law of large numbers; and Markov chains. Students cannot receive credit for this course and course 131 or Computer Engineering 107. Enrollment restricted to graduate students, or by permission of the instructor. R. Prado, B. Sanso, A. Kottas

205B. Intermediate Classical Inference. W

Statistical inference from a frequentist point of view. Properties of random samples; convergence concepts applied to point estimators; principles of statistical inference; obtaining and evaluating point estimators with particular attention to maximum likelihood estimates and their properties; obtaining and evaluating interval estimators; and hypothesis testing methods and their properties. (Formerly Statistical Inference.) Prerequisite(s): course 203 or equivalent. Enrollment restricted to graduate students. D. Draper, B. Sansó

206. Classical and Bayesian Inference. W

Introduction to statistical inference at a calculus-based level: maximum likelihood estimation, sufficient statistics, distribution of estimators, confidence intervals, hypothesis testing, and Bayesian inference. Students cannot receive credit for this course and course 132. (Formerly Bayesian Statistics.) Prerequisite(s): course 203. Enrollment restricted to graduate students; undergraduates may enroll by permission of instructor. H. Lee, D. Draper, A. Kottas

206B. Intermediate Bayesian Inference. W

Bayesian statistical methods for inference and prediction including: estimation; model selection and prediction; exchangeability; prior, likelihood, posterior, and predictive distributions; coherence and calibration; conjugate analysis; Markov Chain Monte Carlo methods for simulation-based computation; hierarchical modeling; Bayesian model diagnostics, model selection, and sensitivity analysis. Prerequisite(s): course 203. Enrollment restricted to graduate students; undergraduates may enroll by permission of instructor. R. Prado, A. Rodriguez, J. Lee

207. Intermediate Bayesian Statistical Modeling. S

Hierarchical modeling, linear models (regression and analysis of variance) from the Bayesian point of view, intermediate Markov chain Monte Carlo methods, generalized linear models, multivariate models, mixture models, hidden Markov models. Prerequisite(s): courses 206 and 206B, and graduate standing or permission of instructor. R. Prado, D. Draper, B. Sanso

211. Foundations of Applied Mathematics. F

Accelerated class reviewing fundamental applied mathematical methods for all sciences. Topics include: multivariate calculus, linear algebra, Fourier series and integral transform methods, complex analysis, and ordinary differential equations. Enrollment restricted to graduate students. N. Brummell, J. Katzenelson

212A. Applied Mathematical Methods I. W

Focuses on analytical methods for partial differential equations (PDEs), including: the method of characteristics for first-order PDEs; canonical forms of linear second-order PDEs; separation of variables; Sturm-Liouville theory; Green's functions. Illustrates each method using applications taken from examples in physics. Course 211 or equivalent is

strongly recommended as preparation. Enrollment restricted to graduate students. Undergraduates are encouraged to take this class with permission of instructor. H. Wang, N. Brummell, P. Garaud

212B. Applied Mathematical Methods II. S

Covers perturbation methods: asymptotic series, stationary phase and expansion of integrals, matched asymptotic expansions, multiple scales and the WKB method, Padé approximants and improvements of series. (Formerly course 212.) Prerequisite(s): course 212A. H. Wang, N. Brummell, P. Garaud

213. Numerical Solutions of Differential Equations. S

Teaches basic numerical methods for numerical linear algebra and, thus, the solution of ordinary differential equations (ODEs) and partial differential equations (PDEs). Covers LU, Cholesky, and QR decompositions; eigenvalue search methods (QR algorithm); singular value decomposition; conjugate gradient method; Runge–Kutta methods; error estimation and error control; finite differences for PDEs; stability, consistency, and convergence. Basic knowledge of computer programming is needed. Enrollment restricted to graduate students or permission of instructor. H. Wang, Q. Gong, N. Brummell, P. Garaud

214. Applied Dynamical Systems. W

Introduces continuous and discrete dynamical systems. Topics include: fixed points; stability; limit cycles; bifurcations; transition to and characterization of chaos; and fractals. Examples drawn from sciences and engineering; founding papers of the subject are studied. Students cannot receive credit for this course and course 114. Enrollment restricted to graduate students. Enrollment of undergraduates by permission of instructor. Enrollment limited to 15. P. Garaud, D. Milutinovic, Q. Gong

215. Stochastic Modeling in Biology.

Application of differential equations and probability and stochastic processes to problems in cell, organismal, and population biology. Topics include: life-history theory, behavioral ecology, and population biology. Students may not receive credit for this course and course 115. Enrollment restricted to graduate students or permission of instructor. The Staff

216. Stochastic Differential Equations. W

Introduction to stochastic differential equations and diffusion processes with applications to biology, biomolecular engineering, and chemical kinetics. Topics include Brownian motion and white noise, gambler's ruin, backward and forward equations, and the theory of boundary conditions. Enrollment restricted to graduate students or consent of instructor. H. Wang

217. Introduction to Fluid Dynamics. F

Covers fundamental topics in fluid dynamics at the graduate level: Euler and Lagrange descriptions of continuum dynamics; conservation laws for inviscid and viscous flows; potential flows; exact solutions of the Navier–Stokes equation; boundary layer theory; gravity waves. Students cannot receive credit for this course and course 107. Enrollment restricted to graduate students. N. Brummell, The Staff

218. Estimation and Introduction to Control of Stochastic Processes. S

Provides practical knowledge of Kalman filtering and introduces control theory for stochastic processes. Selected topics include: state-space modeling; discrete- and continuous-time Kalman filter; smoothing; and applications in feedback control. Students learn through hands-on experience. Students cannot receive credit for this course and course 118. Enrollment restricted to graduate students. D. Milutinovic

221. Bayesian Decision Theory.

Explores conceptual and theoretical bases of statistical decision making under uncertainty. Focuses on axiomatic foundations of expected utility, elicitation of subjective probabilities and utilities, and the value of information and modern computational methods for decision problems. Prerequisite(s): course 206. Enrollment restricted to graduate students. D. Draper, B. Sansó

223. Time Series Analysis. F

Graduate level introductory course on time series data and models in the time and frequency domains: descriptive time series methods; the periodogram; basic theory of stationary processes; linear filters; spectral analysis; time series analysis for repeated

measurements; ARIMA models; introduction to Bayesian spectral analysis; Bayesian learning, forecasting, and smoothing; introduction to Bayesian Dynamic Linear Models (DLMs); DLM mathematical structure; DLMs for trends and seasonal patterns; and autoregression and time series regression models. Prerequisite(s): course 206B, or by permission of instructor. Enrollment restricted to graduate students. R. Prado

225. Multivariate Statistical Methods.

Introduction to statistical methods for analyzing data sets in which two or more variables play the role of outcome or response. Descriptive methods for multivariate data. Matrix algebra and random vectors. The multivariate normal distribution. Likelihood and Bayesian inferences about multivariate mean vectors. Analysis of covariance structure: principle components, factor analysis. Discriminant, classification and cluster analysis.

Prerequisite(s): course 206 or 206B, or by permission of instructor. Enrollment restricted to graduate students. D. Draper, J. Lee

227. Waves and Instabilities in Fluids.

Advanced fluid dynamics course introducing various types of small-amplitude waves and instabilities that commonly arise in geophysical and astrophysical systems. Topics covered include, but are not limited to: pressure waves, gravity waves, Rossby waves, interfacial instabilities, double-diffuse instabilities, and centrifugal instabilities. Advanced mathematical methods are used to study each topic. Undergraduates are encouraged to take this course with permission of the instructor. Prerequisite(s): courses 212A and 217. P. Garaud

231. Nonlinear Control Theory.

Covers analysis and design of nonlinear control systems using Lyapunov theory and geometric methods. Includes properties of solutions of nonlinear systems, Lyapunov stability analysis, effects of perturbations, controllability, observability, feedback linearization, and nonlinear control design tools for stabilization. Prerequisite(s): basic knowledge of mathematical analysis and ordinary differential equations is assumed. Enrollment restricted to graduate students or permission of instructor. Q. Gong

232. Applied Optimal Control. S

Introduces optimal control theory and computational optimal control algorithms. Topics include: calculus of variations, minimum principle, dynamic programming, HJB equation, linear-quadratic regulator, direct and indirect computational methods, and engineering application of optimal control. Prerequisite(s): course 114 or 214, or Computer Engineering 240 or 241, or Mathematics 145. Enrollment restricted to graduate students. Q. Gong

236. Motion Coordination of Robotic Networks.

Comprehensive introduction to motion coordination algorithms for robotic networks. Emphasis on mathematical tools to model, analyze, and design cooperative strategies for control, robotics, and sensing tasks. Topics include: continuous and discrete-time evolution models, proximity graphs, performance measures, invariance principles, and coordination algorithms for rendezvous, deployment, flocking, and consensus. Techniques and methodologies are introduced through application setups from multi-agent robotic systems, cooperative control, and mobile sensor networks. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

241. Bayesian Nonparametric Methods. W

Theory, methods, and applications of Bayesian nonparametric modeling. Prior probability models for spaces of functions. Dirichlet processes. Polya trees. Nonparametric mixtures. Models for regression, survival analysis, categorical data analysis, and spatial statistics. Examples drawn from social, engineering, and life sciences. Prerequisite(s): course 207. Enrollment restricted to graduate students. A. Rodriguez, A. Kottas

245. Spatial Statistics. S

Introduction to the analysis of spatial data: theory of correlation structures and variograms; kriging and Gaussian processes; Markov random fields; fitting models to data; computational techniques; frequentist and Bayesian approaches. Prerequisite(s): course 207. Enrollment restricted to graduate students. B. Sanso, H. Lee

256. Linear Statistical Models. S

Theory, methods, and applications of linear statistical models. Review of simple correlation and simple linear regression. Multiple and partial correlation and multiple linear regression.

Analysis of variance and covariance. Linear model diagnostics and model selection. Case studies drawn from natural, social, and medical sciences. Course 205 strongly recommended as a prerequisite. Undergraduates are encouraged to take this class with permission of instructor. Prerequisite(s): course 205A or 205B or permission of instructor. Enrollment restricted to graduate students. The Staff, R. Prado, A. Rodriguez, B. Sanso, J. Lee

261. Probability Theory with Markov Chains.

Introduction to probability theory: probability spaces, expectation as Lebesgue integral, characteristic functions, modes of convergence, conditional probability and expectation, discrete-state Markov chains, stationary distributions, limit theorems, ergodic theorem, continuous-state Markov chains, applications to Markov chain Monte Carlo methods. Prerequisite(s): course 205B or by permission of instructor. Enrollment restricted to graduate students. A. Kottas

263. Stochastic Processes. F

Includes probabilistic and statistical analysis of random processes, continuous-time Markov chains, hidden Markov models, point processes, Markov random fields, spatial and spatio-temporal processes, and statistical modeling and inference in stochastic processes. Applications to a variety of fields. Prerequisite(s): course 205A, 205B, or 261, or by permission of instructor. A. Rodriguez, A. Kottas

274. Generalized Linear Models.

Theory, methods, and applications of generalized linear statistical models; review of linear models; binomial models for binary responses (including logistical regression and probit models); log-linear models for categorical data analysis; and Poisson models for count data. Case studies drawn from social, engineering, and life sciences. Prerequisite(s): course 205A, 205B, or 256. Enrollment restricted to graduate students. A. Kottas, The Staff

280A. Seminar in Mathematical and Computational Biology (2 credits). F

Weekly seminar on mathematical and computational biology. Participants present research findings in organized and critical fashion, framed in context of current literature. Students present own research on a regular basis. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. The Staff

280B. Seminars in Statistical and Applied Mathematical Modeling (2 credits). F,W,S

Weekly seminar series covering topics of current research in applied mathematics and statistics. Permission of instructor required. Enrollment restricted to graduate students. (Formerly Seminar in Applied Mathematics and Statistics.) May be repeated for credit. The Staff

280C. Seminar in Geophysical and Astrophysical Fluid Dynamics (2 credits). F,W,S

Weekly seminar/discussion group on geophysical and astrophysical fluid dynamics covering both analytical and computational approaches. Participants present research progress and findings in semiformal discussions. Students must present their own research on a regular basis. Enrollment restricted to graduate students. May be repeated for credit. N. Brummell, P. Garaud

280D. Seminar in Bayesian Statistical Methodology (2 credits).

Weekly seminar/discussion group on Bayesian statistical methods, covering both analytical and computational approaches. Participants present research progress and finding in semiformal discussions. Students must present their own research on a regular basis. Enrollment restricted to graduate students. May be repeated for credit. The Staff

285. Seminar in Career Skills (2 credits).

Seminar in career skills for applied mathematicians and statisticians. Learn about professional activities such as the publication process, grant proposals, and the job market. Enrollment restricted to graduate students, typically within two years of their expected Ph.D. completion date. The Staff

290A. Topics in Mathematical and Computational Biology (2 credits).

Focuses on applications of mathematical and computational methods with particular emphasis on advanced methods applying to organismal biology or resource management. Students read current literature, prepare critiques, and conduct projects. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. The

Staff

290B. Advanced Topics in the Numerical Solution of PDEs. S

Modern practical methods for the numerical solution of partial differential equations. Methods considered depend on the expertise of the instructor, but are covered in-depth and up to the cutting-edge of practical contemporary implementation. Content could be method-based (e.g., spectral methods, finite-element methods) or topic-based (e.g., simulations of turbulence). Some programming and numerical analysis (e.g., course 213) highly recommended. Enrollment restricted to graduate students and undergraduates with permission of the instructor. H. Wang, N. Brummell, P. Garaud

291. Advanced Topics in Bayesian Statistics (3 credits).

Advanced study of research topics in the theory, methods, or applications of Bayesian statistics. The specific subject depends on the instructor. Enrollment restricted to graduate students and by permission of instructor. May be repeated for credit. The Staff

296. Masters Project (2 credits). F,W,S

Independent completion of a masters project under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study or Research. F,W,S

Independent study or research under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. The Staff

297F. Independent Study (2 credits). F,W,S

Independent study or research under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Thesis research under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. The Staff

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Art

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Elena Baskin Visual Arts Studios

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Lower-Division Courses

10. Foundation Series in Art.

Introduces general education students and prospective majors to theory and practice of art and contemporary discourse surrounding it. Courses expose students to both art discourse and art making through large lecture sections that meet twice a week and smaller studio sections that meet twice a week. Students must register for both lecture and studio sections. The Staff

10D. 2D Foundation. W

Introduces students to the fundamental principles of two-dimensional art and design and focuses on analyzing the concepts of line, color shape, value, space, form, unity, balance, scale, proportion, texture, and emphasis to be used to express complex ideas. This course is a hybrid studio/lecture. Students are billed for a materials fee. (General Education Code(s): IM.) E. Leal

10E. 3D Foundation. F

Introduces students to the fundamental principles of three-dimensional art and design through basic concepts, techniques, and technical practice. Focuses on three-dimensional art and the design fundamentals of sculpture, public art, architecture, and the industrial-design process and production. This course is a hybrid studio/lecture. Students are billed for a materials fee. (General Education Code(s): IM.) J. Kerns

10F. 4D Foundation. S

Introduces students to the fundamental principles of four-dimensional/time-based art and design through basic concepts, techniques, and technical practices. Computers and video, photo, sound, and lighting equipment are used to create short-form, time-based work. This course is a hybrid studio/lecture. (General Education Code(s): IM.) S. Ruiz

20. Introduction to Contemporary Art.

Introduces basic conceptual and practical tools for specific art practices. Instruction consists of studio sections that meet twice a week incorporating theory, practice, technique, and critiques. (Formerly Introduction to Contemporary Art: Concepts and Practices.) The Staff

20G. Introduction to Print Media and Drawing. F,S

Introduces the methods, materials, and history of printmaking and drawing as a tool for creative exploration. Understanding and development of concepts and skills are

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- achieved through a series of lectures, studio demonstrations and practice, assignments, and critiques. Students are billed for a materials fee. Prerequisite(s): Pre-Art major or completion of two courses from 10A, 10B, 10D, 10E, or 10F. (General Education Code(s): PR-C.) E. Leal, J. Lee
- 20H. Introduction to Sculpture and Public Art. W,S**
Introduces sculpture and art in public space. The course is composed of lectures, readings, discussions, studio assignments, and demonstrations. Students are billed for a materials fee. Prerequisite(s): Pre-Art major or completion of two courses from 10A, 10B, 10D, 10E, or 10F. (General Education Code(s): PR-C.) W. Hibbert-Jones, The Staff
- 20I. Introduction to Photography and Digital Media. F,W**
Introduces basic skills and conceptual development in photography and digital media through image-making in the field, on the web, and in laboratories, through readings, discussions, and critiques. Students are billed for a materials fee. Prerequisite(s): Pre-Art major or completion of two courses from 10A, 10B, 10D, 10E, or 10F. (General Education Code(s): PR-C.) N. Locks, E. Anderson
- 20J. Introduction to Drawing and Painting. F,W**
Introduces the material practices of painting in combination with the formal vocabulary of the visual arts. A discussion of values, form, color, and figure/ground relationships enters into each class. Students are billed for a materials fee.
Prerequisite(s): Pre-Art major or completion of two courses from 10A, 10B, 10D, 10E, or 10F. (General Education Code(s): PR-C.) M. Gwyn
- 42. Student-Directed Seminar. ***
Seminars taught by upper-division students under faculty supervision. Does not fulfill major requirement. (See course 192.) The Staff
- 80. Artists and Ideas.**
Introduces general education students, prospective majors, and art majors to art forms and critical ideas that have shaped artistic practice focusing on the work of contemporary artists, including current faculty in the Art Department. The Staff
- 80B. Environmental Art. W**
Examines ways artists engage, interact, and comment upon ecology and nature in their artworks by examining environmental art from the 1960s through the present. (General Education Code(s): PE-E.) E. Stephens
- 80D. Introduction to Photography. W,S**
Introductory course for beginners. Various techniques examined and assigned in specific exercises. Work on projects using color film; this is a non-darkroom course. Examples given of photography from 1826 to the present. Balances historical study and practice through assigned homework exercises. Students are billed a materials fee. (General Education Code(s): IM, T4-Humanities and Arts, A.) K. Perry
- 80F. Introduction to Issues in Digital Media. F,W**
Digital media was positioned as a radical new social and creative medium in the 1980s and 1990s. The ensuing decades have seen this area become ubiquitous mass media with structural inequalities, centralized ownership, environmental damage, and precarious labor conditions. At the same time, it has become the language of our time and remains a site of creativity and intervention and offers opportunities for social changes. This course provides an introduction to key issues in this area through the lens of race and ethnicity. (General Education Code(s): ER, T6-Natural Sciences or Humanities and Arts, A.) K. O'Riordan, K. McKinley
- 80H. History of Digital Games. W**
Surveys the history of digital games from open "university games" through the home console, PC, and contemporary platforms, and on to "indie" and art games. Throughout, the course locates connections between technology, marketing, and play culture. Enrollment limited to 100. (General Education Code(s): PE-T.) The Staff
- 80I. Foundations of Play. S**
Understanding the foundations of play through reading influential texts; in-class lectures and activities; designing and "playtesting" games; and the ethnographies of players in the

Management UCDC Program Writing Program Theater Arts Yiddish	<p>physical world. (Formerly Digital Arts and New Media 80I.) (General Education Code(s): PE-H.) R. Hunicke</p> <p>99. Tutorial. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
Teaching and Administrative Staff	<h2>Upper-Division Courses</h2>
Appendices	<p>102. Introduction to Physical Computing and Interactivity. *</p>
Archive of General Catalogs	<p>Physical computing examines bodily sound, movement, and other physical phenomena as an interface to a computer or microcomputer. Students investigate electronics and devices for use in interactive art-making to create sculptural or installation-based projects.</p>
Nondiscrimination Statement	<p>Students receive hands-on experience working with sensors, motors, switches, gears, lights, circuits, and hardware store devices to create kinetic and interactive works of art, programming and interface design. Students are billed a materials fee. (Formerly course 22, Introduction to Electronics for Intermedia.) Prerequisite(s): Art 20B, 20I, 21, 80F, 103, 104, 107, or 108 or CMPS 25; and two courses from any non-computer/digital media lower-division art studios (Art 15-40, 80A, or 80D) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. E. Anderson</p>
Search the Catalog	<p>103. Physical Computing: Installation and Sculpture. W</p>
	<p>Examines computer interactivity and interface in art making through theory and practice. Students develop interactive installation and sculptural works of art. Assignments may include the acquisition and creation of digital images, two-dimensional animation, programming with MAX/MSP/Jitter, basic electronics and sensors, and digital video and audio. Discussions, readings, and critiques address content, aesthetics, concepts, and expression as well as a practical grasp of relevant software. Students are encouraged to develop research projects and explore experimental practices. Students are billed a materials fee. (Formerly course 118, Computer Art: Theories, Methods, and Practices.)</p>
	<p>Prerequisite(s): Art 20B, 20I, 21, 22, 80F, 102, 104, 107, or 108 or CMPS 25; and two courses from any non-computer/digital media lower-division art studios (Art 15-40, 80A, or 80D) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. E. Anderson</p>
	<p>104. Digital Video. W</p>
	<p>An exploration of the video medium including production using the digital video format.</p>
	<p>Digital video cameras will be used to produce digital source material to be manipulated in a non-linear digital editing system. Image manipulation, effects, and editing will be explored.</p>
	<p>A variety of video structures, theories, concepts, and forms will be examined through production, discussions, and viewing students' and artists' work. (Formerly course 119.)</p>
	<p>Prerequisite(s): Art 20B, 20I, 21, 22, 80F, 102, 103, 107, or 108 or CMPS 25; and two courses from any non-computer/digital media lower-division art studios (Art 15-40, 80A, or 80D) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. E. Anderson</p>
	<p>106. Introduction to Animation. W</p>
	<p>Introduces animation techniques, practices, history, and theories. Students learn</p>
	<p>techniques and process in 2D, stop-motion, and digital animation. Projects teach students</p>
	<p>the workflow of animating including script development, storyboarding, frame-by-frame</p>
	<p>animation, animatic, digital, and post-production. Students are required to research artists,</p>
	<p>both historical and contemporary, working in the field of animation and to be able to</p>
	<p>discuss the work. The course teaches theoretical and historical perspectives on animation</p>
	<p>and requires students to develop a critical analysis and vocabulary. Prerequisite(s): Three</p>
	<p>courses from the following: Art 15-40, 80A, 80D, 80F, or Computer Science 25. Enrollment</p>
	<p>restricted to art majors. May be repeated for credit. G. Thomas</p>
	<p>107. Introduction to 3D Graphics and Modeling. F</p>
	<p>Independent and collaborative creative projects using advanced computer methods. May</p>
	<p>include networking projects, virtual representations, interactive multimedia, installation,</p>
	<p>performance, 3D modeling and animation, or robotics. Emphasis on advanced critical and</p>
	<p>experimental approaches to computers as a unique art medium, and contemporary</p>
	<p>research issues. Students are required to enroll in scheduled lab section. Students are</p>
	<p>billed for a materials fee. (Formerly course 121, Advanced Projects in Computer Art II.)</p>
	<p>Prerequisite(s): Art 20B, 20I, 21, 22, 80F, 102, 103, 104, or 108 or CMPS 25; and any two of</p>

any non-computer/digital media lower-division art studios (Art 15–40, 80A, and 80D) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. E. Anderson

108. New Media and Social Practice Artmaking. S

Provides students with firsthand experience developing new media artworks in relationship to the needs of specific communities and social struggles. Students develop content using new media practices, tools, systems, and strategies. The final artwork can utilize video, film, digital media, social networks, and app development, among other new media art forms. Students are billed for a materials fee. Prerequisite(s): Art 20B, 20I, 21, 22, 80F, 102, 103, 104, or 107 or Computer Science 25; and two courses from lower-division art studios courses (Art 15–40, 80A, or 80D) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. E. Anderson

110. Intermediate/Advanced Drawing. W

Work moves toward individual directions in drawing. A variety of media are explored. Each student is expected to do 150 hours of drawing over the quarter. Students are billed a materials fee. (Formerly course 101.) Prerequisite(s): Art 15, 20, 20A, 20G, 20J, 80A, 111, 112, 119; and two non-drawing lower-division art studios (Art 20H, 20I, 21–40, 80D, or 80F, or CMPS 25) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. F. Galuszka

111. Figure Drawing. *

Focuses on drawing from the human figure and exploring the figure for the purpose of personal expression and social communication. Intended for the intermediate/advanced drawing student. Students are billed a materials fee. (Formerly course 102.) Prerequisite(s): Art 15, 20, 20A, 20G, 20J, 80A, 110, 112, 119; and two non-drawing lower-division art studios (Art 20H, 20I, 21–40, 80D, or 80F, or CMPS 25) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. The Staff

112. Mixed Media Works on Paper. F

This course stresses alternative drawing processes, techniques, and materials. Intended for the intermediate or advanced student. Students are billed a materials fee. (Formerly course 107.) Prerequisite(s): Art 15, 20, 20A, 20G, 20J, 80A, 110, 111, or 119; and two of any non-drawing lower-division art studios (Art 20H, 20I, 21–40, 80D, or 80F, or CMPS 25) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. M. Gwyn

118. Digital Drawing/Painting for Game Design. W,S

Supports students working as artists in an interdisciplinary collaboration with project teams led by senior students in computer game design (the yearlong Computer Science 170 series). Instruction includes techniques, tools, and concepts of drawing and painting in a digital environment oriented toward the context of computer games. Coursework is composed of projects to develop individual ideas and skills, as well as offering productively engaged participation in a collaborative game-design team. Students are billed a materials fee. Enrollment restricted to art majors; admission by permission of the instructor. May be repeated for credit. The Staff

119. Special Topics in Drawing. F

Special topics in drawing as announced. Students are billed a materials fee. (Formerly course 105.) Prerequisite(s): Art 15, 20, 20A, 20G, 20J, 80A, 110, 111, or 112; and two non-drawing lower-division art studios (Art 20H, 20I, 21–40, 80D, or 80F, and CMPS 25) or by permission of instructor. Enrollment restricted to art majors. May be repeated for credit. N. Buchanan, M. Gwyn, G. Thomas

120. Introduction to Intermedia. F

Explorations of the role of an artist as someone who integrates a variety of media to explore conscious subject matter. Emphasis on contemporary art forms that incorporate scores, mapping, found objects, time-based elements, and interactivity. Students are billed a materials fee. Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 121, 122, 124, 125, 129, 172, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. E. Crichton

121. Intermedia II. *

Investigation in combining media, materials, and forms to explore a variety of contemporary art practices. Students develop their projects thematically throughout the quarter. Assignments encourage experimentation with time and motion, text and images, collaboration, installation, performance, and interactivity. Discussions, reading handouts, and critiques further the development of perceptual and conceptual skills. Skill workshops introduce new techniques. Students are billed a materials fee. (Formerly course 109.) Prerequisite(s): Art 120. Enrollment restricted to art majors. May be repeated for credit. (General Education Code(s): PR-C, A.) E. Crichton

122. Intermedia: Conceptual and Process–Oriented Approaches. *

Special subjects to be offered by regular staff or visiting artists as announced. Students are billed a materials fee. (Formerly course 146, Special Topics in Intermedia: Conceptual and Process–Oriented Approaches .) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 124, 125, 129, 172, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. The Staff

124. Material Metaphor: Creating Meaning in Form. S

Workshops introduce further investigation of materials and techniques. Students explore diverse methods of visual communication through a series of projects that require individual research and collaborative efforts. Students are encouraged to develop projects according to their motivation, expertise, and self assessment. Emphasis placed on contemporary studio practices of installation, students will integrate a variety of materials and metaphor within the architectural and environmental space. Students are billed a materials fee. (Formerly course 145, Material Metaphor II.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 125, 129, 172, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Stephens

125. Environmental Art Studio. W

Introduces students to environmental art and design through basic concepts, techniques, and studio practice. Students enrolled in this course are also required to attend the first weekly lecture of course 80B, Environmental Art, which is a lecture course focusing on the history of environmental art through current practices in the field. Students are billed for a materials fee. Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 129, 172, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Stephens

128. Picturing Identity: Document and Culture. *

Studio addresses issues of race, gender, culture, personal identity, and visual representation. Examines ways ideas of identity are given visual form and communicated in fine arts and mass media. Students research ways traditionally underrepresented groups in society have been and are being represented in mass media; they then visually interpret that information in forms of visual artifacts. This process and interpretation serve as springboard to examination of expanded ideas of identity, including personal and/or family culture and history, gender, and ethnicity. Encourages use of broad range of mediums available to construct visual representations of identity. Students are billed a materials fee. (Formerly course 161.) Prerequisite(s): Three courses from the following: Art 15–40, 80A, 80D, 80F, or Computer Science 25. Enrollment restricted to art majors. The Staff

129. Special Topics in Intermedia. W

Exploring interactive strategies for making art. Projects experiment with combining forms and mediums to engage an audience. Students are billed a materials fee. (Formerly course 110.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 172, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Stephens

130. Intermediate/Advanced Painting. *

Continuation of the development of a basic foundation in painting with emphasis on the development of individual, experimental procedures. A foundation in drawing is recommended. Students are billed a materials fee. (Formerly course 103.) Prerequisite(s): Art 20E, 20J, 24, 24A, 24B, 133, 137, 138, or 139; and two of any non-painting lower-

division studios (Art 15–40, 80A, 80D, 80F, or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. M. Gwyn

133. Abstract Painting. W

Exploration of abstract painting through studio work, lectures, and critiques with emphasis on progressive abstraction, minimalism, op art, and abstract expressionism as well as other 20th-century and 21st-century forms. A foundation in drawing is recommended. Students are billed a materials fee. Prerequisite(s): Art 20E, 20J, 24, 24A, 24B, 130, 137, 138, or 139; and two of any non-painting lower-division studios (Art 15–40, 80A, 80D, 80F, or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. I. Pines

137. Outdoor Painter's Project. S

Explores contemporary landscape through the practice of plein air painting. Observational plein air painting will provide the foundation for the class. Instruction includes technical instruction in materials and technique as well as conceptual material. Student may work with oils, alkyds, or acrylic on panels, paper, or canvas. Prerequisite(s): Art 20E, 20J, 24, 24A, 24B, 130, 133, 138, or 139; and two of any non-painting lower-division studios (Art 15–40, 80A, 80D, 80F, or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. P. Loftus, The Staff

138. Facture and Meaning. F

Explores the materials and history of painting through lectures, demonstrations, and practice in oils, egg tempura, distemper, and flashe paint. Students participate in group practices and also work independently on projects designed by them in consultation with the instructor. A foundation in drawing is recommended. Students are billed for a materials fee. Prerequisite(s): art 20E, 20J, 24, 24A, 24B, 130, 137, or 139; and two of any non-painting lower-division art studios (Art 15–40, 80A, 80D, 80F, or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. M. Gwyn

139. Special Topics in Painting. S

Special studies in painting as announced. A foundation in drawing is recommended. Students are billed a materials fee. (Formerly course 104.) Prerequisite(s): Art 20E, 20J, 24, 24A, 24B, 133, 137, or 138; and two of any non-painting lower-division studios (Art 15–40, 80A, 80D, 80F, or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. M. Gwyn, The Staff

149A. Contemporary Visual Media: Issues of Theory and Practice. *

Examines selected issues in critical theory relevant to contemporary visual practices through writing assignments and class discussions of core readings. Specifically, thematically explores the relationship between visual art and film aesthetics. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors. (General Education Code(s): W.) The Staff

149B. Contemporary Visual Media: Issues of Theory and Practice. *

Examines selected issues in critical theory relevant to contemporary visual practices through writing assignments and class discussions of core readings. Specifically, focuses on the creative process: How do artists work and what informs their production? Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors. (General Education Code(s): W.) The Staff

150. Darkroom Practices. F

Students concentrate on darkroom practices and explore visual ideas, directing their work toward individualized goals. Required work includes making photographic prints, reading historical and theoretical works, and examination of photographs. Students are billed a materials fee. (Formerly Black and White Photography.) Prerequisite(s): Art 20C, 20I, 30, 32, 80D, 151, 156, 157, 158, or 159; and two of any non-photo lower-division studios (Art 15–40, 80A, 80F or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. S. Friedman, N. Locks, The Staff

150C. Critical Issues in Contemporary Art. *

This writing-specific course is concerned with the role of the artist in society and offers a comprehensive overview of contemporary thought within the visual arts from an international perspective. Special emphasis placed on current trends and shifts in artistic production, theory, and criticism, and on art works that are artistically and intellectually

inventive, as well as those that produce controversial and often challenging results.
Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements.
Enrollment restricted to junior and senior art majors. (General Education Code(s): W.) The Staff

151. Digital Photography. F,W,S

Introduction to basic theories behind the digital production, manipulation, and output of photographic images. Through readings and production, students address major issues specific to working with images in an increasingly digital environment. Students are billed a materials fee. Prerequisite(s): Art 20C, 20I, 30, 32, 80D, 150, 156, 157, 158, or 159; and two of any non-photo lower-division studios (Art 15-40, 80A, 80F or Computer Science 25). Enrollment restricted to art majors. May be repeated for credit. The Staff, E. Crichton, K. Perry

156. Project Development in Photography. W

Concentrates on photographic project development, developing analytical skills designed to help direct students' own photographic ideas. Helps students create a conceptual theoretical framework through image-making in the field and studio, through critique and discussion, through readings, and by studying the work of artists. Students are billed a materials fee. Prerequisite(s): Art 150 or 151. Enrollment restricted to art majors. May be repeated for credit. N. Locks

157. Advanced Digital Photography. *

Further study the practice, theories, and criticisms of the digital production, manipulation, and output of photographic images. Major issues specific to the production of digital images will be addressed through readings and discussion, including techniques and theories drawn from a course reader and a textbook on advanced Photoshop skills. A final project is required. Students are billed a materials fee. Prerequisite(s): Art 151. Enrollment restricted to art majors. May be repeated for credit. N. Locks

158. Advanced Photography. F,S

Students produce a portfolio of photographs, read historical and theoretical works, and study photographs and other art works. Students are billed a materials fee. Prerequisite(s): two courses from Art 150, 151, 156, 157, or 159. Enrollment restricted to art majors. May be repeated for credit. N. Locks

159. Special Topics in Photography. *

Special studies in photography, concentrating on specific subject matter or media. Topics may include documentary photography, landscape, alternative processes, or mixed media. Students are billed a materials fee. Prerequisite(s): Art 150 or 151. Enrollment restricted to art majors. May be repeated for credit. N. Locks

160B. Mono/Mixed Media Printmaking. W

Introduces the contemporary monotype, monoprint, and mixed media print processes facilitating a crossover between painting, drawing, and printmaking. Through lectures, demonstrations, and discussions on topics and class assignments, students will expand their creative possibilities in this exciting medium. Students are billed a materials fee. (Formerly course 27, Monoprinting/Mixed Media Printing.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 33, 36, 38, 161B, 162A, 162B, 163A, 163B, 164A, 165, 168, or 169; and two non-print media lower-division studios (Art 15-40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Leal, J. Lee

161B. Relief/Mixed Media Printmaking. *

Explores traditional, contemporary, and experimental processes, issues, and concepts of relief and mono/mixed media printmaking. Students gain in-depth information and working knowledge to specialize individual ideas and build artistic development through varieties of class activities. (Formerly course 36.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 27, 33, 38, 160B, 162A, 162B, 163A, 163B, 164A, 165, 168, or 169; and two non-print media lower-division studios (Art 15-40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. J. Lee, The Staff

162A. Intaglio I. F

Introduces students to various methods used in making intaglio prints. Encourages individual artistic growth of imagery and technique through assignments designed to explore the medium. Includes discussion and critique of work with equal emphasis on

	<p>technique and concept. Students are billed a materials fee. (Formerly course 112.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 27, 33, 36, 38, 160B, 161B, 162B, 163A, 163B, 164, 165, 168, or 169; and two non-print media lower-division studios (Art 15-40, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. J. Lee</p>
	<p>162B. Intaglio II. *</p> <p>This presentation of advanced intaglio techniques emphasizes a variety of multi-plate color printing and photo etching processes. The course concentrates on individual development in style and concept through the intaglio process. Students are billed a materials fee.</p> <p>Prerequisite(s): Art 162A. Enrollment restricted to art majors. May be repeated for credit. J. Lee</p>
	<p>163A. Lithography I. F</p> <p>Introduction to drawing, processing, and printing of lithographs from stone. Emphasis on discovery of tonal, textural, and expressive potential from the surface of the stone, while establishing individual directions in imagery. Condensed history of the medium, technical theory, and critique in lecture and demonstrations. Students are billed a materials fee. (Formerly course 114.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 27, 33, 36, 38, 160B, 161B, 162A, 162B, 164A, 165, 168, or 169; and two non-print media lower-division studios (Art 15-40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Leal</p>
	<p>163B. Lithography II. *</p> <p>Continuation of course 163A. Introduction of tusche wash, aluminum plates, transfers, photo-lithography (computer interface), and multiple color techniques. Emphasis on experimentation, refinement of craft and approach, defining individual imagery, and expanding scale. Further investigation of the history of the medium and contemporary practice. Students are billed a materials fee. Prerequisite(s): Art 163A. Enrollment restricted to art majors. May be repeated for credit. The Staff</p>
	<p>165. Print Media in Visual Communication. S</p> <p>Explores a unique approach reviewing the printed images in visual communications. A wide blend of traditional and cutting-edge print media processes with an interdisciplinary focus will be taught for conceptualizing, producing, and presenting the printed image. Students are billed a materials fee. Prerequisite(s): Art 160B, 161B, 162A, 162B, 163A, 163B, 164A, 168, or 169. Enrollment restricted to art majors. May be repeated for credit. J. Lee</p>
	<p>166. Art of Bookmaking. *</p> <p>Introduction to production of small edition books and multiples utilizing sequential visual imaging, narrative content, and mixed media in bookmaking. Provides instruction in conceptualizing, producing, and distributing printed artists' multiples. Ideas encouraged within a broad range of possibilities via the format of artists' books. Students are billed a materials fee. (Formerly course 126.) Prerequisite(s): Three courses from the following: Art 15-40, 80A, 80D, 80F, or Computer Science 25. Enrollment restricted to art majors. May be repeated for credit. The Staff</p>
	<p>168. Photo-Based Printmaking. W</p> <p>Intermediate/advanced studio course exploring the processes, history, and the recent developments in contemporary photomechanical printmaking. Through experimentation and research students learn how to utilize photographic imagery, blending them in multiple layers and colors, thereby facilitating articulation of their conceptual foundations. Students are billed a materials fee. (Formerly course 129.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 27, 33, 36, 38, 160B, 161B, 162A, 162B, 163A, 163B, 164A, 165, or 169; and two non-print media lower-division studios (Art 15-40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. J. Lee</p>
	<p>169. Special Topics in Printmaking. S</p> <p>Special studies in printmaking, as announced. Students are billed for a materials fee. (Formerly course 117.) Prerequisite(s): Art 20C, 20F, 20G, 25, 26, 27, 33, 36, 38, 160B, 161B, 162A, 162B, 163A, 163B, 164, 165, or 168; and two non-print lower-division media studios (Art 15-40, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. E. Leal</p>
	<p>172. Public Art: Memory, Landscape, and Artist as Activist. W,S</p> <p>In-depth exploration of art in the public sphere. Students build an understanding of public</p>

art sparked by practical experience designing and developing projects. Theoretical aspects of contemporary public art, and an introduction to the range of current public art practices will be introduced through readings, lectures, and artist's talks. The combination of practical hands-on technique and theoretical ideology will enable students to fully develop their own project within the class. Students are billed a materials fee. (Formerly course 156, Topics in Public Art II: Memory, Landscape, and Artist as Activist.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 129, 180B, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. W. Hibbert-Jones

180B. Sculpture II. S

More advanced fabrication techniques in sculpture using wood, metal, industrial, and other materials. Techniques include carpentry and woodshop skills, and an introduction to sculptural forms, processes, and ideas. Demonstrations, slide lectures, and critical discussion of work help develop technical and conceptual skills. Students are billed a materials fee. (Formerly course 141.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 129, 172, 183, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. The Staff, E. Stephens, W. Hibbert-Jones

183. Metal Fabrication. F,W

Focus on teaching intermediate to advanced students the processes and techniques of direct metal fabrication for contemporary sculpture and design. Explores a range of welding, cutting, and forming techniques and processes through demonstrations, slide lectures, field trips, and studio time. Demonstrations, slide lectures, and critical discussion of work help develop technical and conceptual skills. Students are billed a materials fee. (Formerly course 140.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 129, 172, 180B, 188, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. The Staff

188. Intermediate to Advanced Sculpture (Foundry). F,S

This intermediate/advanced course provides the information and facilities necessary to express ideas through the indirect process of metal casting. The "lost wax" method is used to manifest ideas in sculpture. Lectures and demonstrations are combined with work time in class. Students generate sculpture forms in wax then gate, invest, weld, chase, patina, and present at least one finished piece. Students are billed a materials fee. May be repeated for credit. (Formerly course 139.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 129, 180B, 172, 183, or 189; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. May be repeated for credit. The Staff

189. Special Topics in Sculpture. W,S

Special topics in sculpture as announced, concentrating on specific aspects of subject matter and media. Students are billed a materials fee. (Formerly course 148.) Prerequisite(s): Art 20D, 20H, 23, 28, 29, 37, 40, 120, 121, 122, 124, 125, 129, 172, 180B, 183, or 188; and two non-sculpture/intermedia public art lower-division studios (Art 15–40, 80A, 80D, 80F, or CMPS 25). Enrollment restricted to art majors. Offered in alternate academic years. May be repeated for credit. W. Hibbert-Jones, The Staff

190A. Writing for Artists. W

Provides practice and discussion for art majors as they face a variety of situations requiring clear and critical writing skills: writing scholarly statements about their creative process; developing a concise artist biographical statement; drafting a short grant proposal for their projects; and preparing works of art for critique and exhibition. (Formerly course 170W.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements.

Enrollment restricted to junior and senior art majors. (General Education Code(s): W.) C. Waters, The Staff

190B. Senior Project. S

Advanced senior art majors create and complete a senior project to fulfill their comprehensive graduation requirement. Focuses on a weekly lecture, studio work, peer critique, and professional practices such as the documentation and exhibition of work. Students are billed for a materials fee. Enrollment restricted to senior art majors. E.

Crichton

191. Teaching Apprenticeship. F,W,S

Designed for art majors at the upper-division level. Each student assists in a lower-division art course under the direct supervision of a faculty member. Students assist in technical instruction, critiques, and class discussions. May not be repeated for credit. Does not count toward upper-division major requirements. Enrollment restricted to art majors. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students should have upper-division standing with a proposal supported by a faculty member willing to supervise. Students submit petition to sponsoring agency. Enrollment limited to 5. The Staff

193. Field Study. F,W,S

Supervised off-campus study conducted under the immediate and direct guidance of a faculty supervisor. To be used primarily by upper-division students doing part-time off-campus study. Students submit petition to sponsoring agency. Petitions may be obtained in the Art Department Office. May be repeated for credit. The Staff

194. Forms and Ideas. F

Required for all junior transfer student art majors. Introduction to the art program, emphasizing awareness of contemporary visual practices and theory. Combines studio practice and theory. Students are billed a materials fee. (Formerly course 160.) Enrollment restricted to junior transfer art majors. (General Education Code(s): A.) K. Perry, The Staff

196. Independent Senior Project. F,W,S

Student will concentrate on completing work for comprehensive exhibition under the direction of his or her art adviser, with help from other faculty as needed. Students submit petition to sponsoring agency. (Formerly Senior Project.) May be repeated for credit. The Staff

197. Individual Study. F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

Provides for department-sponsored independent study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. Students are billed a materials fee. May be repeated for credit. The Staff

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Astronomy Department Office
211 Interdisciplinary Sciences Building
(831) 459-2844
<http://www.astro.ucsc.edu>

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Lower-Division Courses

1. Introduction to the Cosmos. F

Overview of the main ideas in our current view of the universe and how these ideas originated. Galaxies, quasars, stars, black holes, and planets. Students cannot receive credit for this course and course 2. (General Education Code(s): SI, IN.) P. Guha Thakurta

2. Overview of the Universe. F,S

An overview of the main ideas in our current view of the universe, and how they originated. Galaxies, quasars, stars, pulsars, and planets. Intended primarily for nonscience majors interested in a one-quarter survey of classical and modern astronomy. (General Education Code(s): MF, IN, Q.) C. Rockosi, S. Vogt

3. Introductory Astronomy: Planetary Systems. W

Properties of the solar system and other planetary systems. Topics include the Sun, solar system exploration, the physical nature of the Earth and the other planets, comets and asteroids, the origin of the solar system, the possibility of life on other worlds, planet formation, and the discovery and characterization of planets beyond the solar system. Intended for nonscience majors. Courses 3, 4, and 5 are independent and may be taken separately or sequentially. (Formerly Introductory Astronomy: The Solar System.) (General Education Code(s): MF, IN, Q.) D. Lin

4. Introductory Astronomy: The Stars. *

Stellar evolution: observed properties of stars, internal structure of stars, stages of a star's life including stellar births, white dwarfs, supernovae, pulsars, neutron stars, and black holes. Planet and constellation identification. Intended for nonscience majors. Courses 3, 4, and 5 are independent and may be taken separately or sequentially. (General Education Code(s): MF, IN, Q.) A. Steinacker

5. Introductory Astronomy: The Formation and Evolution of the Universe. W,S

The universe explained. Fundamental concepts of modern cosmology (Big Bang, dark matter, curved space, black holes, star and galaxy formation), the basic physics underlying them, and their scientific development. Intended for non-science majors. Courses 3, 4, and 5 are independent and may be taken separately. (General Education Code(s): MF, IN, Q.) J. Brodie, M. Bolte

6. The Space-Age Solar System. W

Scientific study of the Moon, Earth, Mercury, Venus, and Mars by the space program; history of rocket development; the Apollo program and exploration of the Moon;

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■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
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■ Environmental Studies
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■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

unmanned spacecraft studies of the terrestrial planets; scientific theories of planetary surfaces and atmospheres. Intended for nonscience majors. (Formerly course 80A.) (General Education Code(s): SI, T–2 Natural Sciences.) G. Smith

12. Stars and Stellar Evolution. F

An introduction to the observational facts and physical theory pertaining to stars. Topics include the observed properties of stars and the physics underlying those properties; stellar atmospheres; stellar structure and evolution. Intended for science majors and qualified non-science majors. Knowledge of high school physics and an understanding of mathematics at the Mathematics 2 level required. (General Education Code(s): MF, IN, Q.) The Staff

13. Galaxies, Cosmology, and High Energy Astrophysics. *

Introduction to modern cosmology and extragalactic astronomy. Topics include the origin of the universe, Big Bang cosmology, expansion of the universe, dark matter and dark energy, properties of galaxies and active galactic nuclei, and very energetic phenomena in our own and other galaxies. Intended for science majors and qualified non-science majors. Knowledge of high school physics and an understanding of mathematics at the Math 2 level required. (General Education Code(s): MF, IN, Q.) The Staff

15. Dead Stars and Black Holes. *

Course is primarily concerned with the structure, formation, and astrophysical manifestations of compact objects, such as white dwarfs, neutron stars, and black holes, and the astronomical evidence for their existence. Intended for science majors and qualified non-science majors. Knowledge of high school physics and an understanding of mathematics at the Math 2 level required. (General Education Code(s): MF, IN, Q.) E. Ramirez-Ruiz

16. Astrobiology: Life in the Universe. S

Topics include the detection of extrasolar planets, planet formation, stellar evolution and properties of Mars, the exploration of our solar system and the search for life within it, and the evolution of life on Earth. Intended for science majors and qualified non-science majors. Knowledge of high school physics and an understanding of mathematics at the Math 2 level required. Enrollment limited to 50. (General Education Code(s): MF, IN, Q.) A. Steinacker

18. Planets and Planetary Systems. W

Our solar system and newly discovered planetary systems. Formation and structure of planets, moons, rings, asteroids, comets. Intended for science majors and qualified non-science majors. Knowledge of high school physics and an understanding of mathematics at the Mathematics 2 level required. Offered in alternate academic years. (General Education Code(s): IN, Q.) D. Lin

Upper-Division Courses

111. Order-of-Magnitude Astrophysics. F

Examines the most basic and direct connection between physics and astrophysics in order to derive a better understanding of astrophysical phenomena from first principles to the extent possible. Prerequisite(s): Mathematics 22 or 23A; Physics 5B or 6B; and Physics 101A or Physics 102. Enrollment limited to 25. G. Laughlin

112. Physics of Stars. W

The leading observational facts about stars as interpreted by current theories of stellar structure and evolution. Spectroscopy, abundances of the elements, nucleosynthesis, stellar atmospheres, stellar populations. Final stages of evolution, including white dwarfs, neutron stars, supernovae. Prerequisite(s): Mathematics 22 or 23A, Physics 5B or 6B, and Physics 101A or Physics 102. J. Fortney

113. Introduction to Cosmology. S

Physical examination of our evolving universe: the Big Bang model; simple aspects of general relativity; particle physics in the early universe; production of various background radiations; production of elements; tests of geometry of the universe; dark energy and dark matter; and formation and evolution of galaxies and large-scale structure. (Formerly "Physical Cosmology.") Prerequisite(s): Mathematics 22 or 23A, Physics 5B or 6B, and Physics 101A or 102. P. Madau

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[Teaching and Administrative Staff](#)[Appendices](#)[Archive of General Catalogs](#)[Nondiscrimination Statement](#)[Search the Catalog](#)**117. High Energy Astrophysics. ***

Theory and practice of space and ground-based x-ray and gamma-ray astronomical detectors. High-energy emission processes, neutron stars, black holes. Observations of x-ray binaries, pulsars, magnetars, clusters, gamma-ray bursts, the x-ray background. High-energy cosmic rays. Neutrino and gravitational-wave astronomy. Prerequisite(s): Mathematics 22 or 23A, Physics 5B or 6B, and Physics 101A or Physics 102. E. Ramirez-Ruiz

118. Physics of Planetary Systems. *

Determination of the physical properties of the solar system, its individual planets, and extrasolar planetary systems through ground-based and space-based observations, laboratory measurements, and theory. Theories of the origin and evolution of planets and planetary systems. Prerequisite(s): Mathematics 22 or 23A, and Physics 5B or 6B. Offered in alternate academic years. J. Fortney

119. Introduction to Scientific Computing. W

Introduction to solving scientific problems using computers. A series of simple problems from Earth sciences, physics, and astronomy are solved using a user-friendly scientific programming language (Python/SciPy). (Also offered as Earth Sciences 119. Students cannot receive credit for both courses.) Prerequisite(s): Mathematics 11A or Mathematics 19A or Applied Mathematics or Statistics 15A. (General Education Code(s): IN.) M. Krumholz

135. Astrophysics Advanced Laboratory. *

Introduction to the techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Offered in some academic years as a multiple-term course: 135A in fall and 135B in winter, depending on astronomical conditions. (Also offered as Physics 135. Students cannot receive credit for both courses.) Prerequisite(s): Physics 133 and at least one astronomy course. Intended primarily for juniors and seniors majoring or minoring in astrophysics. G. Brown

135A. Astrophysics Advanced Laboratory (3 credits). F

Introduction to techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Intended primarily for juniors and seniors majoring or minoring in astrophysics. Offered in some academic years as single-term course 135 in fall, depending on astronomical conditions. (Also offered as Physics 135A. Students cannot receive credit for both courses.) Prerequisite(s): Physics 133 and at least one astronomy course. R. Dewey

135B. Astrophysics Advanced Laboratory (2 credits). W

Introduction to techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Intended primarily for juniors and seniors majoring or minoring in astrophysics. Offered in some academic years as single-term course 135 in fall, depending on astronomical conditions. (Also offered as Physics 135B. Students cannot receive credit for both courses.) Prerequisite(s): Physics 133 and at least one astronomy course. G. Brown

171. General Relativity, Black Holes, and Cosmology. F

Special relativity is reviewed. Curved space-time, including the metric and geodesics, are illustrated with simple examples. The Einstein equations are solved for cases of high symmetry. Black-hole physics and cosmology are discussed, including recent developments. (Also offered as Physics 171. Students cannot receive credit for both courses.) Prerequisite(s): courses 105, 110A, 110B, and 116A-B. H. Haber

199. Tutorial. F,W,S

May be repeated for credit. The Staff

Graduate Courses

202. Radiative Processes. *

Survey of radiative processes of astrophysical importance from radio waves to gamma rays. The interaction of radiation with matter: radiative transfer, emission, and absorption. Thermal and non-thermal processes, including bremsstrahlung, synchrotron radiation, and Compton scattering. Radiation in plasmas. (Formerly Electromagnetism and Plasma Physics.) Offered in alternate academic years. E. Ramirez-Ruiz

204. Astrophysical Flows. *

Explores how physical conditions in astrophysical objects can be diagnosed from their spectra. Discussion topics include how energy flows determine the thermal state of radiating objects and how the physics of radiative transfer can explain the emergent spectral characteristics of stars, accretion disks, Lyman-alpha clouds, and microwave background. (Formerly 204A Physics of Astrophysics I and 204B Physics of Astrophysics II.) Enrollment restricted to graduate students. Offered in alternate academic years. G. Laughlin

205. Introduction to Astronomical Research and Teaching. F

Lectures and seminar-style course intended to integrate new graduate students into the department; to introduce students to the research and interests of department faculty; and to expose graduate students to teaching skills and classroom techniques. (Formerly Introduction to Astronomical Research.) Enrollment restricted to graduate students. G. Smith

207. Future Directions/Future Missions. *

Examines possible key science goals for the next decade, such as planet detection, galaxy formation, and "dark energy" cosmology; the means for addressing these goals, such as new space missions and/or ground-based facilities; and the political, technical, and scientific constraints on such research. Looks at the role of the Decadal Survey. Examines a few existing programs (DEEP, ALMA, SNAP, NGST) as examples. Enrollment restricted to graduate students. Offered in alternate academic years. G. Illingworth

212. Dynamical Astronomy. W

Surveys dynamical processes in astrophysical systems on scales ranging from the planetary to the cosmological, stability and evolution of planetary orbits, scattering processes and the few-body problem, processes in stellar clusters, spiral structure and galactic dynamics, galactic collisions, and evolution of large-scale structure. Enrollment restricted to graduate students. G. Laughlin

214. Special Topics in Galactic and Extragalactic Astronomy. *

Survey of some principal areas of research on the origin and growth of cosmic structures and galaxies: the "dark ages;" 21cm tomography; first galaxies; first stars and seed black holes; reionization and chemical enrichment of the intergalactic medium; the assembly of massive galaxies; quasi-stellar sources; interactions of massive black holes with their environment; extragalactic background radiation; numerical simulations and the nature of the dark matter; the dark halo of the Milky Way. (Formerly Special Topics in Cosmology) Enrollment restricted to graduate students. P. Madau

220A. Stellar Structure and Evolution. F

Survey of stellar structure and evolution. Physical properties of stellar material. Convective and radiative energy transport. Stellar models and evolutionary tracks through all phases. Brown dwarfs and giant planets. Comparison with observations. Enrollment restricted to graduate students. J. Fortney

220B. Star Formation. F

Theory and observations of star formation. Observational techniques used to study star formation, particularly millimeter line and continuum observations, and infrared, visible, and UV star-formation tracers. Physics of giant molecular clouds and galaxy-scale star formation. Gravitational instability, collapse, and fragmentation. Pre-main sequence stellar evolution. Protostellar accretion disks and jets. Radiative feedback and HII regions. (Formerly Star and Planet Formation) Prerequisite(s): course 220A. M. Krumholz

220C. Advanced Stages of Stellar Evolution and Nucleosynthesis. S

The evolution of massive stars beyond helium burning; properties of white dwarf stars; physics and observations of novae, supernovae, and other high energy stellar phenomena; nuclear systematics and reaction rates; the origin and production of all the chemical elements. Prerequisite(s): course 220A. Enrollment restricted to graduate students. S. Woosley

222. Planetary Formation and Evolution. *

Theory and observations of protoplanetary disks. Origin and evolution of the solar nebula. Formation and evolution of the terrestrial planets and the giant planets. (Formerly Planetary Science) Enrollment restricted to graduate students. Offered in alternate academic years. D. Lin

223. Planetary Physics. *

Survey of interiors, atmospheres, thermal evolution, and magnetospheres of planets, with focus on the astronomical perspective. Course covers exoplanets and solar system planets, both giant and terrestrial, with attention to current and future observations. Enrollment restricted to graduate students. J. Fortney

224. Particle Astrophysics and Cosmology. *

Particle physics and cosmology of the very early universe: thermodynamics and thermal history; out-of-equilibrium phenomena (e.g., WIMPs freeze-out, neutrino cosmology, Big Bang nucleosynthesis, recombination); baryogenesis; inflation; topological defects. High-energy astrophysical processes: overview of cosmic ray and gamma ray astrophysics; radiative and inelastic processes; astroparticle acceleration mechanisms; magnetic fields and cosmic ray transport; radiation-energy density of the universe; ultrahigh-energy cosmic rays; dark-matter models; and detection techniques. (Formerly Origin and Evolution of the Universe.) (Also offered as Physics 224. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Offered in alternate academic years.

A. Aguirre

225. High-Energy Astrophysics. *

High-energy astrophysics and the final stages of stellar evolution: supernovae, binary stars, accretion disks, pulsars; extragalactic radio sources; active galactic nuclei; black holes. (Formerly Physics of Compact Objects) Offered in alternate academic years. E. Ramirez-Ruiz

226. General Relativity. W

Develops the formalism of Einstein's general relativity, including solar system tests, gravitational waves, cosmology, and black holes. (Also offered as Physics 226. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. S. Profumo

230. Diffuse Matter in Space. *

Fundamental physical theory of gaseous nebulae and the interstellar medium. Ionization, thermal balance, theory and observation of emission spectra. Interstellar absorption lines, extinction by interstellar dust. Ultraviolet, optical, infrared, and radio spectra of gaseous nebulae. (Formerly Low-Density Astrophysics) Offered in alternate academic years. M. Krumholz

231. Diffuse Gas In and In Between Galaxies. *

Examines the observational data and theoretical concepts related to the interstellar medium (gas inside galaxies); intracluster medium (gas in between galaxies in clusters); and intergalactic medium (gas in between field galaxies). Emphasizes on the inferred physical conditions of this gas and its implications for cosmology and processes of galaxy formation. Enrollment restricted to graduate students. J. Prochaska

233. Physical Cosmology. S

Survey of modern physical cosmology, including Newtonian cosmology, curved space-times, observational tests of cosmology, the early universe, inflation, nucleosynthesis, dark matter, and the formation of structure in the universe. Offered in alternate academic years. C. Conroy

235. Numerical Techniques. *

Gives students a theoretical and practical grounding in the use of numerical methods and simulations for solving astrophysical problems. Topics include N-body, SPH and grid-based hydro methods as well as stellar evolution and radiation transport techniques. Enrollment restricted to graduate students. Offered in alternate academic years. G. Laughlin

237. Accretion Processes. *

Theories of spherical accretion, structure and stability of steady-state accretion disks, and the evolution of time-dependent accretion disks. Applications of these theories to the formation of the solar system as well as the structure and evolution of dwarf novae and X-ray sources are emphasized. (Formerly Accretion in Early and Late Stages of Stellar Evolution) Offered in alternate academic years. D. Lin

240A. Galactic and Extragalactic Stellar Systems. *

Structure and evolutionary histories of nearby galaxies. Stellar populations, galactic

dynamics, dark matter, galactic structure and mass distributions. Peculiar galaxies and starbursting galaxies. Structure and content of the Milky Way. Evolution of density perturbations in the early universe. Hierarchical clustering model for galaxy formation and evolution. Offered in alternate academic years. The Staff

240B. High Redshift Galaxies. *

Galaxy formation and evolution from observations of intermediate-to-high redshift galaxies (z 0.5–5). Complements and builds on 240A. Cluster galaxies and field galaxies. Foundation from classic papers on distant galaxies. Recent discoveries from IR and sub-mm measurements. Impact of AGNs and QSOs. Overview of modeling approaches. Identify theoretical and observational issues. (Formerly Galactic and Extragalactic Stellar Systems) Enrollment restricted to graduate students. Offered in alternate academic years. G. Illingworth

257. Modern Astronomical Techniques. *

Covers physical, mathematical, and practical methods of modern astronomical observations at all wavelengths at a level that prepares students to comprehend published data and to plan their own observations. Topics include: noise sources and astrophysical backgrounds; coordinate systems; filter systems; the physical basis of coherent and incoherent photon detectors; astronomical optics and aberrations; design and use of imaging and spectroscopic instruments; antenna theory; aperture synthesis and image reconstruction techniques; and further topics at the discretion of the instructor. Familiarity with UNIX, computer programming, and completion of Physics 116C is strongly recommended as well as at least one upper-division course in astronomy. Designed for graduate students; available to qualified undergraduate astrophysics majors by instructor permission. Offered in alternate academic years. T. Jeltema

260. Instrumentation for Astronomy. *

An introduction to astronomical instrumentation for infrared and visible wavelengths. Topics include instrument requirements imposed by dust, atmosphere, and telescope; optical, mechanical, and structural design principles and components; electronic and software instrument control. Imaging cameras and spectrographs are described. Offered in alternate academic years. Enrollment restricted to graduate students. C. Rockosi

289. Adaptive Optics and Its Application. *

Introduction to adaptive optics and its astronomical applications. Topics include effects of atmospheric turbulence on astronomical images, basic principles of feedback control, wavefront sensors and correctors, laser guide stars, how to analyze and optimize performance of adaptive optics systems, and techniques for utilizing current and future systems for astronomical observations. (Formerly course 289C.) Enrollment restricted to graduate students. Offered in alternate academic years. C. Max

292. Seminar (no credit). F,W,S

Seminar attended by faculty, graduate students, and upper-division undergraduate students. The Staff

297. Independent Study. F,W,S

Independent study or research for graduate students who have not yet begun work on their theses. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. The Staff

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Biochemistry and Molecular Biology

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Physical and Biological Sciences Undergraduate Affairs Office

142 Jack Baskin Engineering Building

(831) 459-4143

<http://undergrad.pbsci.ucsc.edu>[Faculty | Program Statements](#)

Upper-Division Courses

100A. Biochemistry. F

Fundamentals of molecular biology, structure and function of nucleic acids, and protein structure. Designed for students preparing for research careers in biochemistry and molecular biology. Lecture: 3-1/2 hours; discussion: 1-1/4 hours. Prerequisite(s): Chemistry 108B or 112C; and Biology 20A W. Scott

100B. Biochemistry. W

Covers enzyme mechanisms, kinetics, regulations, membrane composition and structure, specialized membrane functions, active transport and electro-chemical storage, excitable membranes and neurotransmitters, membrane receptors and sensory transduction mechanisms. Lecture: 3-1/2 hours; discussion: 1-1/4 hours. Prerequisite(s): course 100A C. Partch

100C. Biochemistry. S

Biochemistry: intermediary metabolism and bioenergetics. How enzymatically catalyzed reactions are organized and regulated; how energy from molecules is extracted for chemical work. Lecture: 3-1/2 hours; discussion: 1-1/4 hours. Prerequisite(s): course 100B R. Ludwig

110L. Advanced Biochemistry Laboratory. F

An introduction to the major techniques used in the isolation and characterization of biological components. Laboratory: 8 hours; lecture: 1-1/4 hours. Students are billed a materials fee. (Formerly course 110, Biochemistry Laboratory) Prerequisite(s): course 100B and satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): W.) O. Einarsdottir

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Biomolecular Engineering

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Baskin School of Engineering
335 Baskin Engineering Building
(831) 459-2158
<http://www.soe.ucsc.edu>

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Lower-Division Courses

5. Introduction to Biotechnology. F,W,S

Introduces the tools and applications of biotechnology in the fields of medicine, agriculture, the environment, and industry. (General Education Code(s): PE-T, IN.) W. Rothwell, The Staff

80G. Bioethics in the 21st Century: Science, Business, and Society. F

Serves science and non-science majors interested in bioethics. Guest speakers and instructors lead discussions of major ethical questions having arisen from research in genetics, medicine, and industries supported by this knowledge. (Also offered as Philosophy 80G. Students cannot receive credit for both courses.) (General Education Code(s): PE-T, T6-Natural Sciences or Humanities and Arts.) M. Akeson, S. Dreisbach, The Staff

80H. The Human Genome. F,W,S

Course will focus on understanding human genes. Accessible to non-science majors. Will cover principles of human inheritance and techniques used in gene analysis. The evolutionary, social, ethical, and legal issues associated with knowledge of the human genome will be discussed. (General Education Code(s): PE-T, T2-Natural Sciences.) W. Rothwell, The Staff

88A. BMES Freshman Design Seminar (2 credits). W

A first course in engineering design for bioengineers. In cooperation with the Biomedical Engineering Society (BMES). Students choose a design project and work on it in competitive and cooperative teams. Covers research, design, prototyping, and report writing. Enrollment restricted to freshman majors and proposed majors in Bioengineering. Enrollment limited to 25. (General Education Code(s): PR-E.) K. Karplus

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

94F. Group Tutorial (2 credits). F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for

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■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
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■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
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■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

101. Applied Circuits for Bioengineers. S

Introduces analog electronics. Topics include circuit theory (Kirchoff's laws, Thevenin equivalents); constant and sinusoidal signals; RC filters op amps; feedback; oscillators; and instrumentation amplifiers. Emphasis is on design for sensors (thermistors, microphones, electrodes, pressure sensors, phototransistors); voltage dividers are a recurring theme. Prerequisite(s): Mathematics 11B, 19B, or 20B and Physics 5C/N or 6C/N which may be taken concurrently with Biomolecular Engineering 101. K. Karplus

101L. Applied Circuits Laboratory (2 credits). S

Twice weekly, three-hour laboratory to design and build circuits to interface sensors used in bioengineering (thermistors, microphones, electrodes, pressure sensors, phototransistors). Students design and build a one-lead electrocardiograph (EKG). Students are billed a materials fee. Prerequisite(s): Physics 5C/N or 6C/N. Concurrent enrollment in course 101 is required. Enrollment limited to 48. K. Karplus

110. Computational Biology Tools. F,W

Hands-on lectures and laboratory geared to teach basic tools and skills used in computational biology (genome browsers, sequence database searching, motif analysis, multiple sequence alignment, gene finders, phylogenetics analysis, protein structure visualization, and others). Web-based tools/databases are used on student laptops. Open to all science students; no prior programming or Unix experience required. (Also offered as Biology: Molecular Cell & Dev 181. Students cannot receive credit for both courses.) Prerequisite(s): Biology 100, 105, Biochemistry 100A, or Chemistry 103 or declared Bioinformatics majors. Enrollment limited to 25. T. Lowe, The Staff

123A. Bioengineering Project 1 (7 credits). F

First of a two-course sequence that is the culmination of the engineering program. Students apply knowledge and skills gained in elective track to complete a major design project. Students complete research, specification, planning, and procurement for a substantial project. Includes technical discussions, design reviews, and formal presentations; engineering design cycle, engineering teams, and professional practices. Formal technical specification of the approved project is presented to faculty. Students are billed a materials fee. Prerequisite(s): course 140 or 150 and previous or concurrent enrollment in Computer Engineering 185. Enrollment restricted to biogengineering majors. (General Education Code(s): PR-E.) The Staff, M. Akeson, K. Karplus

123B. Bioengineering Project 2 (7 credits). W

Second of two-course bioengineering project sequence. Students implement and test the engineering designs from course 123A. Projects are usually done as group projects, but individual projects are permitted. Requires written progress reports, formal written report, and oral presentation before a panel of faculty. Students are billed a materials fee. Prerequisite(s): course 123A and Computer Engineering 185. Enrollment restricted to biogengineering majors. Enrollment limited to 30. M. Akeson, The Staff

123T. Senior Thesis Presentation (2 credits). W

For bioengineering senior thesis students, guidance in preparing a research seminar and a draft manuscript describing their senior research project. Students collaborate with each other and with investigators from their sponsoring laboratory as they fulfill the course requirements. Prerequisite(s): Computer Engineering (CMPE) 185. Concurrent enrollment in BME 193 or BME 195 or BME 198 or CMPE 193 or CMPE 195 or CMPE 198 or Electrical Engineering (EE) 193 or EE 195 or EE 198 is required. Enrollment limited to 25. (General Education Code(s): PR-E.) The Staff, M. Akeson, K. Karplus

128. Protein Engineering. S

For bioengineering, bioinformatics, and biology majors, focuses on engineering (i.e.,

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changing) of proteins. Topics focus on practical aspects of protein engineering strategies that are crucial to modern biotechnology and biomedical applications. Prerequisite(s): Biology 20A, and Biology 100 or Biochemistry and Molecular Biology 100A, or by permission of instructor. R. Dubois, The Staff

130. Genomes. F,S

Advanced elective for biology majors, examining biology on the genome scale. Topics include genome sequencing; large scale computational and functional analysis; features specific to prokaryotic, eukaryotic, or mammalian genomes; proteomics; SNP analysis; medical genomics; and genome evolution. (Also offered as Biology: Molecular Cell & Dev 182. Students cannot receive credit for both courses.) Prerequisite(s): Biology 100 or Chemistry 103 or Biochemistry 100A; and Biology 105; or approval of instructor. Enrollment limited to 30. R. Green

140. Bioinstrumentation. F

Introduction to theory, design, and application of bioinstrumentation in clinical, pharmaceutical, and biotechnology laboratories. Highly recommended for students planning careers in the biomolecular industries. Typical topics and demonstrations include thermocycler, polymerase chain reaction (PCR), pyrosequencing, fabless nanofabrication, ion-sensitive measurements, microarray fabrication, and fluorescent-activated cell sorter (FACS). Students are billed a materials fee. Prerequisite(s): course 5, or Biology 100, or Biochemistry and Molecular Biology 100A. N. Pourmand

150. Molecular Biomechanics. S

Considers how assemblies of macromolecules (molecular motors) convert chemical energy into mechanical work on the nanometer-to-Angstrom scale. Processes examined include ATP-dependent movement of organelles in the cytosol facilitated by kinesin; proton pumping by ATPases in the mitochondrial membrane; viral genome packaging; bacterial movement driven by flagella; processive addition of nucleotides by polymerases during replication and transcription; and protein synthesis by ribosomes. Cannot receive credit for this course and course 250. Prerequisite(s): Biology 20A; and Biology 20B or 105; and Biology 100 or Biochemistry 100A. M. Akeson

155. Biotechnology and Drug Development. W

Recommended for students interested in careers in the biopharmaceutical industry. Focuses on recombinant DNA technology and the drug-development process, including discovery research; preclinical testing; clinical trials; and regulatory review, as well as manufacturing and production considerations. Students may not receive credit for this course and Biomolecular Engineering 255 and Chemistry 255. (Also offered as Biology: Molecular Cell & Dev 179. Students cannot receive credit for both courses.) Prerequisite(s): Biology 20A and Biology 100 or Chemistry 103 or Biochemistry and Molecular Biology 100A. Enrollment limited to 15. P. Berman

160. Research Programming in the Life Sciences. S

No programming experience is required, but basic computer and molecular biology understanding is assumed. Students learn programming in Python to manipulate biological data. Programming assignments comprise the majority of the assignments, and a final project using skills developed in this course is required. BioPython and other modules introduced for use in the final project. (Formerly Research Programming for Biologists and Biochemists.) (Also offered as Biology: Molecular Cell & Dev 180. Students cannot receive credit for both courses.) Prerequisite(s): Biology 20A or 21A. Previous or concurrent enrollment in course 160L is required. (General Education Code(s): MF.) J. Stuart, The Staff

160L. Research Programming in the Life Sciences Laboratory (1 credit). S

Laboratory sequence illustrating topics covered in course 160. One two-hour laboratory per week. (Formerly Research Programming for Biologists and Biochemists Laboratory.) (Also offered as Biology: Molecular Cell & Dev 180L. Students cannot receive credit for both courses.) Prerequisite(s): Biology 20A or 21A. Previous or concurrent enrollment in course 160 is required. J. Stuart, The Staff

170. Drug Action and Development. S

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and

course 270. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Chemistry and Biochemistry 170. Students cannot receive credit for both courses.) Prerequisite(s): Biology 100 or Chemistry 103 or Biochemistry 100A. Biology 110 and 130/L or 131/L are recommended. Enrollment restricted to juniors and seniors. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

177. Engineering Stem Cells. W

For bioengineering students interested in stem cells. Class uses project-based learning to discuss basic stem cell concepts and past breakthrough approaches to identify and design solutions for technological hurdles in stem cell research. Prerequisite(s): course 140 or 150, and BIOL 100, or by consent of instructor. Enrollment limited to 30. C. Forsberg

178. Stem Cell Biology. W

Basic concepts, experimental approaches, and therapeutic potential are discussed. Students gain experience in reading the primary scientific literature. (Also offered as Biology: Molecular Cell & Dev 178. Students cannot receive credit for both courses.) Prerequisite(s): Biology 110; Biology 115 recommended. C. Forsberg

193. Field Study. F,W,S

Provides for individual programs of study with specific aims and academic objectives carried out under the direction of a BME faculty member and a willing sponsor at a field site, using resources not normally available on campus. Credit is based upon written and oral presentations demonstrating the achievement of the objectives of the course. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study with specific aims and academic objectives carried out under the direction of a BME faculty member and a willing sponsor at a field site, using resources not normally available on campus. Credit is based upon written and oral presentations demonstrating the achievement of the objectives of the course. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

A program of study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194F. Group Tutorial (2 credits). F,W,S

A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195. Senior Thesis Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195F. Senior Thesis or Research (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Individual Study or Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Individual Study or Research (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

For fourth-year students majoring in bioinformatics or bioengineering. May be repeated for credit. The Staff

Graduate Courses

200. Research and Teaching in Bioinformatics (3 credits). F

Basic teaching techniques for teaching assistants, including responsibilities and rights of teaching assistants, resource materials, computer security, leading discussion or lab sessions, presentation techniques, maintaining class records, electronic handling of homework, and grading. Examines research and professional training, including use of library and online databases, technical typesetting, writing journal and conference papers, publishing in bioinformatics, giving talks in seminars and conferences, and ethical issues in

science and engineering. Required for all teaching assistants. Enrollment restricted to graduate students. K. Karplus

205. Bioinformatics Models and Algorithms. F

Covers bioinformatics models and algorithms: the use of computational techniques to convert the masses of information from biochemical experiments (DNA sequencing, DNA chips, and other high-throughput experimental methods) into useful information.

Emphasis is on DNA and protein sequence alignment and analysis. Enrollment restricted to graduate students. Undergraduates may enroll with prerequisite(s): Computer Science 12B; and Computer Engineering 107 or Applied Math and Statistics 131; and Biology 20A; and concurrent enrollment in Biochemistry 100A. K. Karplus

211. Computational Systems Biology. S

Teaches machine-learning methods relevant for the analysis of high-throughput molecular biology experiments. Students should be fluent in a programming language and should have taken basic molecular biology courses. Prerequisite(s): course 205. Enrollment restricted to graduate students; undergraduates may enroll if they have completed course 205, Computer Science 101, and any upper-division molecular biology or biochemistry course, such as Biochemistry 100 or 100A. J. Stuart

215. Applied Gene Technology. S

Detailed insight into the techniques and technological trends in genomics and transcriptomics, building the necessary foundations for further research in genetic association studies, population genetic association studies, population genetics, diagnostics, medicine, and drug development. Students should already have a deeper understanding of the basic tools of molecular biotechnology than acquired in introductory courses in biotechnology, biochemistry, and molecular biotechnology. Enrollment restricted to graduate students. N. Pourmand

230. Computational Genomics. W

Genomics databases: analysis of high-throughput genomics datasets; BLAST and related sequence comparison methods; pairwise alignment of biosequences by dynamic programming; statistical methods to discover common motifs in biosequences; multiple alignment and database search using motif models; constructing phylogenetic trees; hidden Markov models for finding genes, etc.; discriminative methods for analysis of bioinformatics data, neural networks, and support vector machines; locating genes and predicting gene function, including introduction to linkage analysis and disease association studies using SNPs; and modeling DNA and RNA structures. Prerequisite(s): course 205; concurrent enrollment in course 230L, 296, or 297 is required. Enrollment restricted to graduate students; undergraduates may enroll by instructor permission if they have completed course 205, Computer Science 101, BIOC 100A. J. Stuart, R. Green, D. Haussler

230L. Computational Genomics Laboratory (1 credit). W

Project in computational genomics. Prerequisite(s): course 205; concurrent enrollment in course 230 is required. J. Stuart, R. Green, D. Haussler

235. Banana Slug Genomics.

Students will assemble and annotate the banana slug genome (*Ariolimax dolichophallus*) from next-generation sequencing data. Students also will explore the capabilities of the latest next-generation bioinformatics tools and write their own as needed. Prerequisite(s): course 205 or graduate status. Seniors who have taken course 110 and a computer programming course may enroll with permission of instructor. May be repeated for credit. K. Karplus, The Staff

237. Applied RNA Bioinformatics.

Teaches methods for RNA gene discovery; probabilistic modeling, secondary structure/trans-interaction prediction; mRNA splicing; and functional analysis. Emphasis on leveraging comparative genomics and employing high-throughput RNA sequencing data. Includes lectures, scientific literature discussion, problem sets, and final gene-discovery project. Enrollment restricted to seniors and graduate students. T. Lowe, The Staff

250. Molecular Biomechanics. S

Considers how assemblies of macromolecules (molecular motors) convert chemical energy into mechanical work on the nanometer-to-Angstrom scale. Processes examined in the course include ATP-dependent movement of organelles in the cytosol facilitated by

kinesin; proton pumping by ATPases in the mitochondrial membrane; viral genome packaging; bacterial movement driven by flagella; processive addition of nucleotides by polymerases during replication and transcription; and protein synthesis by ribosomes. Cannot receive credit for this course and course 150. Enrollment restricted to graduate students. M. Akeson

255. Biotechnology and Drug Development. W

Recommended for students interested in careers in the biopharmaceutical industry. Focuses on recombinant DNA technology and the drug-development process, including discovery research; preclinical testing; clinical trials; and regulatory review, as well as manufacturing and production considerations. Students may not receive credit for this course and Biomolecular Engineering 155 and Biology 179. (Also offered as Chemistry and Biochemistry 255. Students cannot receive credit for both courses.) Enrollment limited to graduate students. Enrollment limited to 15. P. Berman

268A. Science and Justice: Experiments in Collaboration. S

Considers the practical and epistemological necessity of collaborative research in the development of new sciences and technologies that are attentive to questions of ethics and justice. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267A, Feminist Studies 268A, and Sociology 268A. Students cannot receive credit for more than one course.) Enrollment limited to 15. The Staff

268B. Science and Justice Research Seminar.

Provides in-depth instruction in conducting collaborative interdisciplinary research. Students produce a final research project that explores how this training might generate research that is more responsive to the links between questions of knowledge and questions of justice. Prerequisite(s): Sociology 268A, Biomolecular Engineering 268A, Feminist Studies 268A, or Anthropology 267A. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267B, Feminist Studies 268B, and Sociology 268B. Students cannot receive credit for more than one course.) Enrollment limited to 15. The Staff

270. Drug Action and Development. S

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and course 170. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Chemistry and Biochemistry 270. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

280B. Seminar on Bioinformatics and Bioengineering (2 credits). F,W,S

Weekly seminar series covering topics of current research in computational biology, and bioinformatics. Current research work and literature in these areas are discussed.(Formerly Seminar on Bioinformatics.) May be repeated for credit. The Staff

281A. Seminar on Processive Enzymes and Nanopores (2 credits). F,W,S

Weekly seminar series covering experimental research in nanopore technology and single-molecule analysis of polymerase function. Current research work and literature is discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students. Qualified undergraduates may enroll with permission of instructor. May be repeated for credit. M. Akeson

281B. HIV Vaccine Research (2 credits). F,S

Weekly seminar series covering topics of HIV vaccine research. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. P. Berman

281C. Seminar in Cancer Genomics (2 credits). F,W,S

Presents current computational biology research to identify genomics-based signatures of cancer onset, progression, and treatment response. Examples of such investigations include: genetic pathway interpretation of multivariate high-throughput datasets; discovery of mutations in whole-genome sequence; identifications and quantification of gene

isoforms, alleles, and copy number variants; and machine-learning tools to predict clinical outcomes. Students present their own research, host journal clubs, and attend lectures and teleconferences to learn about research conducted by national and international projects. Enrollment restricted to graduate students. May be repeated for credit. D. Haussler, J. Stuart

281E. Seminar in Genomics (2 credits). F,W,S

Current topics in genomics including high-throughput sequencing, genome assembly, and comparative genomics. Students design and implement independent research projects. Weekly laboratory meetings are held to discuss these projects and related research in the field. Enrollment restricted to graduate students. May be repeated for credit. R. Green

281F. Blood Cell Development (2 credits). F,W,S

Weekly seminar covering topics in current research on blood cell development and stem cell biology. Current research and literature in these areas discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. C. Forsberg

281H. Seminar in Comparative Genomics (2 credits). F,W,S

Weekly seminar series covering topics of current computational and experimental research in comparative genomics. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. D. Haussler

281K. Seminar on Protein Structure Prediction (2 credits). F,W,S

Weekly seminar series covering topics of current computational and experimental research in protein structure prediction. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. K. Karplus

281L. Seminar in Computational Genetics (2 credits). W,S

Weekly seminar series covering topics and experimental research in computational genetics. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. T. Lowe

281P. Seminar on Nanotechnology and Biosensors (2 credits). F,W,S

Weekly seminar covering topics of research in the development of new tools and technologies to detect and study genes and proteins. Latest research work and literature in these areas are discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. N. Pourmand

281S. Seminar in Computational Functional Genomics (2 credits). F,W,S

Weekly seminar series covering topics of current computational and experimental research in computational functional genomics. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. J. Stuart

293. Seminar in Biomolecular Engineering.

Weekly seminar series covering topics of bioinformatics and biomolecular engineering research. Current research work and literature in this area discussed. Students lead some discussions and participate in all meetings. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. The Staff

296. Research in Bioinformatics. F,W,S

Independent research in bioinformatics under faculty supervision. Although this course may be repeated for credit, not every degree program accepts a repeated course towards degree requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297. Independent Study or Research. F,W,S

Independent study or research under faculty supervision. Although course may be repeated for credit, not every degree program accepts a repeated course towards degree requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study or Research (2 credits). F,W,S

Independent study or research under faculty supervision. Although course may be repeated for credit, not every degree program accepts a repeated course towards degree requirements. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Thesis research conducted under faculty supervision. Although course may be repeated for credit, not every degree program accepts a repeated course towards degree requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Chemistry and Biochemistry

[2014-15 General Catalog](#)

Chemistry and Biochemistry Department

230 Physical Sciences Building

(831) 459-4125

<http://chemistry.ucsc.edu>

Physical and Biological Sciences Undergraduate Affairs

142 Jack Baskin Engineering Building

(831) 459-4143

<http://undergrad/pbsci.ucsc.edu/index.html>[Faculty | Program Statement](#)

Lower-Division Courses

1A. General Chemistry. F,W,S

First quarter of an integrated study of general chemistry. Covers a range of topics including the atomic structure of matter; molecules; chemical reactions; acids and bases; gases; and equilibria in the gas and liquid phase. Students expected to use algebra to solve problems. Prerequisite(s): Previous or concurrent enrollment in MATH 3 (or equivalent), or score of 300 or higher on math placement exam, or 3 or higher on advanced placement calculus (AB or BC) exam; online chemistry self-assessment exam strongly recommended. (General Education Code(s): SI, IN, Q.) G. Millhauser, R. Roland, S. Rubin, T. Holman

1B. General Chemistry. F,W,S

Second quarter of an integrated study of general chemistry. Coverage includes quantum mechanics; the hydrogen atom; many-electron atoms and chemical periodicity; elementary covalent bonding; transition metals; and chemical kinetics. Prerequisite(s): Strong high school level chemistry is strongly recommended; taking the online chemistry self-assessment examination is strongly recommended. Concurrent enrollment in course 1M is recommended. (General Education Code(s): IN, Q.) The Staff, R. Bogomolni, R. Roland

1C. General Chemistry. F,W,S

Third quarter of an integrated study of general chemistry. Coverage includes thermodynamics; oxidation-reduction and electrochemistry; liquids and solids; intermolecular forces and solutions, including colligative properties; and nuclear chemistry. Prerequisite(s): course 1A. Concurrent enrollment in course 1N is required. (General Education Code(s): IN, Q.) P. Weiss

1M. General Chemistry Laboratory (2 credits). F,W,S

Laboratory sequence illustrating topics covered in courses 1B and 1C and important experimental techniques. Students are billed a materials fee. Prerequisite(s): Previous or concurrent enrollment in course 1B is required. R. Roland, P. Weiss

1N. General Chemistry Laboratory (2 credits). F,W,S

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Laboratory sequence illustrating topics covered in courses 1B–1C, respectively, and important experimental techniques. Students are billed a materials fee. Prerequisite(s): Concurrent enrollment in course 1C is required. R. Roland

1P. Chemistry Essentials (3 credits). *

Introduction to basic concepts required for the Chemistry 1 series. This course is for students who have little background in high school chemistry or equivalent. Covers elementary topics including units, conversions, the mole, chemical reactions, and balancing. This course is offered during Summer Session only. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

103. Biochemistry. W

Introduction to biochemistry including biochemical molecules, protein structure and function, membranes, bioenergetics, and regulation of biosynthesis. Provides students with basic essentials of modern biochemistry. Students who plan to do advanced work in biochemistry and molecular biology should take the Biochemistry and Molecular Biology (BIOC) 100 series. Students cannot receive credit for this course after they have completed any two courses from the BIOC 100A, 100B, and 100C sequence. Prerequisite(s): course 108B. M. Stone

108A. Organic Chemistry. F,W

Introduction to organic chemistry, with an emphasis on bonding and reactivity of organic compounds. Prerequisite(s): courses 1B and 1C. R. Lokey, The Staff

108B. Organic Chemistry. W,S

Introduction to organic chemistry, with an emphasis on reactivity and synthesis of organic compounds. Prerequisite(s): course 108A. R. Braslau, D. Palleros

108L. Organic Chemistry Laboratory (2 credits). F,W

Laboratory experience in organic chemistry associated with course 108A. Designed to introduce the student to the many techniques associated with organic chemistry while affording an opportunity to explore the concepts discussed in the lecture material.

Laboratory: 4 hours, lecture: 1–1/4 hours. Students are billed a materials fee.

Prerequisite(s): courses 1C and 1N and previous or concurrent enrollment in 108A is required. D. Palleros

108M. Organic Chemistry Laboratory (2 credits). W,S

Laboratory experience in organic chemistry associated with course 108B. Designed to introduce the student to the many techniques associated with organic chemistry while affording an opportunity to explore the concepts discussed in the lecture material.

Laboratory: 4 hours, lecture: 1–1/4 hours. Students are billed a materials fee.

Prerequisite(s): courses 108A and 108L and previous or concurrent enrollment in 108B is required. D. Palleros

109. Intermediate Organic Chemistry and Applications to Biology (3 credits). S

Integrated study of fundamental organic chemistry, with emphasis on materials especially relevant to biological sciences. Prerequisite(s): course 108B or equivalent. D. Palleros

110. Intermediate Organic Chemistry with Emphasis on Synthesis and Analytical Methods. S

An intermediate study of organic chemistry, including synthetic methods, reaction mechanisms, and application of synthetic chemistry techniques. Prerequisite(s): course 108B. Enrollment restricted to chemistry majors and minors. R. Linington

110L. Intermediate Organic Chemistry Laboratory (2 credits). S

Laboratory experience in organic chemistry and associated principles. Experiments involve the preparation, purification, characterization, and identification of organic compounds, and make use of modern as well as classical techniques. Students are billed a materials fee.

Prerequisite(s): course 108M and previous or concurrent enrollment in course 110.

Enrollment restricted to chemistry majors and minors. D. Palleros

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A laboratory course designed to develop familiarity with techniques and instrumentation used in analytical chemistry, emphasizing determination of trace inorganic species. Primary emphasis on applications utilizing the absorption or emission of electromagnetic radiation and on voltammetry. Topics include molecular UV-visible absorption and fluorescence spectrometry; atomic absorption, emission and fluorescence spectrometry; and various forms of voltammetry. Lecture: 2 hours; laboratory: 8 hours. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 110. (General Education Code(s): W.) D. Smith

143. Organic Chemical Structure and Reactions. F

Advanced topics such as the chemistry of terpenes, steroids, synthetic polymers, alkaloids, reactive intermediates, and reaction mechanisms are treated. Lecture: 4 hours.

Prerequisite(s): course 110. B. Singaram

146A. Advanced Laboratory in Organic Chemistry (3 credits). F

Expose students to advanced laboratory techniques in organic chemistry. Designed for students without previous research background in organic chemistry. Experiments carry a research-like format and cover the areas of natural products and reaction chemistry. Modern methods of organic analysis are emphasized including chromatographic methods and organic structure determination by spectroscopy. Laboratory: 8 hours. Students billed a materials fee. Prerequisite(s): courses 110/L; satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to chemistry majors and minors; other majors by permission of instructor. Enrollment limited to 16. D. Palleros

146B. Advanced Laboratory in Inorganic Chemistry (3 credits). S

Designed to expose students to advanced synthetic and spectroscopic techniques in inorganic chemistry. Examples include anaerobic manipulations, characterization of inorganic materials through spectral assignments and synthesis of coordination and organometallic complexes. Lecture: 1-1/4 hours; laboratory: 8 hours. Students billed a materials fee. Prerequisite(s): courses 151A/L; 163A; satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to chemistry majors and minors; other majors by permission of instructor. T. Holman

146C. Advanced Laboratory in Physical Chemistry (3 credits). S

Provides advanced laboratory experience in the areas of nanomaterial synthesis and characterization; spectroscopy; fabrication and measurements energy-conversion devices; and soft lithography techniques and instrumentation. Lecture: 1-1/4 hours; laboratory: 4 hours. Students are billed a materials fee. Prerequisite(s): courses 163B and 164; satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to chemistry majors and minors; other majors by permission of instructor. Enrollment limited to 20. Y. Li

151A. Chemistry of Metals. S

Fundamental topics of inorganic chemistry are presented at the level of the standard texts of field. Special emphasis is given to maintain breadth in the areas of metallic, nonmetallic, and biological aspects of inorganic chemistry. Lecture: 3-1/2 hours; discussion: 1-1/4 hours. Prerequisite(s): courses 108B/M and 163A. Concurrent enrollment in course 151L required. Enrollment restricted to chemistry majors and minors; other majors by permission of instructor. S. Oliver

151B. Chemistry of the Main Group Elements. W

Fundamental aspects of inorganic chemistry of main group elements are discussed. The emphasis is placed on the chemistry of nontransition elements including noble gases and halogens. In addition, students are exposed to the concepts of extended structures, new materials, and solid-state chemistry. Lecture: 3-3/4 hours. Prerequisite(s): courses 110, 110L, and 163A. Recommended for chemistry majors. P. Mascharak

151L. Inorganic Chemistry Laboratory (2 credits). S

Laboratory experience in inorganic chemistry. Experiments involve the preparation, purification, and characterization of inorganic compounds. In addition, experiments are designed to illustrate fundamental principles in inorganic chemistry and are coordinated with lectures in course 151A. Laboratory: 4 hours per week. Laboratory lecture: 1 1/4 hours per week. Students are billed a materials fee. Prerequisite(s): courses 108B/M and

163A. Concurrent enrollment in course 151A required. Enrollment restricted to chemistry majors and minors; other majors by permission of instructor. S. Oliver

156C. Advanced Topics in Inorganic Chemistry. *

Advanced topics in inorganic chemistry and an introduction to solid state chemistry.

Synthesis and structure of materials discussed as well as their influence on properties for modern devices and applications. Recent developments in area of material science also explored. Taught in conjunction with course 256C. Prerequisite(s): course 151A. Enrollment restricted to seniors. S. Oliver

163A. Quantum Mechanics and Basic Spectroscopy. F

A detailed introduction to quantum theory and the application of wave mechanics to problems of atomic structure, bonding in molecules, and fundamentals of spectroscopy.

Prerequisite(s): courses 1B and 1C, Physics 5A–B–C or 6A–B–C and Mathematics 22 or 23B. Physics 6C can be taken concurrently. J. Zhang

163B. Chemical Thermodynamics. W

Fundamentals of thermodynamics and applications to chemical and biochemical equilibria.

(Formerly Thermodynamics and Kinetic Theory.) Prerequisite(s): courses 1B and 1C, Physics 6A or 5A, and Math 22 or 23B. S. Chen

163C. Kinetic Theory and Reaction Kinetics, Statistical Mechanics, Spectroscopic

Applications. S

Introduction to statistical mechanics, kinetic theory, and reaction kinetics and topics in spectroscopy. Prerequisite(s): courses 163A and 163B. A. Ayzner

164. Physical Chemistry Laboratory. W

Provides laboratory experience and data analysis in the areas of thermodynamics, kinetics, and spectroscopy. Lecture: 1.75 hours; experimental laboratory: 4 hours; computer laboratory: 2 hours. Students are billed a materials fee. Prerequisite(s): courses 1B and 1C; and Physics 5A and Physics 5B and Physics 5C, or Physics 6A and Physics 6B and Physics 6C; and Mathematics 22 or Mathematics 23B. Course 163A is recommended. S. Chen

169. Chemistry and Biology of Drug Design and Discovery. S

An overview of the central elements of drug discovery, including target selection and validation; computational or virtual screening; high-throughput screening; fragment-based methods; and pharmacokinetics. Prerequisite(s): course 103 or Biochemistry 100A. R. Lokey

170. Drug Action and Development. *

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and course 270. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Biomolecular Engineering 170. Students cannot receive credit for both courses.)

Prerequisite(s): Biology 100 or Chemistry 103 or Biochemistry 100A. Biology 110 and 130/L or 131/L are recommended. Enrollment restricted to juniors and seniors. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

182. ACE Program Service Learning (2 credits). F

Students participate in training and development to co-facilitate collaborative learning in ACE chemistry discussion sections and midterm/exam review sessions. Students are role models for students pursuing science- and math-intensive majors. Prerequisite(s): Prior participation in ACE; good academic standing; no non-passing grades in prior quarter. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 10. (General Education Code(s): PR-S.) N. Cox-Konopelski

194. Senior Essay. F,W,S

An individually supervised course with emphasis on reviewing the current scientific literature. Students are required to submit a summary and a critique of a scientific paper in the form of a senior essay. Students submit a petition to the sponsoring agency. This course may not be repeated for credit. The Staff

195A. Senior Research. F,W,S

An individually supervised course with emphasis on independent research. Multiple-term course extending over two or three quarters; the grade and evaluation submitted for the

final quarter apply to all previous quarters. Students submit petition to sponsoring agency; may not be repeated for credit. The Staff

195B. Senior Research. F,W,S

An individually supervised course with emphasis on independent research. Multiple-term course extending over two or three quarters; the grade and evaluation submitted for the final quarter apply to all previous quarters. Students submit petition to sponsoring agency; may not be repeated for credit. The Staff

195C. Senior Thesis. F,W,S

An individually supervised course with emphasis on independent research. Multiple-term course extending over two or three quarters; the grade and evaluation submitted for the final quarter apply to all previous quarters. Students submit petition to sponsoring agency; may not be repeated for credit. (Formerly Senior Research.) The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200A. Advanced Biochemistry: Biophysical Methods. F

An introduction to the theory, principles, and practical application of biophysical methods to the study of biomolecules, especially proteins and nucleic acids. Emphasis on spectroscopic techniques. Topics include magnetic resonance, optical spectroscopy, fast reaction techniques, crystallography, and mass spectrometry. S. Rubin

200B. Advanced Biochemistry: Macromolecular Structure and Function. S

A detailed discussion of nucleic acid and protein chemistry, ranging from the structure, thermodynamics, and folding to the relationship between structure and function, and encompassing the methods used to determine such information. (Formerly Advanced Biochemistry: Protein Structure and Function.) M. Stone

200C. Advanced Biochemistry: Enzyme Mechanisms and Kinetics. W

A study of enzyme kinetics, mechanisms, and factors involved in enzymic catalysis.

Lecture: 3-1/2 hours. (Formerly course 231, Enzyme Mechanisms and Kinetics.) W. Scott

234. Bioinorganic Chemistry. S

The role played by transition metals in biological systems is discussed through application of the principles of coordination chemistry and inorganic spectroscopy. Topics include metalloproteins involved in oxygen binding, iron storage, biological redox reactions, and nitrogen fixation, as well as metal complexes of nucleic acids. Lecture: 4 hours.

Prerequisite(s): courses 151A/L, 163A; and Biochemistry and Molecular Biology 100A. P. Mascharak

238. Topics in Biophysical Chemistry. S

A discussion of the application of selected topics in biophysical chemistry to contemporary problems in biochemistry and molecular biology. Lecture: 3-1/2 hours. Offered in alternate academic years. C. Partch

242A. Modern Physical Organic Chemistry. W

Covers molecular structure and bonding, strain, and non-covalent binding forces. Other topics include acid-base chemistry, kinetics, thermodynamics, catalysis, organic reactions and mechanism, and quantum mechanical approaches to the analysis of organic molecules. Enrollment restricted to seniors who have taken course 143, and graduate students. J. Raskatov

242B. Modern Synthetic Methods in Organic Chemistry. F

Presents concepts in bond formation, conformation, selectivity, and stereocontrol in modern organic synthesis. Focuses on understanding reaction mechanisms. Culminates with strategy in designing multi-step synthesis of complex targets. Enrollment restricted to seniors who have taken course 143, and graduate students. R. Braslau

242C. Spectroscopy and Applied Analytical Methods. S

Presents strategies in organic structure elucidation, including nuclear magnetic resonance

(NMR) and mass spectrometry. Provides theory and practical elements of structure elucidation and modern analytical methods for organic molecules. Enrollment restricted to seniors who have taken course 143, and graduate students. R. Linington

246. Advanced Topics in Organic Chemistry. *

A graduate course covering advanced topics in organic chemistry. Topics vary from year to year. The Staff

246A. Organic Reactions and Molecular Orbital Theory. *

Qualitative molecular orbital concepts, especially concerning aromaticity, orbital symmetry, and perturbation theory, and their application toward interpretation of reactivity and mechanism. Lecture: 3-1/2 hours. Prerequisite(s): courses 273 and 240A. Offered in alternate academic years. May be repeated for credit. The Staff

246B. Marine Organic Chemistry. *

A survey of organic natural products from marine sources. Organic chemical structural families unique to marine organisms are outlined. Pathways of their synthesis and interconversions; their role in the marine environment; approaches to their analysis; the distribution of organics in seawater. Lecture: 3-1/2 hours. Prerequisite(s): courses 108B/M or 112C/N. Offered in alternate academic years. May be repeated for credit. P. Crews

246C. Computers and Information Processing in Chemistry. *

An introduction to digital computers and their applications in chemistry. Includes Monte Carlo, artificial intelligence, pattern recognition, modeling, simulation, and optimization problem-solving methods. Applications to include structural analysis, spectroscopy, organic synthesis, and kinetics. Lecture: 3-1/2 hours; laboratory: 1-1/2 hours. Offered in alternate academic years. May be repeated for credit. The Staff

246F. Organoboranes in Organic Synthesis. *

An introduction to organoborane chemistry and its applications to synthetic organic chemistry, including principles, synthetic methods, reaction mechanisms, and asymmetric synthesis. A variety of topics including allylboration, boron-enolates, and asymmetric reductions are discussed. Enrollment restricted to seniors and graduate students. Offered in alternate academic years. May be repeated for credit. B. Singaram

246G. Heterocyclic Chemistry. *

Advanced study of synthesis and reactions of heterocyclic organic compounds; particular emphasis on structures with important medicinal value from natural products or pharmaceutical research. Prerequisite(s): course 143 or approval of instructor. J. Konopelski

246H. Organic Free Radical Chemistry. *

Covers a range of topics including radical stabilization, rates of fundamental radical reactions, methods of radical generation, synthetic applications of free radicals, persistent radicals, and some aspects of free radicals in biology. Prerequisite(s): course 143 or permission of instructor. R. Braslav

246I. Advanced Mechanistic Chemistry and Solution Kinetics. *

Kinetic approach to selected topics in mechanistic chemistry with emphasis on structure-reactivity relationships in organic as well as inorganic and biochemical systems. Discussion of significance and treatment of kinetic data illustrated with examples from various branches of chemistry. Prerequisite(s): permission of instructor. C. Bernasconi

255. Biotechnology and Drug Development. W

Recommended for students interested in careers in the biopharmaceutical industry. Focuses on recombinant DNA technology and the drug-development process, including discovery research; preclinical testing; clinical trials; and regulatory review, as well as manufacturing and production considerations. Students may not receive credit for this course and Biomolecular Engineering 155 and Biology 179. (Also offered as Biomolecular Engineering 255. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. P. Berman

256A. Advanced Topics in Inorganic Chemistry. *

Advanced topics in inorganic chemistry are presented. Topics covered vary from year to year, and are announced in advance. Possible topics include A) organometallic chemistry; B) structural methods in inorganic chemistry; C) solid-state chemistry. Prerequisite(s): courses 151A/L and 146B or graduate standing. The Staff

256B. Advanced Topics in Inorganic Chemistry. *

Advanced topics in inorganic chemistry are presented. Topics covered vary from year to year, and are announced in advance. Possible topics include A) organometallic chemistry; B) structural methods in inorganic chemistry; C) solid-state chemistry. Prerequisite(s): courses 151A/L and 146B or graduate standing. T. Holman

256C. Advanced Topics in Inorganic Chemistry. *

Advanced topics in inorganic chemistry are presented. Topics covered vary from year to year, and are announced in advance. Possible topics include A) organometallic chemistry; B) structural methods in inorganic chemistry; C) solid-state chemistry. Prerequisite(s): courses 151A/L and 146B or graduate standing. S. Oliver

256D. X-ray Crystallography. *

Course in chemical crystallography focuses on the needs of small-molecule, single-crystal diffraction studies. Includes diffraction theory, space-group analysis, data collection, structure solution, and refinement. Practical component: use of diffraction equipment and solution/refinement software. Enrollment restricted to graduate students and seniors who have taken courses 151A, 151L, and 163A. The Staff

261. Foundations of Spectroscopy. S

The basic theory of time dependent processes is covered at an advanced level. The interaction of electromagnetic radiation and matter is described using both semiclassical and quantum field formulations. A variety of modern spectroscopic techniques are discussed both in terms of the basic processes and their use in the elucidation of chemical structure and dynamics. Prerequisite(s): course 163A. Offered in alternate academic years. J. Zhang

262. Statistical Mechanics. *

Theory and concepts of statistical mechanics with applications to ideal gases, condensed systems, phase transition, and non-equilibrium thermodynamics. Lecture: 3-1/2 hours. Prerequisite(s): course 160B or 163A. Offered in alternate academic years. I. Benjamin

263. Quantum Mechanics. F

A rigorous introductory course: the Schrödinger equation, operator formalism, matrix mechanics, angular momentum, and spin. Perturbation and other approximate methods. Applications to atomic and molecular problems. Lecture: 3-1/2 hours. Prerequisite(s): courses 163A and Physics 114A-B. Offered in alternate academic years. I. Benjamin

265. Computer Simulation in Statistical Mechanics. *

A detailed introduction of the use of computer simulation methods in physical and biophysical chemistry. Includes review of thermodynamics and statistical mechanics, molecular mechanics, molecular dynamics, and Monte-Carlo methods. Applications to liquid structure, reaction dynamics, and protein dynamics. Offered in alternate academic years. I. Benjamin

266. Advanced Topics in Physical Chemistry. *

A graduate course covering advanced topics in physical chemistry. Topics vary from year to year. The Staff

266A. Lasers and Their Chemical Applications. *

Introduces the basic theoretical principles of lasers and laser light. Various types of lasers and selected applications to chemistry are discussed. The use of lasers in photochemistry, spectroscopy, chemical kinetics, and chemical analysis is considered. Lecture: 3-1/2 hours. Prerequisite(s): course 163A and Physics 114A-B. Offered in alternate academic years. May be repeated for credit. The Staff

268. Solid State and Materials Chemistry. W

Topics include synthesis of solid-state materials and their characterization using experimental techniques: XRD, TEM spectroscopy, NMR, and their applications in technologies. Emphasis on new materials, e.g., polymer, biopolymers, nanomaterials, organic/inorganic composites, ceramics, superconductors, electronic, magnetic, and opto-electronic materials. Prerequisite(s): courses 163A and 163B. Enrollment restricted to senior and graduate chemistry majors. Y. Li

269. Electrochemistry. *

Designed to introduce basic principles and applications of electrochemistry to students at upper undergraduate and lower graduate levels in various fields including analytical, physical, and materials chemistry. Enrollment restricted to seniors and graduate students. S. Chen

270. Drug Action and Development. *

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and course 170. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Biomolecular Engineering 270. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

274. Proseminar in Synthetic and Polymer Chemistry. F,W,S

Weekly meetings devoted to study of synthetic organic chemistry and controlled polymer design for applications in nanotechnology. Topics drawn from current literature and research interests of participants. May be repeated for credit. R. Braslau

275. Proseminar in Biological Inorganic Chemistry. F,W,S

Weekly meetings devoted to biological inorganic chemistry and biochemistry. Topics are drawn from current literature. Papers and reviews are discussed, and participants give short seminars on their research interests. May be repeated for credit. T. Holman

282. Proseminar: Synthetic Methods. F,W,S

Weekly meetings devoted to the study of asymmetric and/or enantio-selective synthesis of optically active organic compounds of biological and medicinal significance. Topics drawn from the current literature and the research interests of the participants. May be repeated for credit. B. Singaram

284. Proseminar in Synthetic Organic Chemistry. F,W,S

Weekly meetings devoted to the study of synthetic organic chemistry. Topics drawn from the current literature and the research interests of the participants. May be repeated for credit. J. Konopelski

285. Proseminar: Photobiochemistry and Photobiology. F,W,S

A detailed study of molecular mechanisms of light energy conversion and light-signal transduction processes in biological systems. Student participation in critical discussion of current literature examples are emphasized. Two-hour lecture and two-hour seminar weekly. Enrollment limited to 8. May be repeated for credit. R. Bogomolni

286. Proseminar in Natural Products Chemistry. F,W,S

Weekly meetings devoted to the study of natural products. Topics drawn from the current literature and research interests of the participants. May be repeated for credit. P. Crews

288. Proseminar in Bioinorganic Chemistry. F,W,S

Weekly meetings devoted to inorganic and bioinorganic research. Topics are drawn from current literature. Papers and reviews are discussed. Participants also give short seminars on topics of their research interests. May be repeated for credit. P. Mascharak

291. Chemistry and Biochemistry Research Seminar. F,W,S

A weekly chemistry and biochemistry seminar series covering recent developments and current research, led by experts from other institutions, as well as local speakers. Open to chemistry and biochemistry graduate students. Enrollment restricted to graduate students. May be repeated for credit. S. Chen

292. Seminar (2 credits). F

Enrollment restrictions: graduate standing or approval of the graduate adviser. A. Ayzner

296. Teaching Chemistry (2 credits). F

University-level pedagogy in chemistry; examines the role of preparation, assessment, and feedback in teaching chemistry discussion and laboratory sections. Effective classroom techniques and organizational strategies discussed; oral presentations analyzed critically. Required of entering chemistry graduate students. R. Roland

297. Independent Study. F,W,S

A topic will be studied with faculty tutorial assistance to satisfy a need for the student when

a regular course is not available. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. The Staff

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Department of Languages and Applied Linguistics

218 Cowell College

(831) 459-2054

<http://language.ucsc.edu>

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Lower-Division Courses

1. First-Year Chinese. F

Instruction in elementary spoken and written Chinese (Mandarin), beginning with the sounds of Chinese and their representation in the pinyin romanization system. Conversation, structural analysis, and an introduction to character texts. The first-year sequence (1–2–3) begins only in the fall quarter. Students interested in learning Chinese who are uncertain about where they should enter the sequence should meet with the instructor prior to the first class meeting. (Formerly Instruction in the Chinese (Mandarin) Language.) The Staff

2. First-Year Chinese. W

Continuation of Chinese 1, which assumes that students are familiar both with the pinyin romanization system and approximately 150 basic characters. (Formerly Instruction in the Chinese (Mandarin) Language.) Prerequisite(s): course 1 or by consent of instructor. The Staff

3. First-Year Chinese. S

Continuation of Chinese 2, which assumes that students are familiar both with the pinyin romanization system and approximately 300 basic characters. (Formerly Instruction in the Chinese (Mandarin) Language.) Prerequisite(s): course 2 or by consent of instructor. The Staff

4. Second-Year Chinese. F

Instruction in intermediate spoken and written Chinese (Mandarin). Conversation, composition, and the reading of modern texts. The second-year sequence (4–5–6) begins only in the fall quarter. (Formerly Intermediate Chinese (Mandarin).) Prerequisite(s): course 3 or by consent of instructor. (General Education Code(s): IH.) The Staff

4H. Accelerated Chinese for Heritage Speakers. F

Intensive instruction in spoken and written Chinese for heritage students whose limited proficiency in Mandarin or limited familiarity with characters requires an accelerated review of the sounds, sentence patterns, and basic vocabulary before joining the Chinese sequence above the elementary level. Students who successfully complete Chinese 4H proceed to Chinese 5. Enrollment by instructor consent. The Staff

5. Second-Year Chinese. W

Continuation of Chinese 4. Conversation, composition, and the reading of modern texts.

<ul style="list-style-type: none"> ■ Community Studies ■ Computer Engineering ■ Cowell College ■ Critical Race and Ethnic Studies ■ Crown College ■ Digital Arts and New Media ■ Earth and Planetary Sciences ■ Ecology and Evolutionary Biology ■ Economics ■ Education ■ Electrical Engineering ■ Environmental Studies ■ Feminist Studies ■ Film and Digital Media ■ French ■ German ■ Greek ■ Hebrew ■ History ■ History of Art and Visual Culture ■ History of Consciousness ■ Italian ■ Japanese ■ Jewish Studies ■ Kresge College ■ Languages ■ Latin ■ Latin American and Latino Studies ■ Legal Studies ■ Linguistics ■ Literature ■ Mathematics ■ Merrill College ■ Microbiology and Environmental Toxicology ■ Molecular, Cell, and Developmental Biology ■ Music ■ Oakes College ■ Ocean Sciences ■ Physical Education ■ Physics ■ Politics ■ Porter College ■ Portuguese ■ Psychology ■ Russian ■ Science Communication ■ Social Documentation ■ Sociology ■ Spanish ■ Spanish for Heritage Speakers ■ Stevenson College ■ Technology and Information 	<p>(Formerly Intermediate Chinese (Mandarin).) Prerequisite(s): course 4 or 4H or by consent of instructor. (General Education Code(s): IH.) The Staff</p> <p>5H. Accelerated Chinese for Heritage Speakers. W Intensive instruction in spoken and written Chinese for heritage students whose limited proficiency in Mandarin or limited familiarity with characters requires an accelerated review of the sounds, sentence patterns, and basic vocabulary before joining the Chinese sequence above the elementary level. Students who successfully complete Chinese 5H proceed to Chinese 6. Prerequisite(s): Course 4H or by consent of instructor. The Staff</p> <p>6. Second-Year Chinese. S Continuation of Chinese 5. Conversation, composition, and the reading of modern texts. (Formerly Intermediate Chinese (Mandarin).) Prerequisite(s): course 5 of 5H or by consent of instructor. (General Education Code(s): CC, IH.) The Staff</p> <p>94. Group Tutorial. F,W,S Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99. Tutorial. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99F. Tutorial (2 credits). F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <h2>Upper-Division Courses</h2> <p>103. Advanced Chinese. F Designed to enhance the students' ability to understand, analyze, and discuss authentic Chinese reading materials. Chinese linguistic and cultural aspects are introduced. (Formerly Advanced Chinese: Readings in Economics and Trade.) Prerequisite(s): course 6 or by consent of instructor. (General Education Code(s): TA.) The Staff</p> <p>104. Advanced Chinese: Readings in Literature. * Close readings in Chinese vernacular literature of recognized merit from contemporary and modern writers as well as from models from the traditional period. Student are introduced to the basic critical issues, in Chinese, relating to narrative and drama, revealed by the works under discussion. Prerequisite(s): course 103 or 105 or 107 or 108; or by consent of instructor. (General Education Code(s): TA.) The Staff</p> <p>105. Advanced Chinese: Readings in History. * Offers an appreciation of some of the central issues in Chinese history as defined by Chinese historians of the 20th century. Through readings of graduated difficulty, the vocabulary, style, and form of modern Chinese historical writing are introduced. Prerequisite(s): course 103 or 104 or 107 or 108; or by consent of instructor. (General Education Code(s): TA.) The Staff</p> <p>107. Introduction to Classical Chinese Prose. W Introduces the grammar and lexicon of classical Chinese and the language of China's pre-modern canonical writings in philosophy, religion, history, music, visual art, and literature. Reading from the Han and pre-Han era is featured. (Formerly Introduction to Classical Chinese.) Prerequisite(s): course 103 or 104 or 105 or 108; or by consent of instructor. Enrollment limited to 25. (General Education Code(s): TA, IH.) The Staff</p> <p>108. Introduction to Classical Chinese Poetry. S Introduces the grammar and lexicon of classical Chinese and the language of China's pre-modern canonical writings in philosophy, religion, history, music, visual art, and literature. Classical poetry and lyrics are featured. Prerequisite(s): course 103 or 104 or 105 or 107; or by consent of instructor. (General Education Code(s): TA, IH.) The Staff</p> <p>194. Group Tutorial. F,W,S Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
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199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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College Office

(831) 459-2361

<http://eight.ucsc.edu/>For college description and list of faculty, see [Colleges](#).

Lower-Division Courses

10. Academic Success (2 credits). F,W,S

An interactive course providing students with the opportunity to assess and revise methods of and purposes in studying. Critical, effective approaches to reading, writing, participating in lectures and sections, taking exams, balancing competing responsibilities, and utilizing campus resources are all explored. Enrollment restricted to College Eight students and by permission of college adviser. Enrollment limited to 30. The Staff

20C. The Water Environment: Literature of the Sea (2 credits). *

Students consider the representation of the sea in selected texts, noting how it becomes the focal point for the fears, hopes, and prejudices of Western civilization. Students write critical papers and their own narratives. Enrollment restricted to first-year and sophomore College Eight members. Enrollment limited to 25. C. Calsoyas

20D. College Students' Lives (2 credits). *

Students understand their peers and themselves better through an exploration of issues that affect the daily life of college students. Topics include campus/student cultures, the academic system, and other critical issues. Overview of campus resources also provided. Enrollment restricted to first-year and sophomore College Eight members. The Staff

20F. Justice on Earth (3 credits). *

Examines issues of oppression, privilege, and social justice within a global and environmental context through self-reflective and group work. May include an optional service-learning component requiring travel during spring break. Enrollment limited to 20. The Staff

20G. Peregrine Falcons Return (2 credits). W

Required training laboratory for students who wish to pursue a hands-on, two-credit service project (laboratory or field) that is focused on peregrine falcon conservation. Enrollment limited to 26. G. Stewart

28. Peer Leadership in Higher Education (3 credits). *

Overview of theories of student development, critical student issues, and skills needed for appropriate peer leadership interventions. Utilizes a variety of learning modes including readings, discussions, case studies, lectures, and group projects. Interview only: approval of instructor; Resident Assistant (RA) pre-employment training course. Enrollment limited to 25. May be repeated for credit. The Staff

55. College Eight: Service Learning Practicum (2 credits). F

Introduction to service learning theory and practice for students engaging in service-

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

learning work in College Eight, College Eight-related projects, community service organization, or public agencies. Enrollment restricted to College Eight members. Enrollment limited to 50. (General Education Code(s): PR-S.) R. Lipschutz, S. Watrous

56. Media Internships for Sustainability (2 credits). F,W,S

Students develop and work on media projects related to the college theme of "Environment and Society" in film, on television, in print, and on the Internet. Students work in groups with specific instructors and project leaders. Enrollment by application and instructor consent. May be repeated for credit. S. Watrous

61. Education for Sustainable Living Program (2 credits). S

Analyzes sustainability and its application in daily life and on campus, involving collaboration between students, faculty, staff, administration, and the community. Guest lecturers, discussions, an optional UC-wide retreat, and essays allow engagement with aspects of ecological and social sustainability. The Staff

80A. Introduction to University Discourse: Environment and Society. F

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Introduces students to environmental history, ethics, and policy options, and teaches them to analyze and interpret key literary texts. Students cannot receive credit for this course and course 80B. Concurrent enrollment in course 81A is required. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. (General Education Code(s): TA, T3-Social Sciences, C1.) The Staff

80B. Rhetoric and Inquiry: Environment and Society. F

Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Introduces students to environmental history, ethics, and policy options, and teaches them to analyze and interpret key literary texts. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the C1 requirement; concurrent enrollment in course 81A is required. Enrollment restricted to first-year college members. (General Education Code(s): TA, T3-Social Sciences, C2.) The Staff

80C. Introduction to University Discourse: Writing for Environment and Society (I). F

Two-quarter seminar explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Introduces students to environmental history, ethics, and policy options, and teaches them to analyze and interpret key literary texts. Students cannot receive credit for this course and course 80A or 80B. Enrollment restricted to first-year college members who have not satisfied the entry level writing requirement. Concurrent enrollment in course 81A is required. Enrollment limited to 20. (General Education Code(s): TA.) The Staff

80D. Introduction to University Discourse: Writing for Environment and Society (II). W

Two-quarter seminar explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Introduces students to environmental history, ethics, and policy options, and teaches them to analyze and interpret key literary texts. Prerequisite(s): course 80C. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 20. (General Education Code(s): C1.) R. Lipschutz

81A. The Environment and Us (3 credits). F

Takes students through a wide range of approaches to environmental citizenship and provides conceptual and practical tools to explore alternatives. Students also participate in a hands-on sustainability project designed to connect academic learning with practical applications. Concurrent enrollment in course 80A or 80B or 80C is required. Enrollment restricted to first-year college members. R. Lipschutz

81B. Fundamentals of Environmental Science. W

Addresses major issues in physical and biological environmental sciences and provides tools to critically evaluate, debate, and make informed choices regarding one's own impact on the environment. Topics include: climate change, water resources, air pollution, evolution, ecology (from populations to ecosystems), and conservation. Quantitative problem solving is an integral part of this course. (Also offered as Earth Sciences 81B. Students cannot receive credit for both courses.) Prerequisite(s): courses 80A or 80B.

Management UCDC Program Writing Program Theater Arts Yiddish	<p>Enrollment restricted to first-year and sophomore college members. (General Education Code(s): MF, IN, Q.) L. Fox, P. Chuang</p> <p>81C. Designing a Sustainable Future. S Introduces key technological solutions to environmental problems; discusses their underlying principles; and examines their societal dimensions. Topics include: conventional and renewable energy; emerging technologies for transportation, energy efficiency clean water; planetary engineering; and lean manufacturing. (Formerly Technological Innovation and Environmental Challenges.) (Also offered as Electrical Engineering 81C. Students cannot receive credit for both courses.) Prerequisite(s): courses 80A or 80B. Enrollment restricted to first-year and sophomore college members. (General Education Code(s): SI, T-2 Natural Sciences.) The Staff</p> <p>82. Environment and Society in Film (2 credits). S Students write about and discuss a variety of films and articles about environment and society. Topics may include water, food systems, wilderness, wildlife, pollution, global warming, nuclear energy, conservation, and environmental activism. Enrollment limited to 25. N. Schaefer</p> <p>90. College Eight Garden Internship (1 credit). F,W,S One-credit internship in the College Eight Garden. Offers students of College Eight an opportunity to become involved in an experimental learning project focusing on application of concepts of sustainable agriculture. Enrollment restricted to members of College Eight. Enrollment limited to 10. May be repeated for credit. The Staff</p> <p>93. Field Study. F,W,S The Staff</p> <p>99. Tutorial. F,W,S May be repeated for credit. The Staff</p> <p>99F. Tutorial (2 credits). F,W,S Individual study for lower-division students directed by a faculty member affiliated with College Eight. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
	<h2>Upper-Division Courses</h2> <p>128. Advanced Peer Leadership Practicum (3 credits). * Advanced practicum for the application of skills and theoretical knowledge studied in course 28. Uses many learning modes including readings, discussions, case studies, lectures, and group projects. Prerequisite(s): course 28. Enrollment by permission of instructor. Enrollment limited to 25. May be repeated for credit. The Staff</p> <p>150A. Sustainability Praxis in the Built Environment (2 credits). F Introduces the concepts, methods, and practices of research on sustainable energy, water, and food production and consumption. Resources surveying and assessment; building energy auditing; renewable energy systems; water supply, demand, and distribution. Intensive agroecology is conducted at campus sites. Enrollment limited to 25. K. Monsen, K. Bell, R. Lipschutz</p> <p>150B. Tools of the Trade for Sustainability Analysis (2 credits). W Problem-solving in sustainability through basic STEM concepts, statistical tools, and analytical methods for engaging in advanced sustainability studies drawn from physics, chemistry, biology, ecology, engineering, electronics, sociology, economics, and public policy. Prerequisite(s): course 150A. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. K. Bell, R. Lipschutz</p> <p>150C. Green Enterprise and Social Entrepreneurship (2 credits). S Teaches students how to become green entrepreneurs, develop green enterprises, and incubate green projects, especially in connection with students' research and interests. Students develop business plans; solicit participation from mentors; and prepare and submit funding proposals. Prerequisite(s): courses 150A and 150B. K. Bell, R. Lipschutz</p> <p>155. College Eight Sustainability Internship (2 credits). W,S For students undertaking sustainability-oriented service-learning work in the college</p>

(college-related projects, community service organizations, or public agencies). Students are supervised by the college provost and project supervisor, and determine the content of their internship with the provost and supervisor. Enrollment restricted to College Eight members or by permission of instructor. May be repeated for credit. (General Education Code(s): PR-S.) R. Lipschutz, S. Watrous

160. Developing Leadership to Facilitate Environmental Education. W

Prepares students to facilitate an action research team for "Sustainable Living" (courses 61/161) during spring quarter. Workshops and training selected to build the skills and preparation to become successful facilitators. Topics include: facilitation skills; syllabus planning and curriculum building; experiential learning techniques; leadership skills; and non-violent communication training. Enrollment by interview only. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 30. The Staff

161. Education for Sustainable Living Program. S

Analyzes sustainability and its application in daily life and on campus, involving collaboration between students, faculty, staff, administration, and the community. Guest lecturers, discussions, an optional UC-wide retreat, and essays allow engagement with aspects of ecological and social sustainability. Enrollment limited to 25. The Staff

162. Sustainability Internship Practicum. W,S

Introduces students to sustainable practices and state, local, and UC-wide policies through projects. Matches students with UCSC staff partners to work collaboratively on projects that integrate sustainability into aspects of campus operations. Supports students to develop the competencies necessary to become effective environmental professionals through learning models including hands-on work experience; professional skills training; guest lectures; reading, and discussion; and peer-to-peer advising. In addition to project deliverables, students complete and present a portfolio of their work upon completion of their project. Enrollment limited to Sustainability Office Interns and by instructor permission; an interview, resume, and cover letter are required. Enrollment limited to 20. (General Education Code(s): PR-S.) The Staff

193. Field Study. F,W,S

The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study sponsored by the college and performed off campus. Must be sponsored by College Eight faculty. Approval of the student's adviser and the academic preceptor is needed to enroll. May be repeated three times for credit. Students submit petition to sponsoring agency. The Staff

195. Senior Thesis. F,W,S

May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

The Staff

199. Tutorial. F,W,S

May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual study for upper-division students directed by a faculty member affiliated with College Eight. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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College Office

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Lower-Division Courses

70. Colleges Nine and Ten Community Garden (2 credits). F

Students in this course design and build a new community garden at Colleges Nine and Ten. Students engage in a collaborative design process with campus stakeholders; learn hands-on skills and community gardening best practices; and build regenerative social and ecological systems. Enrollment restricted to College Nine and College Ten students. May be repeated for credit. The Staff

80A. Introduction to University Discourse: International and Global Issues. F

Explores rhetorical principles and conventions of university discourse and provides intensive practice in analytical writing, critical reading, and speaking. Topics address contemporary global issues including economic globalization, human rights, international and inter-ethnic conflicts, poverty, and immigration. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): T3-Social Sciences, C1.) The Staff

80B. Rhetoric and Inquiry: International and Global Issues. F

Explores the intersection of investigation, interpretation, and persuasion and refines strategies for writing, research, and speaking. Topics address contemporary global issues including economic globalization, human rights, international and inter-ethnic conflicts, poverty, and immigration. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. Enrollment limited to 22. (General Education Code(s): T3-Social Sciences, C2.) The Staff

80C. Introduction to University Discourse: International and Global Issues Writing Intensive 1. F

Explores rhetorical principles and conventions of university discourse and provides intensive practice in analytical writing, critical reading, and speaking. Topics address contemporary global issues including economic globalization, human rights, international and inter-ethnic conflicts, poverty, and immigration. More writing intensive than course 80A; prerequisite to 80D. Enrollment restricted to first-year college members who have not satisfied the C1 requirement and who scored a 5 or lower on the Analytical Writing and Placement Exam. Enrollment limited to 22. The Staff

80D. Introduction to University Discourse: International and Global Issues Writing Intensive 2. W

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Continues to provide practice in analytical writing, critical reading, and speaking, and to examine global issues. Prerequisite(s): course 80C. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): C1.) The Staff

80L. College Nine Core Film Course (2 credits). F

Complements the College Nine core course. The films and readings explore the theme of International and Global Perspectives and follow the core course syllabus. Prerequisite(s): Concurrent enrollment in course 80A, 80B, or 80C. Enrollment restricted to first-year college members. The Staff

85. Global Action (2 credits). W

Workshop facilitated by peer instructors. Students learn about current international and global issues through interactive exercises, small-group discussions, and faculty presentations. Students develop an "action plan" to raise awareness about one or more of these concerns and take practical steps to create positive change in the world. Enrollment restricted to College Nine members during priority enrollment only. Enrollment limited to 20. E. Ramsden

86. College Leadership Development (2 credits). S

Students newly appointed into leadership positions at College Nine explore the concept of leadership relating to the college's theme of International and Global Perspectives. Prerequisite(s): current College Nine student leader; permission of instructor. R. Shaw

90. Intercultural Understanding (2 credits). F

Provides an opportunity to enhance the intercultural experience, increase cultural competency, promote further understanding, and examine the various trends facing a uniquely diverse community. Geared toward U.S. and international students affiliated with the International Living Center. Enrollment by instructor permission. Enrollment limited to 50. The Staff

91. Global Issues Colloquium (1 credit). F,W,S

Weekly colloquium on global issues with different topical focus each quarter. Presentations by UCSC faculty and invited speakers. Students must attend class, read an assigned article, and write a one-page synopsis. Enrollment restricted to College Nine members. Enrollment limited to 50. May be repeated for credit. The Staff

Upper-Division Courses

105. Researching Food Sovereignty. S

Students engage in individual and collective research projects on transformational food systems in the United States and abroad. Readings look at the current global food system and grassroots responses to food and environmental crises. Enrollment restricted to junior and senior College Nine and College Ten members during priority enrollment only. Enrollment limited to 20. The Staff

106. Israel and Palestine: Pathways to a Deeper Understanding (2 credits). S

Explores, and seeks to provide a deeper understanding of, the Israeli-Palestinian conflict through materials and guest speakers that offer varying perspectives. Self-reflection and structured communication facilitate the positive exchange of ideas and views. Enrollment by permission of instructor. The Staff

112A. Model United Nations Part A: A Group Seminar (2 credits). W

Introduces the Model United Nations. Students learn parliamentary procedure and U.N. protocols, as well as how to research and present position papers to the general assembly. Students learn resolution writing, alliance building, and persuasive speech. (Formerly course 112, Model United Nations: A Group Seminar) Enrollment limited to 35. May be repeated for credit. The Staff

112B. Model United Nations Part B: International Crises (2 credits). S

Students are assigned a country to represent in the U.N. Three international crises allow students to present position papers, make speeches, and debate the issues. Prerequisite(s): course 112A. May be repeated for credit. The Staff

120. Practical Activism Conference Planning and Development (2 credits). F

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Offers an applied experience of collaborative planning, production, and leadership. Students plan workshops and other event components; conduct outreach and publicity; and address all aspects of educational event planning. Enrollment restricted to members of the spring volunteer Practical Activism planning group. Enrollment by permission of the instructor. May be repeated for credit. (General Education Code(s): PR-E.) W. Baxter

191. Teaching Global Action. W

Undergraduates at upper-division level participate in teaching discussion groups for College Nine 85 (W). Prerequisite(s): permission of instructor: essay describing interest in becoming course assistant, copies of evaluations, and letter of recommendation from faculty member and/or college staff member. Enrollment restricted to College Nine juniors and seniors. E. Ramsden

199. Independent Study. F,W,S

Individual directed study for upper-division college members with college-affiliated faculty. Students must submit petition with one of the college academic advisers with accompanying letter from faculty adviser. Approval of provost required. Enrollment restricted to upper-division College Nine members. May be repeated for credit. The Staff

199F. Independent Study (2 credits). F,W,S

Individual directed study for upper-division college members with college-affiliated faculty. Students must submit petition with one of the college academic advisers with accompanying letter from faculty adviser. Approval of provost required. Enrollment restricted to upper-division College Nine members. May be repeated for credit. The Staff

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College Office

(831) 459-5034

<http://college10.ucsc.edu/>

For college description and list of faculty, see [Colleges](#).

Lower-Division Courses

80A. Introduction to University Discourse: Social Justice and Community. F

Explores rhetorical principles and conventions of university discourse and provides intensive practice in analytical writing, critical reading, and speaking. Examines social justice issues; topics include racism, sexism, and other forms of prejudice and discrimination; poverty and welfare; civil liberties; and community involvement and citizenship. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): T3-Social Sciences, C1.) The Staff

80B. Rhetoric and Inquiry: Social Justice and Community. F

Explores the intersection of investigation, interpretation, and persuasion and refines strategies for writing, research, and speaking. Examines social justice issues; topics include racism, sexism, and other forms of prejudice and discrimination; poverty and welfare; civil liberties; and community involvement and citizenship. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. Enrollment limited to 22. (General Education Code(s): T3-Social Sciences, C2.) The Staff

80C. Introduction to University Discourse: Social Justice and Community Writing Intensive 1. F

Explores rhetorical principles and conventions of university discourse and provides intensive practice in analytical writing, critical reading, and speaking. Examines social justice issues. Topics include: racism, sexism, and other forms of prejudice and discrimination; poverty and welfare; civil liberties; and community involvement and citizenship. More writing-intensive than 80A; prerequisite to 80D. Enrollment restricted to first-year college members who have not satisfied the Entry Level Writing and C1 requirement and who scored a 5 or lower on the AWPE (Analytical Writing and Placement Exam). Enrollment limited to 22. The Staff

80D. Introduction to University Discourse: Social Justice and Community Writing Intensive 2. W

Continues to provide practice in analytical writing, critical reading, and speaking, and to examine social justice issues. Prerequisite(s): course 80C. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): C1.) The Staff

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80L. College Ten Core Film Course (2 credits). F
 Complements the College Ten core course. The films and readings explore the theme of Social Justice and Community, and follow the core course syllabus. Prerequisite(s): Concurrent enrollment in course 80A, 80B, or 80C. Enrollment restricted to first-year college members. The Staff

85. Social Justice Issues Workshop (2 credits). W
 Series of presentations, films, and workshops that address personal and cultural identity and examine social, cultural, political, environmental, and other justice concerns. Enrollment restricted to College Ten members during priority enrollment only. Enrollment limited to 20. W. Baxter

86. College Leadership Development (2 credits). S
 Students newly appointed into leadership positions at College Ten explore the concept of leadership relating to the college's theme of Social Justice and Community. Prerequisite(s): current College Ten student leader; permission of instructor. R. Shaw

91. Introduction to Nuclear Policy (2 credits). F
 Introduces the key aspects of nuclear policy. Examines issues associated with nuclear weapons and civil nuclear power and the interplay between the two with regards to proliferation. Presentations will be given by guest speakers. Enrollment limited to 50. May be repeated for credit. D. Hirsch

92. Social Justice Issues Colloquium (1 credit). F,W,S
 Weekly colloquium on social justice issues with a different topical focus each quarter. Presentations by UCSC faculty and invited speakers. Students must attend class, read an assigned article or book chapter(s) on the week's topic, and write a one-page synopsis. May be repeated for credit. The Staff

95. Nonviolent Communication (Living–Learning Community) (1 credit). F,W,S
 The Nonviolent Living–Learning Community operates in a spirit of cooperation, compassion, and good will without competition or hierarchy. Students living in the Nonviolent Living–Learning Community enroll in this course each quarter of the academic year. Restricted to residents of the Nonviolent Living–Learning Community. Enrollment limited to 25. May be repeated for credit. The Staff

98. Alternative Spring Break (2 credits). S
 Provides students with the opportunity to conduct service–learning work in a local Santa Cruz community over spring break. There are four preliminary class meetings in the winter quarter. Winter meeting attendance is required. Enrollment by interview only. Enrollment restricted to College Nine and College Ten members. (General Education Code(s): PR–S.) A. Asher

Upper-Division Courses

105. The Making and Influencing of Environmental Policy. W
 Explores how environmental policy is made and influenced. Students learn about key contemporary environmental issues and the forces at play in determining environmental policy outcomes. Focuses on skills that enable citizens to impact environmental policy. (Formerly The Making and Influencing of Nuclear Policy.) Enrollment restricted to sophomore, junior, and senior College Nine and College Ten members during priority enrollment only. Enrollment limited to 35. (General Education Code(s): PE–E.) D. Hirsch

110. Service Learning Field Study (Esprit de Corps). F,W,S
 Provides college members the opportunity to apply their academic learning in a practical setting in the community. Students earn academic credit by volunteering in a non–profit agency or school for approximately 12 hours per week. Students supervised by a professional on site. Students attend a weekly class, complete readings, listen to local leaders from the community, reflect upon their experiences with fellow students, and submit a final project related to their service learning placement. Taught concurrently with course 110B. Enrollment by instructor consent. Enrollment restricted to sophomore, junior, and senior College Nine and College Ten members. Students must attend an informational session to enroll. Contact: aasher@ucsc.edu for more information. Enrollment limited to 22. May be repeated for credit. (General Education Code(s): PR–S.) A. Asher

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Provides college members the opportunity to apply their academic learning in a practical setting in the community. Students earn academic credit by volunteering in a non-profit agency or school for approximately three hours per week. Students supervised by a professional on site. Students attend a weekly class, complete readings, listen to local leaders from the community, reflect upon their experiences with fellow students, and submit a final project related to their service learning placement. Taught concurrently with course 110. Enrollment by instructor consent. Enrollment restricted to sophomore, junior, and senior College Nine and College Ten members. Students must attend an informational session to enroll. Contact: aasher@ucsc.edu for more information. Enrollment limited to 22. May be repeated for credit. (General Education Code(s): PR-S.) A. Asher

120. Practical Activism Conference Planning and Development (2 credits). F

Offers an applied experience of collaborative planning, production, and leadership. Students plan workshops and other event components; conduct outreach and publicity; and address all aspects of educational event planning. Enrollment restricted to members of the spring volunteer Practical Activism planning group. Enrollment by permission of the instructor. May be repeated for credit. (General Education Code(s): PR-E.) W. Baxter

191. Teaching Social Justice. W

Undergraduates at upper-division level participate in teaching discussion groups for College Ten 85 (W). Prerequisite(s): permission of instructor: essay describing interest in becoming course assistant, copies of evaluations, and letter of recommendation from faculty member and/or college staff member. Enrollment restricted to College Ten juniors and seniors. W. Baxter

194. Group Tutorial. F,W,S

Independent study through which a group of students explores a particular topic in consultation with an instructor. Prerequisite(s): Course 91 or 105 recommended. Students submit petition to sponsoring agency. Enrollment limited to 15. May be repeated for credit. D. Hirsch, The Staff

194F. Group Tutorial (2 credits). F,W,S

Independent study through which a group of students explores a particular topic in consultation with an instructor. Prerequisite(s): Course 91 or 105 recommended. Students submit petition to sponsoring agency. Enrollment limited to 15. May be repeated for credit. D. Hirsch, The Staff

199. Independent Study. F,W,S

Individual directed study for upper-division college members with college-affiliated faculty. Students must submit petition with one of the college academic advisers with accompanying letter from faculty adviser. Approval of provost required. Enrollment restricted to upper-division College Ten members. May be repeated for credit. The Staff

199F. Independent Study (2 credits). F,W,S

Individual directed study for upper-division college members with college-affiliated faculty. Students must submit petition with one of the college academic advisers with accompanying letter from faculty adviser. Approval of provost required. Enrollment restricted to upper-division College Ten members. May be repeated for credit. The Staff

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Community Studies

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213 Oakes Academic Building

(831) 459-2371

<http://communitystudies.ucsc.edu>

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Lower-Division Courses

10. Introduction to Community Activism. F

Surveys different strategies of community activism including charity, volunteering, labor and community organizing, and recently emerging global activism with goal of demonstrating how certain strategies challenge existing social relations and arrangements while others typically (and often by design) reproduce them. (General Education Code(s): IS.) L. Lopez

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division or graduate students under faculty supervision. (See course 192.) The Staff

93. Field Study. F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

93F. Field Study (2 credits). F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

93G. Field Study (3 credits). F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Individual directed study for lower-division undergraduates. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Individual directed study for lower-division undergraduates. May be repeated for credit. The Staff

Upper-Division Courses

■ Community Studies	➤
■ Computer Engineering	
■ Cowell College	
■ Critical Race and Ethnic Studies	
■ Crown College	
■ Digital Arts and New Media	
■ Earth and Planetary Sciences	
■ Ecology and Evolutionary Biology	
■ Economics	
■ Education	
■ Electrical Engineering	
■ Environmental Studies	
■ Feminist Studies	
■ Film and Digital Media	
■ French	
■ German	
■ Greek	
■ Hebrew	
■ History	
■ History of Art and Visual Culture	
■ History of Consciousness	
■ Italian	
■ Japanese	
■ Jewish Studies	
■ Kresge College	
■ Languages	
■ Latin	
■ Latin American and Latino Studies	
■ Legal Studies	
■ Linguistics	
■ Literature	
■ Mathematics	
■ Merrill College	
■ Microbiology and Environmental Toxicology	
■ Molecular, Cell, and Developmental Biology	
■ Music	
■ Oakes College	
■ Ocean Sciences	
■ Physical Education	
■ Physics	
■ Politics	
■ Porter College	
■ Portuguese	
■ Psychology	
■ Russian	
■ Science Communication	
■ Social Documentation	
■ Sociology	
■ Spanish	
■ Spanish for Heritage Speakers	
■ Stevenson College	

101. Communities, Social Movements, and the Third Sector. W
Engages with crosscutting ideas and concepts central to the major including constructions of community in social-change efforts and the institutionalization of social movements in third-sector organizations. Deepens students' understanding of the opportunities and obstacles embedded in various avenues of social action. The Staff
102. Preparation for Field Studies. S
A practicum to prepare students for field study. Course must be successfully completed prior to the six-month field study. Prerequisite(s): course 10; course 101; satisfaction of the Entry Level Writing and Composition requirements; submission of the signed Goals and Objectives form; and completion of the declaration of major process. Enrollment restricted to community studies majors. A. Steiner
103. Field Study Practicum (2 credits). S
A practicum in social change work in which the students works for a social change organization on a part-time basis. Concurrent enrollment in course 102 required. A. Steiner
132. American Cities and Social Change. *
Examines the historical development of and contemporary conditions within U.S. cities by focusing on social and economic restructurings of cities, cultural and political transformations, and spatial reorganizations of the urban landscape. Goal is understanding the changing nature of urban experience. M. Pudup
133. Making California: Landscapes, People, Politics, Economy. S
Examines key moments in the development of California to provide understanding of the challenges and opportunities facing California today. Particular focus is given to abiding tensions around wealth and poverty, opportunity and exclusion, and progressive and conservative politics. J. Guthman
141. Economic Justice. F
Examines how markets operate within the political economy of contemporary capitalism to generate myriad and often chronic forms of economic and social inequality in the United States. Explores different approaches to addressing inequality within the multi-faceted economic justice movement. (General Education Code(s): E.) M. Pudup
143. Wal-Mart Nation. *
Examines origins and growth of Wal-Mart stores as powerful guides to understanding dynamics of contemporary global political economy and, relatedly, the changing fortunes of global social classes. M. Pudup
145. Globalization and Its Discontents. W
Provides an overview of the origins and existing character of major institutions, structures, and dynamics of the global political economy. Examines some social consequences of neoliberalism as well as political responses to it. J. Guthman
149. Political Economy of Food and Agriculture. *
Examines key concepts in agrarian political economy; the historical development of the world food system; and a selection of contemporary issues related to food production, consumption, distribution, and regulation. (General Education Code(s): PE-E.) J. Guthman
151. Sex, Race, and Globalization.
Examines globalization by attending to shaping forces of sexuality, gender, and race. Foregrounds Third World feminist theories, social movements. Topics include sexual and racial dynamics of "free trade" and labor fragmentation; global sex trades; HIV/AIDS politics in the South and North; transnational LGBT/queer politics. (General Education Code(s): E.) The Staff
156. Politics of Obesity. *
Critically examines the construction and representation of the so-called epidemic of obesity, the major explanations for the rise in obesity and the interventions they beget, and the implications of naming obesity as a problem. (Formerly course 145.) (General Education Code(s): PE-H.) J. Guthman
157. Ageism and Activism. *
Introduces students to gerontology, the study of aging. Taking a multidisciplinary

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approach, critically examines the theories, stereotypes, and realities of worldwide demographic transition and considers the many interesting implications for organizing social and personal life. A. Steiner

160. Public Health. *

Examination of community activism to address health issues: examples are drawn from a range of concerns, e.g., environmental racism, prison conditions, feminist health matters, the AIDS epidemic, violence, and alcoholism. Special attention is given to the social frameworks of health and to the utilization of social and political strategies for improving community well-being. A. Steiner

161. Women's Health Activism. *

Examines concrete aspects of women's health in social and political contexts, including such factors as environmental and occupational health, the role of race and nationality, diverse sexualities and health, American medical care systems, and international comparisons and organizing approaches. A. Steiner

162. Community Gardens and Social Change. *

Examines history, theory, and practice of community gardening, emphasizing contemporary garden projects using the transformative power of direct contact with nature to effect social change. Aims include understanding the nonprofit sector's response to social problems with novel programs and practices. M. Pudup

163. Health Care Inequalities. F

Examines system and non-system that is American health care with special attention to inequalities in access, financing, and quality of care. Covers concepts such as equality, fairness, and need as well as community organizing and community building for health. A. Steiner

186. Agriculture, Food, and Social Justice. S

Examines the primary ways in which activists are attempting to resist, provide alternatives to, and/or transform aspects of the food system using social and environmental justice frameworks to evaluate such activism. Topics explored include organic farming, food charity, fair trade, relocalization, and farmworker organizing. Enrollment by permission of instructor; admission determined at the first class meeting. J. Guthman

189. Methods of Teaching Community Studies. F,W,S

Each student serves as a facilitator for small discussion groups in connection with core community studies courses. Facilitators complete course readings and meet with instructor as a group to discuss the teaching process. May not be counted toward upper-division major requirements. Prerequisite(s): prior course work in the major. The Staff

191. Student Volunteer Internship (3 credits). F,W,S

Course bridges Santa Cruz and university communities through students organizing volunteer opportunities and charitable events. Students contribute 10 hours per week on and off campus, including outreach, event-planning, and database maintenance; supplemented by reading and biweekly discussions. Enrollment by permission of instructor after application and interview. Enrollment limited to 15. (General Education Code(s): PR-S.) A. Steiner

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar, course 42, under faculty supervision. Students submit petition to sponsoring agency. Approval by the Committee on Educational Policy the prior quarter. The Staff

193. Field Study. F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193G. Field Study (3 credits). F,W,S

Supervised work in a community-based setting conducted under the guidance of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Analysis of Field Materials. W

A seminar for students who have completed a full-time field study. Devoted to the systematic analysis of field materials, integrating appropriate concepts and relevant literature, as well as utilizing the experience of other students. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 198. Enrollment restricted to community studies majors. (General Education Code(s): W.) The Staff

195A. Senior Thesis. F,W,S

Individual study with a faculty member to complete the senior thesis. The Staff

195B. Senior Thesis. F,W,S

Individual study with a faculty member to complete the senior thesis. The Staff

195C. Senior Thesis. F,W,S

Individual study with a faculty member to complete the senior thesis. The Staff

198. Independent Field Study. F

Full-time field study off-campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Prerequisite(s): course 102. May be repeated for credit. (General Education Code(s): PR-S.) M. Pudup

199. Tutorial. F,W,S

Advanced directed reading and research for the serious student. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Advanced directed reading and research for the serious student. May be repeated for credit. The Staff

Graduate Courses

297. Independent Study. F,W,S

Either study related to a course being taken or a totally independent study. Designed for graduate students. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Computer Engineering

[2013-14 General Catalog](#)

Baskin School of Engineering

(831) 459-2158

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Lower-Division Courses

1. Hands-On Computer Engineering (2 credits). *

Hands-on introduction to computer engineering practice and research, including computer hardware, robotics, and embedded systems. Encourages interaction with UCSC's School of Engineering community. Designed for students without previous background in computer engineering. Enrollment restricted to first-year students and sophomores. Enrollment limited to 20. The Staff

3. Personal Computer Concepts: Software and Hardware. F,W,S

Provides an introduction to computers. Personal computing is emphasized, and students are introduced to word processing, spreadsheets, database management, graphics, and programming. Covers fundamentals of computing and current and future uses of computer technology, PC hardware, Windows operating system, applications software, networking and the Internet, and developments in the computer industry. Designed for students with little or no experience using computers. Students cannot receive credit for this course and Computer Science 2. (General Education Code(s): IN.) G. Moulds

7. Statistical Reasoning in the Age of the Internet. S

Elementary methods of statistical and probabilistic reasoning are introduced through applications from the Internet. Computer simulations and analyses performed by the instructor are presented to develop and discuss these methods. Students experiment with their own simulations (programming skills not required), analyzing and interpreting results. Students cannot receive credit for this course if they have already received credit for course 107 or Applied Mathematics and Statistics 5 or 7 or 131. Prerequisite(s): Applied Mathematics and Statistics 2 or 3 or 6, or Mathematics 3. (General Education Code(s): SR.) A. Brandwajn

8. Robot Automation: Intelligence through Feedback Control. F

Introduction to dynamical systems, feedback control, and robotics. Fundamental concepts in dynamical systems, modeling, stability analysis, robustness to uncertainty, feedback as it occurs naturally, and the design of feedback-control laws to engineer desirable static and dynamic response. Course includes an introduction to MATLAB and programming in MATLAB. Priority enrollment restricted to first-year students and sophomores. (General Education Code(s): MF, IN, Q.) M. Teodorescu

9. Introduction to Statics, Dynamics, and Biomechanics. W

■ Community Studies
■ Computer Engineering >
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Theory and application of mathematical models to analyze statics and dynamics of mechanical and biomechanical systems (partials and rigid bodies) using a vector algebra. Covers: Newton's laws; free-body diagrams; structure analysis; friction; virtual work; energy and momentum methods; dynamics of bodies in two and three dimensions. Prerequisite(s): Mathematics 19A, and Physics 5A/L or 6A/L., and Applied Mathematics and Statistics 10 or Mathematics 21. D. Milutinovic

12. Computer Systems and Assembly Language. F,W,S

Introduction to computer systems and assembly language and how computers compute in hardware and software. Topics include digital logic, number systems, data structures, compiling/assembly process, basics of system software, and computer architecture. May include C language. Prerequisite(s): course 3 or 8, or Computer Science 10 or 12A or 5C or 5J or 5P, or Biomolecular Engineering 60, or suitable programming experience; previous or concurrent enrollment in course 12L required. (General Education Code(s): IN, Q.) M. Guthaus, T. Larrabee

12L. Computer Systems and Assembly Language Laboratory (2 credits). F,W,S

Laboratory sequence in assembly language programming. The basics of logic design, both RISC and microcontroller programming. May include C language programming. Two two-hour laboratories per week . Prerequisite(s): course 3 or 8, or Computer Science 10 or 12A or 5C or 5J or 5P, or Biomolecular Engineering 60, or suitable programming experience; previous or concurrent enrollment in course 12 required. M. Guthaus, T. Larrabee

13. Computer Systems and C Programming. W,S

Introduction to the C programming language as a means for controlling embedded and general computing systems. Continuing the exploration begun in course 12, students move to higher levels of abstraction in the control of complex computer systems. Prerequisite(s): courses 12 and 12L. Concurrent enrollment in course 13L is required. G. Elkaim, The Staff

13L. Computer Systems and C Programming Lab (2 credits). W,S

Laboratory sequence in C programming for embedded and general computing systems. Two 2-hour laboratories per week. Concurrent enrollment in course 13 is required. G. Elkaim, The Staff

16. Applied Discrete Mathematics. F,W,S

Introduction to applications of discrete mathematical systems. Topics include sets, functions, relations, graphs, predicate calculus, mathematical proof methods (induction, contraposition, contradiction), counting methods (permutations, combinations), and recurrences. Examples are drawn from computer science and computer engineering. Knowledge of computer programming is useful before taking this course. Students who do not have prior programing experience are strongly recommended to take Computer Science 5C, 5J, or 5P before taking this course. Prerequisite(s): Mathematics 19A or 11B or Applied Mathematics and Statistics 11B or 15B or Economics 11B. (General Education Code(s): MF, Q.) J. Garcia-Luna-Aceves, M. Schlag, T. Larrabee

80A. Universal Access: Disability, Technology, and Society. F,S

Overview of human-centered technology and of its potential for increasing the quality of life and independence of disabled individuals. A substantial portion of the course is devoted to studying physical, psychological, and psychosocial aspects of disability. Topics include: diversity and integration, legislation, accessibility, and universal design. (Formerly Assistive Technology and Universal Access .) (General Education Code(s): PE-T, T7-Natural Sciences or Social Sciences.) S. Kurniawan, R. Manduchi

80E. Engineering Ethics. S

Ethical theories, analysis, and their application to issues in the practice of engineering, such as safety and liability, professional responsibility to clients and employers, codes of ethics, legal obligations, environmental issues, and social issues. Emphasis on developing independent ethical analysis through the use of case studies. (General Education Code(s): PE-T, T6-Natural Sciences or Humanities and Arts.) R. Hughey, The Staff

80H. History of Modern Computing. *

Presents a history of the development of computing technologies (CPUs and I/O devices, operating systems, and languages) through the latter half of the 20th century in order to build an understanding of how today's computing environment evolved. (General Education Code(s): T2-Natural Sciences.) The Staff

<ul style="list-style-type: none"> Management UCDC Program Writing Program Theater Arts Yiddish <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>80N. Introduction to Networking and the Internet. F,S Introduction to the evolution, technological basis, and services of the Internet, with descriptions of its underlying communications structure, routing algorithms, peer-to-peer hierarchy, reliability, and packet switching. Network security, mail, multimedia and data compression issues, HTML, and digital images. Students who have completed course 150 cannot receive credit for this course. (General Education Code(s): PE-T, T2-Natural Sciences.) T. Larrabee, The Staff</p> <p>80U. Ubiquitous and Mobile Computing. * Ubiquitous computing integrates computer and communication technology with day-to-day life. Ubiquitous and mobile technology includes: MP-3 players, camera cell phones, Bluetooth headsets, sensor networks, and new emerging technologies. Course provides an overview of the technology and economics of ubiquitous computing. (General Education Code(s): T2-Natural Sciences.) The Staff</p> <p>94. Group Tutorial. F,W,S Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>94F. Group Tutorial (2 credits). F,W,S Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99. Tutorial. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99F. Tutorial (2 credits). F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <h2>Upper-Division Courses</h2> <p>100. Logic Design. W,S Boolean algebra, logic minimization, finite-state machine design, sequential circuits, common logic elements, programmable logic devices, and an introduction to system level design. The electrical behavior of circuits including three state outputs, propagation delay, logic levels, and fanout. Prerequisite(s): courses 12 and 12L; previous or concurrent enrollment in course 100L required. Enrollment limited to 60. M. Guthaus, M. Schlag</p> <p>100L. Logic Design Laboratory (2 credits). W,S Laboratory sequence illustrating topics covered in course 100. Two 2-hour laboratory sessions per week. Weekly laboratory assignments which require the use of the oscilloscopes, TTL circuits, computer-aided design and simulation tools, and programmable logic. Students are billed a materials fee. Prerequisite(s): courses 12 and 12L; previous or concurrent enrollment in course 100 required. Enrollment limited to 60. M. Schlag, The Staff</p> <p>107. Probability and Statistics for Engineers. W,S Introduction to fundamental tools of stochastic analysis. Probability, conditional probability; Bayes Theorem; random variables and transforms; independence; Bernoulli trials. Statistics, inference from limited data; outcomes of repeated experiments; applications to design; assessment of relative frequency and probability; law of large numbers; precision of measurements. Elements of stochastic processes, Poisson processes; Markov chains. Students cannot receive credit for this course and Applied Mathematics and Statistics 131. (Formerly Mathematical Methods of Systems Analysis: Stochastic.) Prerequisite(s): course 16 or 16H and Mathematics 22 or 23A. (General Education Code(s): SR.) The Staff</p> <p>108. Data Compression. * Basics of information theory, lossless coding (Huffman coding, arithmetic coding, dictionary coding), lossy coding (PCM, predictive coding, transform coding). Application to the compression of specific data set, which may include biological time series, DNA sequences, and multimedia streams. Programming experience is required. Prerequisite(s): course 107 or Applied Mathematics and Statistics 131. The Staff</p>
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110. Computer Architecture. F,W

Introduction to computer architecture including examples of current approaches and the effect of technology and software. Computer performance evaluation, basic combinatorial and sequential digital components, different instruction set architectures with a focus on the MIPS ISA and RISC paradigm. Evolution of CPU microarchitecture from single-cycle to multi-cycle pipelines, with overview of super-scalar, multiple-issue and VLIW. Memory system, cache, virtual memory and relationship between memory and performance.

Evolution of PC system architecture. May include advanced topics, such as parallel processing, MIMD, and SIMD. Prerequisite(s): courses 12/L, and courses 13/L or Computer Science 12A/L or Computer Science 11. Course 16 recommended. The Staff

112. Computer and Game Console Architecture. *

Introduces computer and game console architecture, including examples of current approaches and the effect of technology and software. Computer performance evaluation; instruction-set architectures; RISC CPU and pipelining; cache and memory; multi-core, system-level architecture; video card; special console architectures. Pre-requisite(s): course 12. The Staff

113. Parallel and Concurrent Programming.

Introduction to parallel and concurrent programming. Topics include: types of parallel computers and programming platforms; design, implementation, and optimization of programs for parallel and multicore processors; basic and advanced programming techniques; performance analysis and load balancing; and selected parallel algorithms. (Also offered as Computer Science 113. Students cannot receive credit for both courses.) Prerequisite(s): Computer Engineering 12 and 12L and Computer Science 101. Computer Engineering 110 or 112 recommended. The Staff

115. Introduction to Solid Mechanics. *

Introduces the solid mechanics of materials. Topics include: stress and strain, torsion, bending of beams, shearing stresses in beams, compound stresses, principal stresses, deflections of beams, and statically indeterminate members and columns. Prerequisite(s): course 9 and Mathematics 19B, and Applied Mathematics and Statistics 10 or Mathematics 21. The Staff

118. Introduction to Mechatronics. F

Technologies involved in mechatronics (intelligent electro-mechanical systems) and techniques necessary to integrate these technologies into mechatronic systems. Topics include electronics (A/D, D/A converters, opamps, filters, power devices), software program design (event-driven programming, state machine-based design), DC and stepper motors, basic sensing, and basic mechanical design (machine elements and mechanical CAD). Combines lab component of structured assignments with a large and open-ended team project. Cannot receive credit for this course and course 218. Prerequisite(s): Electrical Engineering 101/L and courses 12/L and 100/L. Concurrent enrollment in course 118L is required. Enrollment limited to 36. G. Elkaim

118L. Introduction to Mechatronics Laboratory (2 credits). F

Laboratory sequence illustrating topics covered in course 118. Two 2-hour laboratory sessions per week. Students cannot receive credit for this course and course 218L. Students are billed a materials fee. Prerequisite(s): Concurrent enrollment in course 118 is required. Enrollment limited to 36. G. Elkaim

121. Microprocessor System Design. S

The design and use of microprocessor-based systems. Covers microprocessor and microcontroller architecture, programming techniques, bus and memory organization, DMA, timing issues, interrupts, peripheral devices, serial and parallel communication, and interfacing to analog and digital systems. Enrollment restricted to Computer Engineering and Robotics majors during First Pass Enrollment. Prerequisite(s): courses 12/L and 100/L and Electrical Engineering 101/L; and course 13/L or Computer Science 12B/M. Previous or concurrent enrollment in course 121L required. Enrollment limited to 40. A. Varma

121L. Microprocessor System Design Laboratory (2 credits). S

Laboratory sequence illustrating topics covered in course 121. Two 2-hour laboratory sessions per week. Students design, build, program, debug, document, and demonstrate a microprocessor-based system. Students are billed a materials fee. Prerequisite(s): courses

12/L and 100/L and Electrical Engineering 101/L; and course 13/L or Computer Science 12B/M. Previous or concurrent enrollment in course 121 required. Enrollment limited to 40. A. Varma

122. Introduction to VLSI Digital System Design. S

Introduces very large scale integrated (VLSI) custom integrated circuits. Topics include: semiconductor manufacturing, logic families, field-effect transistors (FETs), interconnect models, simulation, and circuits. Introduces the design flow from logic design to layout with a focus on high performance and low power. Students cannot receive credit for this course and course 222. Prerequisite(s): courses 100/L and Electrical Engineering 101/L. Enrollment limited to 25. M. Guthaus

123A. Engineering Design Project I. *

First of a two-course sequence that is the culmination of the engineering program. Students apply knowledge and skills gained in elective track to complete a major design project. Students complete research, specification, planning, and procurement for a substantial project. Includes technical discussions, design reviews, and formal presentations; engineering design cycle, engineering teams, and professional practices. Formal technical specification of the approved project is presented to faculty. Students are billed a materials fee. Prerequisite(s): Computer Engineering 121; previous or concurrent enrollment in Computer Engineering 185; permission of department and instructor. (General Education Code(s): PR-E.) The Staff

123B. Engineering Design Project II (7 credits). *

Second of two-course sequence in engineering system design. Students fully implement and test system designed and specified in course 123A. Formal written report, oral presentation, and demonstration of successful project to review panel of engineering faculty required. Students are billed a materials fee. Prerequisite(s): courses 123A and 185. Enrollment limited to 35. The Staff

125. Logic Design with Verilog. W

Verilog digital logic design with emphasis on ASIC and FPGA design. Students design and verify large-scale systems. Assignments and project use the Verilog Hardware Description Language with emphasis on verification and high-frequency ASIC/FPGA targets. Prerequisite(s): courses 100 and 100L. Concurrent enrollment in course 125L required. Enrollment limited to 40. M. Guthaus

125L. Logic Design with Verilog Laboratory (2 credits). W

Laboratory sequence illustrating topics covered in course 125. Two 2-hour laboratory sessions per week. Students are billed a materials fee. Prerequisite(s): courses 100 and 100L. Concurrent enrollment in course 125 is required. Enrollment limited to 40. The Staff

129A. Capstone Project I (2 credits). F

First of a three-course sequence in which students apply knowledge and skills gained in elective track to complete a major design project. In this first course, students complete the specification and planning for a substantial project. Topics covered: engineering design cycle, engineering teams, and professional practices. Prerequisite(s): previous or concurrent enrollment in courses 121 and 121L. P. Mantey

129B. Capstone Project II. W

Second of a three-course sequence in which students apply knowledge and skills gained in elective track to complete a major design project. In this second course, students complete the research and procurement for a substantial project and a preliminary implementation. Students are billed a materials fee. Prerequisite(s): courses 121, 121L, and 129A. Previous or concurrent enrollment in course 185. Enrollment by permission of instructor. (General Education Code(s): PR-E.) P. Mantey

129C. Capstone Project III. S

Third of a three-course sequence in which students apply knowledge and skills gained in elective track to complete a major design project. In this third course, students work in teams to complete the project specified and advanced in the first two courses. A formal written report, oral presentation, and demonstration of the successful project to a review panel of engineering faculty is required. Students are billed a materials fee. Prerequisite(s): courses 129B and 185. Enrollment by permission of instructor. P. Mantey, The Staff

131. Human-Computer Interaction. W

Theory and hands-on practice to understand what makes user interfaces usable and accessible to diverse individuals. Covers human senses and memory and their design implications, requirement solicitation, user-centered design and prototyping techniques, and expert and user evaluations. Interdisciplinary course for social science and engineering majors. Students cannot receive credit for this course and Computer Engineering 231 or Digital Arts and New Media 231. Prerequisite(s): Computer Science 12B. S. Kurniawan

141. Feedback Control Systems. F

Analysis and design of continuous linear feedback control systems. Essential principles and advantages of feedback. Design by root locus, frequency response, and state space methods and comparisons of these techniques. Applications. (Also offered as Electrical Engineering 154. Students cannot receive credit for both courses.) Prerequisite(s): Electrical Engineering 103. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors, or by permission of instructor. Enrollment limited to 30. D. Milutinovic

142. Introduction to Cyber-physical Systems. F

Presents the basic concepts and tools for the study of cyber-physical systems, including modeling and analysis tools for continuous-time and discrete-time systems, finite state machines, stateflow, timed and hybrid automata, concurrency, invariants, linear temporal logic, verification, and numerical simulation. Students are guided on methods for simulation and encouraged to apply them to several applications. The course is self-contained. Students are expected to have a basic background in logic circuits, programming, the mathematical modeling of dynamical systems (course 8 is recommended), differential equations, linear algebra, and basic calculus. Knowledge of MATLAB/Simulink is useful. Prerequisite(s): courses 100/L or equivalent, and courses 13/L or equivalent. R. Sanfelice

150. Introduction to Computer Networks. F,W

Addresses issues arising in organizing communications among autonomous computers. Network models and conceptual layers; Internet-working; characteristics of transmission media; switching techniques (packet switching, circuit switching, cell switching); medium access control (MAC) protocols and local area networks; error-control strategies and link-level protocols; routing algorithms for bridges and routers; congestion control mechanisms; transport protocols; application of concepts to practical wireless and wireline networks and standard protocol architectures. Students who have completed course 80N can take this course for credit. Prerequisite(s): course 16 and either courses 12 and 12L, or Computer Science 12B and 12M. Concurrent enrollment in course 150L is required. K. Obraczka, The Staff

150L. Introduction to Computer Networks Laboratory (2 credits). F,W

Illustrates the concepts covered in course 150 and provides students with hands-on experience in computer networks. Students are billed a materials fee. Prerequisite(s): course 16 and either courses 12 and 12L, or Computer Science 12B and 12M. Concurrent enrollment in course 150 is required. K. Obraczka, The Staff

151. Advanced Computer Networks. S

Provides an in-depth coverage of fundamental topics introduced in course 150 including routing, transport, and internetworking. Also introduces advanced concepts not covered in course 150 including wireless, application-layer services, security, etc. (Formerly Network Administration.) Prerequisite(s): course 150. Concurrent enrollment in course 151L is required. Enrollment limited to 60. B. Smith

151L. Advanced Computer Networks Laboratory (2 credits). S

Laboratory illustrating the concepts covered in course 151: provides students with hands-on experience in computer networks. Students are billed a materials fee. Prerequisite(s): course 150/L. Concurrent enrollment in course 151 is required. Enrollment limited to 30. B. Smith

153. Digital Signal Processing. F

Introduction to the principles of signal processing, including discrete-time signals and systems, the z-transform, sampling of continuous-time signals, transform analysis of linear time-invariant systems, structures for discrete-time systems, the discrete Fourier transform, computation of the discrete Fourier transform, and filter design techniques.

Taught in conjunction with Electrical Engineering 250. Students cannot receive credit for this course and Electrical Engineering 250. (Also offered as Electrical Engineering 153. Students cannot receive credit for both courses.) Prerequisite(s): Electrical Engineering 103. A. Fletcher

156. Network Programming. W

Methods and tools used for network programming. Topics include: operating system (OS) support for network protocols; inter-process communication (IPC) facilities, such as pipes, sockets, and remote procedure call (RPC); design of client and server sides of network applications; network security; and programming projects. Prerequisites: course 150/L and Computer Science 101. Concurrent enrollment in course 156L required. The Staff

156L. Network Programming Laboratory (2 credits). W

Laboratory sequence illustrating concepts taught in course 156. Students learn use of network programming tools and methods via programming exercises. Students are billed a materials fee. Prerequisites: course 150/L and Computer Science 101. Concurrent enrollment in course 156 required. The Staff

158. Network Management and Operations.

Computer networking internship in the Network Management and Operations (NMO) Lab, an industry-sponsored, networks-research center at UCSC. Working in teams under faculty mentorship, students solve problems posed by industry sponsors over the course of a quarter. Students learn technical topics relevant to the problem, and gain experience and training in best practices for collaborative, multi-site problem solving. Prerequisite(s): course 150/L and 151/L; and previous or concurrent enrollment in course 185. Enrollment by instructor permission. The Staff

161. Mobile Sensing and Interaction. W

Provides hands-on knowledge and experience with modern mobile computing platforms for sensing and interactions tasks. Students learn how to create usable applications on a sensor-laden, mobile computing platform with adequate level of user interface.

Prerequisite(s): courses 13/L or Computer Science 12B/M; and Physics 5A or Physics 6A. R. Manduchi

167. Sensing and Sensor Technologies. W

Introduces the fundamental issues in sensing and various sensor technologies including motion sensors, velocity sensors, GPS sensors, acoustic sensors, light and image sensors, and range sensors. Also demonstrates sensor technologies using a system approach to show how they can be integrated into a complete digital system. Prerequisite(s): Electrical Engineering 103. Concurrent enrollment in course 167L is required. The Staff

167L. Sensing and Sensor Technologies Lab (2 credits). W

Lab assignments reinforce the concepts and techniques learned in course 167. Assignments include measurement and estimation techniques, experiments with various sensors, and a course project in which students build digital sensing systems. Students are billed a materials fee. Prerequisite(s): Electrical Engineering 103. Concurrent enrollment in course 167 is required. The Staff

177. Applied Graph Theory and Algorithms. *

Basic concepts and algorithms are reviewed including trees, Eulerian and Hamiltonian graphs, and graph transversal. Algorithms are explored to solve problems in connectivity, routing, matching, and embedding of graphs. Graph theory and algorithms are developed around applications in computer engineering. Prerequisite(s): Computer Science 101. The Staff

185. Technical Writing for Computer Engineers. F,W,S

Writing by engineers and computer scientists, not to general audiences, but to engineers, engineering managers, and technical writers. Exercises include job application and resume, in-code documentation, algorithm description, naive-user documentation, library puzzle, survey article, proposal, progress report, formal technical report, and oral presentation. Offered in alternate quarters. Enrollment restricted to majors in Computer Engineering, Electrical Engineering, Bioengineering, Bioinformatics, Robotics Engineering, or Network and Digital Technology, or by permission of instructor. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; and Computer Science 12B or Computer Engineering 12 or Biomolecular Engineering 160. Enrollment limited to 60. (General

Education Code(s): W.) G. Moulds

193. Field Study. F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a faculty member of the Computer Engineering Department and a willing sponsor at the field site using resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives by submitting a written and oral presentation. May not be repeated for credit. Students submit petition to sponsoring agency. The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a faculty member of the Computer Engineering Department and a willing sponsor at the field site using resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives by submitting a written and oral presentation. May not be repeated for credit. Students submit petition to sponsoring agency. The Staff

194. Group Tutorial. F,W,S

A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194F. Group Tutorial (2 credits). F,W,S

A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195. Senior Thesis Research. F,W,S

Students submit petition to sponsoring agency. Prerequisite: course 123A. The Staff

195F. Senior Thesis Research (2 credits). F,W,S

Students submit petition to sponsoring agency. Consent of instructor required.
Prerequisite: course 123A. The Staff

198. Individual Study or Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Individual Study or Research (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

For fourth-year students majoring in computer engineering. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

For fourth-year students majoring in computer engineering. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Research and Teaching in Computer Science and Engineering (3 credits). F

Basic teaching techniques for teaching assistants including responsibilities and rights of teaching assistants, resource materials, computer security, leading discussion or lab sessions, presentation techniques, maintaining class records, electronic handling of homework, and grading. Examines research and professional training, including use of the library and online databases, technical typesetting, writing journal and conference papers, publishing in computer science and computer engineering, giving talks in seminars and conferences, and ethical issues in science and engineering. Required for all T.A.s.
Enrollment restricted to graduate students. A. Varma

202. Computer Architecture. S

Provides a thorough and fundamental treatment of the art of computer architecture. Topics include concepts of von Neumann architectures, methods of evaluating CPU performance, instruction-set design and examples, compiler issues, instruction pipelining, superscalar processors, methods for reduction of branch penalty, memory hierarchies, I/O systems, floating-point arithmetic, and current issues in parallel processing. Prerequisite(s): course

110 or 112. Enrollment restricted to graduate students; undergraduates may enroll if they have completed course 110 or 112 and with consent of instructor. Enrollment limited to 30. The Staff

215. Models of Robotic Manipulation. W

Theory and application of mathematical models to analyze, design, and program serial kinematic chains (robot arms). Covers models of arbitrary articulated robotic or biological arms and their application to realistic arms and tasks, including the homogeneous coordinate model of positioning tasks; the forward and inverse kinematic models; the Jacobian matrix; trajectory generation; and dynamic models, including Newton-Euler and Lagrangian formulations. Enrollment restricted to graduate students; and to seniors who have taken electrical engineering 154, and applied mathematics and statistics 10 or 10A or mathematics 21; or by permission of instructor. S. Ellerson

216. Bio-Inspired Locomotion. S

Presents the principles of biological locomotion and application to robotics problems. Students learn about effective movements in the biological world (slithering, walking, climbing, and flying); extract their underlying principles; and apply them creatively to robotics design. Prerequisite(s): course 9 or equivalent. Enrollment restricted to graduate students, and seniors by permission of instructor. Enrollment limited to 20. The Staff

218. Mechatronics. F

Introduction to intelligent electro-mechanical systems, combining aspects of computer, electrical, mechanical, and software engineering. Students become proficient in all aspects of mechanical, electrical, computer system design, analysis, prototyping, presentation and team mentorship. Cannot receive credit for this course and course 118. Prerequisite(s): concurrent enrollment in course 218L. Enrollment restricted to graduate students. Enrollment limited to 36. G. Elkaim

218L. Mechatronics Lab (2 credits). F

Laboratory sequence illustrating topics covered in course 218. Two 2-hour laboratory sessions per week. Students cannot receive credit for this course and course 118L. Students are billed a materials fee. Prerequisite(s): concurrent enrollment in course 218. Enrollment restricted to graduate students. Enrollment limited to 36. G. Elkaim

220. Advanced Parallel Processing. *

Introduction to programming advanced parallel computer architecture. Topics may include: SIMD massively parallel processor arrays; streaming parallel coprocessors, such as graphics cards used for general-purpose processing (GPGPU); or other hybrid MIMD/SIMD architectures. Course has programming lab component, a project, and student presentation on related topics. (Formerly Parallel Processing.) Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. The Staff

221. Advanced Microprocessor Design. *

Introduction to latest advances in computer architecture. Focuses on processor core design. Topics include simultaneous multithreading, thread level speculation, trace caches, novel out-of-order mechanisms, and energy-efficient processor core designs. Final project is modification/enhancement of an out-of-order processor on an FPGA development system. Prerequisite(s): course 202; and course 125, 225, or equivalent Verilog experience. Concurrent enrollment in course 221L required. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

221L. Advanced Microprocessor Design Laboratory (3 credits). *

Laboratory sequence illustrating topics covered in course 221. Prerequisite(s): course 202; and course 125, 225, or equivalent Verilog experience. Concurrent enrollment in course 221 required. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

222. VLSI Digital System Design. S

Advanced Very Large Scale Integrated (VLSI) custom integrated circuits. Topics include: semiconductors; field-effect transistors (FETs); circuits; and interconnect simulation, along with advanced material on manufacturability, variability, short-channel devices, and non-volatile memories. Students cannot receive credit for this course and course 122. (Formerly VLSI Digital System Design.) Prerequisite(s): course 122 or equivalent. Enrollment limited to 15. M. Guthaus

223. VLSI System-on-a-Chip Design. *

Design methodologies for Application Specific Integrated Circuits (ASICs). Topics include: behavioral specification; logic synthesis; standard-cell libraries; advanced timing analysis; and physical design automation tools. Familiarizes students with real-world tools during the design of a small system-on-a-chip project. Students are encouraged to fabricate and test their chips in an independent study. Prerequisite(s): course 222 or permission of instructor. Enrollment restricted to graduate students. The Staff

224. Testing Digital Circuits. *

An introduction to the theory and practice of testing. Topics are chosen from fault and defect models, test generation for combinational and sequential circuits, fault simulation, scan-design and built-in self-test. Enrollment restricted to graduate students; undergraduates may enroll if they have completed Computer Science 101. The Staff

225. Introduction to ASIC Systems Design. *

Introduces reconfigurable computing systems with emphasis on field-programmable devices. Topics include: architectures of field-programmable devices; novel reconfigurable systems; and hardware algorithms. Students are billed a materials fee. Enrollment restricted to computer engineering graduate students. Enrollment limited to 10. Offered in alternate academic years. The Staff

229. Field-Programmable Gate Arrays Computer-Assisted Design. *

Design methods for Field-Programmable Gate Arrays (FPGAs), including algorithms for technology mapping, routability estimation, placement, and routing. The relationship between FPGA architectures and their computer-aided design tools. Course project involves the modification and analysis of an FPGA tool. Enrollment restricted to graduate students or by consent of instructor. Courses 100, 125, 126, 222, 225, or other digital design experience recommended. Enrollment limited to 20. The Staff

230. Computer Performance Evaluation. *

Introduction to methods of analysis of computer system performance. Predictive performance models with emphasis on queuing models; exact and appropriate solution methods, discrete-event simulation, and numeric iterative approaches; analytical solutions and their computation; separable queuing networks, decomposition approaches; examples of practical application; and performance measurement, model validation, robustness of models, and operational analysis. Enrollment restricted to graduate students. Enrollment limited to 20. Offered in alternate academic years. The Staff

231. Human-Computer Interaction. W

Theory and hands-on practice to understand what makes user interfaces usable and accessible to diverse individuals. Covers human senses and memory and their design implications, requirement solicitation, user-centered design and prototyping techniques, and expert and user evaluations. Individual research project. Interdisciplinary course for art, social science and engineering graduate students. Students cannot receive credit for this course and course 131. (Also offered as Digital Arts and New Media 231. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. S. Kurniawan

232. Arithmetic Processors. *

Concept of number systems: binary additions, multiplications, divisions; elementary function evaluations; algorithm acceleration; floating-point and significant arithmetics; IEEE standards; technology related issues; algorithm evaluation by implementation with gate arrays. Prerequisite(s): course 202. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

233. Human Factors. *

Course focuses on theories, practices, and design of systems to optimize human well-being and system performance through consideration of psychological, social, physical, and biological factors. Covers human sensory systems and memory, workload management, error and reliability, performance measurement, and ergonomic design. Interdisciplinary course for social science and engineering graduate students. Enrollment restricted to graduate students; undergraduates may enroll if they have completed course 131. The Staff

235. User Evaluation of Technology.

Presents a variety of evaluation methodologies to assess usability, acceptance, and effectiveness of technology with the intended users. Combines lectures and exercises for students to gain firsthand experiences of these methodologies with real users. Enrollment restricted to graduate students. Seniors may enroll with completion of course 131. The Staff

240. Introduction to Linear Dynamical Systems. *

Introduction to applied linear algebra and linear dynamical systems with applications to circuits, signal processing, communications, and control systems. Topics include the following: Least-squares approximations of over-determined equations and least-norm solutions of underdetermined equations. Symmetric matrices, matrix norm and singular value decomposition. Eigenvalues, left and right eigenvectors, and dynamical interpretation. Matrix exponential, stability, and asymptotic behavior. Multi-input multi-output systems, impulse and step matrices; convolution and transfer matrix descriptions. Control, reachability, state transfer, and least-norm inputs. Observability and least-squares state estimation. Enrollment restricted to graduate students; undergraduates may enroll if they have completed Electrical Engineering 103 and Applied Math and Statistics 147. W. Dunbar

241. Introduction to Feedback Control Systems. F

Graduate-level introduction to control of continuous linear systems using classical feedback techniques. Design of feedback controllers for command-following error, disturbance rejection, stability, and dynamic response specifications. Root locus and frequency response design techniques. Extensive use of Matlab for computer-aided controller design. Course has concurrent lectures with Electrical Engineering 154. (Also offered as Electrical Engineering 241. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. D. Milutinovic

242. Applied Feedback Control. W

Sequel to Electrical Engineering 154. After reviewing control design techniques examined in EE 154, this course explores state space control, discrete time control, and two case studies in control design. Students design and implement feedback controllers on an inverted pendulum experiment. Prerequisite(s): Electrical Engineering 154 or course 241. Enrollment restricted to juniors, seniors, and graduate students. G. Elkaim

243. System Identification. *

Course provides introduction to the construction of linear dynamical models from experimental data using parametric and non-parametric identification techniques. Theoretical and practical aspects of these techniques addressed. Prerequisite(s): course 240, or by permission of instructor. The Staff

244. Digital Control. *

Teaches the design and analysis of digital control systems. The topics covered are discrete-time system modeling; z-transform; stability, controllability, and observability of discrete-time systems; various design approaches to control design in which sensor, computer hardware, actuation, communication, and user interface are part of the design. Note: knowledge of linear algebra, calculus, basic differential equations, Laplace transform, signals and systems, linear-system control theory, MATLAB, and the use of word-processing software are assumed. Prerequisite(s): course 141 or 241. Enrollment restricted to graduate students, or by permission of the instructor. The Staff

246. Hybrid Dynamical Systems. W

Examines the modeling and analysis of hybrid dynamical systems, including the modeling of hybrid systems, the concept of solutions, Zeno behavior, equilibrium sets, stability, convergence, Lyapunov-based conditions, robustness, and simulation. Students are guided on methods for simulation and encouraged to apply them to several applications.

Prerequisite(s): course 241. Enrollment restricted to graduate students. R. Sanfelice

248. Games in Design and Control. *

Graduate-level introduction to game theory and its applications to system design, verification, analysis, and optimal control. Enrollment restricted to graduate students. Computer Science 101, 201, or equivalent recommended. The Staff

250. Multimedia Systems. *

Study of state-of-the-art technology for networked multimedia systems. Topics include

audio, image, and video acquisition and compression standards (JPEG, MPEG, and ITU families); networking for multimedia; and digital television. Proficiency in C or C++ required. Prerequisite(s): Enrollment restricted to graduate students. The Staff

251. Error-Control Coding. S

Overview of coding to protect messages against error during transmission or storage. Topics include channel models, linear algebra over finite fields, linear block codes and bounds, cyclic codes (BCH and RS), decoding algorithms, spectral analysis, codes on graphs, and low-complexity algorithms. Enrollment restricted to graduate students or consent of instructor. H. Sadjadpour

252A. Computer Networks. F

Issues resulting from organizing communication among autonomous computers. Includes network models and switching techniques; medium access control protocols and local area networks; error control and retransmission strategies; routing algorithms and protocols; congestion control mechanisms and end-to-end protocols; application-level protocols; and application of concepts to wireless and wireline networks, with emphasis on the Internet. Enrollment restricted to graduate students. J. Garcia-Luna-Aceves

252B. Principles of Computer Communication. *

Theory and practice of computer communication networks. Emphasis is on verification and performance analysis of network control processes. Topics include protocols for channel access, point-to-point and multipoint reliable transmission, routing, congestion control, network management, multicasting, and ATM networks. (Formerly Modeling of Communications Protocols.) Prerequisite(s): courses 107 and 252A. The Staff

253. Network Security. *

Fundamental mechanisms for network security and their application in widely deployed protocols. In-depth treatment of security mechanism at the data-link, network, and transport layers for both wired and wireless networks. Covers mechanisms for privacy and integrity, and methods for intrusion detection. Prerequisite(s): course 252A and Computer Science 201. Enrollment restricted to graduate students. The Staff

254. High Speed Computer Networks. *

Fiber-optic technology; fiber-optic link design; network protocol concepts; coding and error control; high-speed local area and metropolitan area networks; gigabit networks; error and congestion control; photonic networks; research topics. Prerequisite(s): course 252B. The Staff

256. Design Project in Computer Networks. *

Students develop a working implementation of a network protocol with the goal of obtaining hands-on experience in implementing real-world network protocols. Prerequisite(s): course 252A; enrollment restricted to graduate students. The Staff

257. Wireless and Mobile Networks. S

An interdisciplinary course on wireless communication and mobile computing. Covers the physical aspects of wireless communication but emphasizes higher protocol layers. Topics include cellular networks, packet radio and ad hoc networks, wireless transport protocols, security, and application-level issues. Prerequisite(s): course 252A or permission of instructor. Enrollment limited to 20. K. Obraczka

258. Unix Networking Internals. *

In-depth treatment of the implementation of network protocols in typical open-source Unix systems. Topics include implementation of send and receive functions, buffer management, interrupt handling, locking, scheduling and timer management. Major implementation project required. Prerequisite(s): course 252A. Computer Science 111 recommended. Enrollment restricted to graduate students. The Staff

259. Sensor Networks. *

Focus is on the networking aspects of sensor networks: protocols at the various layers and how they answer the specific requirements posed by these networks (e.g., data driven, energy efficient, etc.) and their applications (monitoring, tracking, etc.). Explore how physical layer and hardware issues may influence protocol design. Courses 252A and 257 recommended. The Staff

263. Data Compression. *

Introduction to information theory and data compression. Lossless coding (Huffman, arithmetic, dictionary codes). Lossy coding (scalar and vector quantization, differential coding, transform coding). Applications to the compression of real data sets (DNA sequences, biological time series, multimedia streams). Concurrent lectures with course 108. Students cannot receive credit for both this course and course 108. Students must have basic knowledge of probability theory. Enrollment restricted to graduate students. The Staff

264. Image Analysis and Computer Vision. W

Brief review of image processing. Binary images, thresholding, morphological operations; edge detection and segmentation; contours: digital curves and curve fitting; statistical texture analysis, shape from texture; depth cues, stereo matching, depth from stereo; color perception and segmentation; and shading and image radiance, surface orientation, and shape from shading. Electrical Engineering 264 encouraged, but not required.

Undergraduate students who are interested in enrolling should meet with the instructor first. R. Manduchi

277. Graph Algorithms. S

Explores graph theory and algorithms for solving problems in engineering. A review of basic graph concepts and algorithms is followed by topics in network flow, partitioning, spectral analysis of graphs, graph isomorphism, and intractability. Prerequisite(s): Computer Science 101 and 102; or course 177; or Computer Science 201; or equivalent. Enrollment restricted to graduate students. Enrollment limited to 20. M. Schlag

280C. Seminar on Control (2 credits). F,W,S

Weekly seminar series covering topics of current research in theory and application of control to engineering systems. Current research work and literature in these areas discussed. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. May be repeated for credit. G. Elkaim

280G. VLSI/CAD Seminar (2 credits). F,W,S

Weekly seminar on advanced topics in VLSI and computer-aided design (CAD). Students present and discuss modern issues in semiconductor design, fabrication, and CAD. Frequent guest speakers present pertinent results from industry and academia. Enrollment limited to 20. May be repeated for credit. M. Guthaus

280N. Seminar on Networks (2 credits). F,W,S

Weekly seminar series covering topics of current research in networks and networked systems. Current research work and literature in these areas are discussed. Prerequisite(s): permission of instructor. Enrollment restricted to graduate students. May be repeated for credit. K. Obraczka, J. Garcia-Luna-Aceves

280P. Seminar on Parallel Processing (2 credits). *

Weekly seminar series covering topics of current research in parallel systems, architectures, and algorithms. Current research work and literature in these areas are discussed. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. The Staff

280T. Seminar on New Technologies (2 credits). *

Weekly seminar series in which distinguished speakers from industry, universities, and government discuss current developments in networking and computer technology. The emphasis is on open research questions that may lead to collaborative work with faculty and graduate students. The Staff

280V. Seminar on Computer Vision (2 credits). F,W,S

Weekly graduate-level seminar series discussing advanced topics in computer vision and image analysis. Current research and literature presented during each meeting. Enrollment limited to 20. May be repeated for credit. R. Manduchi

285. Technical Writing for Engineering Graduates. *

Writing skills development for graduate engineers. Students produce a major writing project with many subtasks. Exercises include fellowship application; mathematical and algorithmic description; use of tables and graphs; experiment description; and producing technical web sites, presentations, and posters. Enrollment restricted to graduate biomolecular engineering, computer engineering, computer science, and electrical

engineering majors. (Open to all School of Engineering graduate students.) Enrollment limited to 20. The Staff

290L. Advanced Topics in VLSI Computer-Aided Design. *

A graduate course on a research topic in VLSI computer-aided design. Topic varies according to instructor. Possible topics include, but are not limited to specification languages and formal verification, logic minimization, testing and verification, electrical simulation, layout synthesis, and behavioral synthesis. Course 100, 125, 126, 222, or 225 recommended. The Staff

290M. Topics in Parallel Computation. *

Investigates selected topics in applied parallel computation. Topics may include numerical methods, artificial intelligence and machine learning algorithms, graphics and image processing, systolic algorithms, and the interplay between hardware and algorithms. Students are encouraged to investigate and discuss the parallelization of their own research. Enrollment restricted to graduate students. The Staff

290N. Topics in Computer Performance. *

Selected topics of current interest in the area of computer system performance. Subjects may include aspects of large systems, performability, computer networks, storage subsystems, and nontraditional approaches and are subject to periodic revision. Enrollment restricted to graduate students. The Staff

290V. Advanced Topics in Visual Computing. *

Advanced course in image analysis and computer vision. Topics include motion analysis, multiple view geometry, 3D reconstruction, image-based rendering, vision-based graphics, face detection and recognition, tracking, image and video retrieval, and human-computer interface. Enrollment restricted to seniors and graduate students. Enrollment limited to 20. The Staff

293. Advanced Topics in Computer Engineering. *

A graduate seminar on a research topic in computer engineering which varies according to instructor. Possible topics include, but are not limited to, communication networks, data compression, special-purpose architectures, computer arithmetic, software reliability and reusability, systolic arrays. The Staff

296. Masters Project (2 credits). F,W,S

Independent completion of a masters project under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study or Research. F,W,S

Independent study or research under faculty supervision. Students submit petition to sponsoring agency. The Staff

299. Thesis Research. F,W,S

Thesis research conducted under faculty supervision. Students submit petition to sponsoring agency. The Staff

299F. Thesis Research (2 credits). F,W,S

Independent study or research under faculty supervision. Enrollment restricted to graduate students. Recommended for part-time students. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

2. Computer Literacy.

Introduction to how computers work and how to use them. Topics covered include network information systems, text editors, formatting, file and directory system, spreadsheets and databases. Computers as symbol manipulation devices. Introduction to programming concepts and computer languages. Impact of computers on society. Designed for students with little or no experience using computers. Preference is given to students who have not taken other computer engineering or computer science courses. Students cannot receive credit for this course and Computer Engineering 3. (General Education Code(s): PE-T, IN.) N. Polyzotis, The Staff

5C. Introduction to Programming in C/C++.

Students learn programming and documentation skills as well as algorithmic problem-solving and programming methodologies. Introduces computers, compilers, and editors. Students write small to medium-sized programs. No prior programming experience required, but a mathematics background at the pre-calculus level is assumed. This course and courses 5J and 5P cover similar concepts, but use different programming languages. This course is recommended for students that have a specific desire or need to learn C/C++; others are encouraged to consider taking course 5P or 5J which use languages that provide a gentler introduction to programming. (General Education Code(s): MF, IN.) C. McDowell, D. Long

5J. Introduction to Programming in Java. F,W

Introduces programming in Java for students who have no prior programming experience. Students learn programming and documentation skills, as well as algorithmic problem-solving, and programming methodologies. Introduces computers, compilers, and editors. Students write small to medium-sized programs. This course and courses 5C and 5P cover similar concepts, but use different programming languages. Because 5J follows by course 11 is a two-quarter alternative to the accelerated course 12A/L, engineering majors and students planning on continuing the programming sequence are encouraged to take 5J rather than 5C or 5P. Students may not receive credit for 5J taken concurrently or subsequently to course 12A, 12B, or Computer Engineering 13. (General Education Code(s): MF, IN.) P. Tantalo, D. Helmbold, C. McDowell

5P. Introduction to Programming in Python.

Introduces programming in Python, a high-level programming language used in the physical and social sciences and for Internet scripting. Students learn programming and

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- [Social Documentation](#)
- [Sociology](#)
- [Spanish](#)
- [Spanish for Heritage Speakers](#)
- [Stevenson College](#)
- [Technology and Information](#)

documentation skills, as well as algorithmic problem-solving, coding, and debugging methodologies. Students write programs to solve sample problems drawn from a wide range of disciplines, primarily in the sciences. No prior programming experience is required, but a mathematics background at the pre-calculus level is assumed. This course and courses 5C and 5J cover similar concepts, but use different programming languages. Students may not receive credit for course 5P after receiving credit for course 11, 12A, or Computer Engineering 13. (General Education Code(s): MF, IN.) D. Long, E. Miller

10. Introduction to Computer Science. F,W

An overview of the theory, foundations, and practice of computer science with emphasis on what computers can and cannot do, now and in the future. Topics include algorithms and data, correctness and efficiency of algorithms, hardware, programming languages, limitations of computation, applications, and social issues. No programming skills are required as a prerequisite. Major concepts and open problems in computer science are presented without reliance on sophisticated mathematical tools. Students cannot receive credit for this course after completing course 12B. (General Education Code(s): MF, IN.) The Staff, P. Tantalo, M. Walker, S. Lodha, C. McDowell, C. Flanagan, N. Whitehead

11. Intermediate Programming. W,S

Continuation of course 5J. Covers basic object-oriented programming, event-driven programming, graphical user interface (GUI) creation, recursion, two-dimensional arrays. The two-quarter sequence courses 5J and 11 cover in two quarters the same material as the accelerated introductory course and lab 12A/L cover in one quarter. Students cannot receive credit for this course and course 12A. Prerequisite(s): course 5J, and Mathematics 3 or 11A or 19A or Applied Mathematics and Statistics 3 or Applied Mathematics and Statistics/Economics 11A or a score of 400 or higher on the mathematics placement examination (MPE). (General Education Code(s): MF.) C. McDowell, P. Tantalo

12A. Introduction to Programming (Accelerated). F,W,S

Accelerated introduction to programming. Students write medium-sized programs. Topics include: functions; conditionals and loops; classes; event-driven programming and graphic user interfaces (GUIs); recursion; and arrays. Students who have no or very limited programming experience should consider courses 5J and 11 which cover the same material in two quarters. Students may not receive credit for both this course and course 11. Some prior programming experience in a language such as C, C++, Java, or C# strongly recommended. Prerequisite(s): Mathematics 3 or 11A or 19A or Applied Mathematics and Statistics 3 or Applied Mathematics and Statistics/Economics 11A, or a score of 400 or higher on the mathematics placement examination (MPE). Concurrent enrollment in 12L required. (General Education Code(s): IN.) W. Mackey, N. Polyzotis, D. Helmbold, C. Flanagan, A. Pang, C. McDowell, D. Long, N. Whitehead

12B. Introduction to Data Structures. F,W,S

Teaches students to implement common data structures and the algorithms associated with each data structure, through progressively difficult exercises. Topics include big "O" notation; pointers, recursion (induction), and dynamic allocation; linked lists and list processing; stacks, queues, binary trees and binary search trees; simple sorting techniques and simple search techniques. Students will gain a working knowledge of the elements of the Java and C programming languages. Prior experience with Unix is assumed. Prerequisite(s): course 11 or 12A or Computer Engineering 13. Concurrent enrollment in course 12M required. (General Education Code(s): MF, IN.) W. Mackey, P. Tantalo, N. Whitehead

12L. Computer Programming Laboratory (2 credits). F,W,S

Laboratory sequence complementing topics taught in course 12A by providing training and exposure to several software development tools and practices not covered in course 12A. In addition, the lab provides an initial exposure to a second programming language to reinforce concepts from course 12A. Concurrent enrollment in course 12A is required. W. Mackey, N. Polyzotis, D. Helmbold, C. Flanagan, A. Pang, C. McDowell, D. Long, N. Whitehead

12M. Data Structures Laboratory (2 credits). F,W,S

Complements course 12B, gaining additional competence with a number of important software development tools, languages, and techniques. Included are advanced Unix features and utilities such as grep, find, diff, the shell, and pipes; C programs utilizing I/O,

<ul style="list-style-type: none"> Management UCDC Program Writing Program Theater Arts Yiddish <p>Teaching and Administrative Staff</p> <p>Appendices</p> <p>Archive of General Catalogs</p> <p>Nondiscrimination Statement</p> <p>Search the Catalog</p>	<p>arrays, pointers, and structures; a scripting language to perform simple text and file manipulation; and the make utility. Concurrent enrollment in course 12B required. W. Mackey, P. Tantalo, N. Whitehead</p> <p>13H. Introduction to Programming and Data Structures (Honors). Provides an accelerated introduction to programming and data structures. Includes a review of basic programming, including loop and conditional control structures, procedures and parameter passing, and arrays. Course goes on to cover same material as course 12B. Students cannot receive credit for this course and course 12A or 12B. Prerequisite(s): interview only; students must have completed a high school or college level programming course in Java, C, or C++. A short oral examination given to ascertain programming level. Concurrent enrollment in course 13L required. (General Education Code(s): IN.) D. Long</p> <p>13L. Introduction to Programming and Data Structures Laboratory (2 credits). Provides accelerated introduction to practical aspects of programming and data structures. Covers three areas: 1) common programming tools, including Unix commands, compilers and linkers, editors, debuggers, and Makefiles; 2) basic programming techniques, including design, testing, and debugging; and 3) C programming, focusing on the major differences between C and Java. Previous or concurrent enrollment in course 13H required. Prerequisite(s): interview only; students must have completed a high school or college level programming course in Java, C, or C++. A short oral examination given to ascertain programming level. D. Long</p> <p>17. Social Networks. Introduction to social networks and game theory. Topics include the structure of social networks; the world wide web; the flow of information and behavior through networks; and the principles behind modern web search and search-ad placement. Prerequisite(s): Mathematics 3 or 11A; or Applied Mathematics and Statistics 2 or 3 or 6 or 11A or 15A; or Economics 11A; or score on math placement exam of 31 or higher. (General Education Code(s): SR.) B. Ten Cate, P. Kolaitis</p> <p>20. Game Design Experience. W Introduction to computer game development. Topics covered include: animating sprites; use of game development frameworks; collision detection; game audio; scrolling game worlds; basic artificial intelligence for games; and basic 3-D graphics. Also covers basic object-oriented design and software design patterns. Course 80K recommended. Prerequisite(s): course 12B. (General Education Code(s): PR-E, IN.) E. Whitehead, A. Jhala, M. Mateas</p> <p>25. Introduction to Computer Graphics: 3D Modeling. F,W Introduces theory and techniques of 3D computer graphics. Topics include: capabilities of modern graphics hardware; 3D coordinate spaces; modeling with polygons; NURBS and subdivision surfaces; applying textures and materials; lighting; and simple effects. Students develop proficiency in 3D modeling via lectures and assignments focused on the use of a 3D modeling tool. (General Education Code(s): PR-C.) The Staff, C. Yonge, E. Whitehead</p> <p>26. Introduction to Computer Graphics: 3D Animation. Introduces theories and techniques of 3D computer animation. Topics include: character animation; rigging; simulation of cloth, liquids, and fire; motion capture; rendering; and editing animated scenes. Students develop proficiency in 3D animation via lectures and assignments focused on the use of a 3D animation tool and use of motion-capture software. Prerequisite(s): course 25. (General Education Code(s): PR-C.) C. Yonge</p> <p>60M. Scientific Computation with Matlab and Maple. Basic concepts from calculus visualized using Matlab and Maple; plotting data and functions, integration, differentiation, limits; solving systems of equation; linear regression; and example applications from science and engineering. Prerequisite(s): Mathematics 19B, or 20B, or by consent of instructor. M. Warmuth</p> <p>80B. Systems and Simulation. An introduction to systems analysis as an approach to understanding and solving complex problems. The use of simulation as an aid in this problem solving. Examples are taken from ecology, economics, physics, computer science, and other fields. Intended as a generally accessible undergraduate course in which students can develop and explore computer simulation models matched to their individual interests. (General Education Code(s): T2-</p>
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Natural Sciences, Q.) The Staff

80G. Introduction to Unix.

Introduction to computing, the Internet, and the World Wide Web through the language of the Unix operating system. Oriented to the beginner, the course presupposes no previous acquaintance with any particular sort of computer. It covers the basic concepts of text editing and formatting, writing Web pages in basic HTML, and promotes a rigorous understanding of Unix commands and shell scripts. Views communication with a computer as a matter of learning a few simple though powerful languages. (General Education Code(s): T2-Natural Sciences.) The Staff

80J. Technology Targeted at Social Issues.

Introduces the idea that engineering can be a means for addressing social issues. Case studies and guest speakers. Issues might include: economic development, privacy, activism, safe drinking water, inexpensive shelters, sustainable energy, education, and waste disposal. (General Education Code(s): PE-T, T7-Natural Sciences or Social Sciences.) J. Davis, S. Lodha

80K. Foundations of Interactive Game Design. S

Surveys history, technology, narrative, ethics, and design of interactive computer games. Work in teams to develop novel game-design storyboards. Intended as a generally accessible undergraduate course in which students can explore the interplay of narrative, graphics, rule systems, and artificial intelligence in the creation of interactive games. Programming experience not required. (General Education Code(s): IM, T2-Natural Sciences.) N. Wardrip-Fruin, E. Whitehead, N. Whitehead

80L. Social Data Analysis and Visualization. F

Course examines: social data analytics--veracity, consistency, uncertainty, volume; statistical computation--misuse, bias, dispersion, correlation, regressions, differential scales, normal distributions, factor and cluster analysis, extrapolation, inference, simple programming; visual representations--communication, critique and design of infographics; applications--environment, energy, economics, education, empowerment. (General Education Code(s): SR.) S. Lodha

80S. From Software Innovation to Social Entrepreneurship.

Emerging software innovations with emphasis on social software. Web 2.0 companies and services. Software that has social impact in a global context. Entrepreneurial plan including social, economic, and innovation value. Final group project on innovative software design and entrepreneurship plan. (General Education Code(s): PE-T, T7-Natural Sciences or Social Sciences, E.) S. Lodha

80V. Creating Virtual Worlds on the Web.

Project-oriented course about creating and publishing interactive 3D content on the web. Focuses on the creation of static and dynamic objects, such as characters, terrain, accessories, and works of art. Also covers inclusion of animation and sound effects with these objects. The objects created can be used in a stand-alone setting (e.g., a 3D document) or incorporated into existing virtual worlds (e.g., as part of a level design in a computer game or assets in massively multiplayer online games). Uses 3D authoring tools (pending availability of resources) like VRML, Second Life, Alice, and/or Acrobat 3D. (Formerly VRML 3D Worlds on the Web.) (General Education Code(s): PR-C, T2-Natural Sciences.) A. Pang

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

94F. Group Tutorial (2 credits). F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

101. Algorithms and Abstract Data Types. F,W,S

Studies basic algorithms and their relationships to common abstract data types. Covers the notions of abstract data types and the distinction between an abstract data type and an implementation of that data type. The complexity analysis of common algorithms using asymptotic (big "O") notation is emphasized. Topics include sorting and searching techniques, basic graph algorithms, and algorithm design techniques. Abstract data types covered include priority queues, dictionaries, disjoint sets, heaps, balanced trees, and hashing. Familiarity with C, Java, and Unix is assumed. Prerequisite(s): course 12B or 13H; CMPE 16 or 16H; MATH 19B, 20B or 11B; and one course from the following: MATH 21, 22, 23A, or AMS 10. P. Tantalo, D. Helmbold, A. Van Gelder, M. Warmuth

102. Introduction to Analysis of Algorithms. W,S

Methods for the systematic construction and mathematical analysis of algorithms. Order notation, the RAM model of computation, lower bounds, and recurrence relations are covered. The algorithm design techniques include divide-and-conquer, branch and bound, and dynamic programming. Applications to combinatorial, graph, string, and geometric algorithms. Prerequisite(s): course 101. M. Warmuth, A. Van Gelder, D. Achlioptas, D. Helmbold, S. Lodha

104A. Fundamentals of Compiler Design I. F,S

An introduction to the basic techniques used in compiler design. Topics include compiler structure, symbol tables, regular expressions and languages, finite automata, lexical analysis, context-free languages, LL(1), recursive descent, LALR(1), and LR(1) parsing; and attribute grammars as a model of syntax-directed translation. Students use compiler building tools to construct a working compiler. Prerequisite(s): course 101 and Computer Engineering 12 and 12L. W. Mackey

104B. Fundamentals of Compiler Design II.

Advanced study of compiler implementation. Topics include compiler structure back end, run-time environments, storage management, garbage collection, register allocation, code generation, basic blocks, control flow, data flow, local and global optimization, interpretation, and machine-code generation. Students may not receive credit for this course and course 204. Taught in conjunction with course 204. Prerequisite(s): course 104A. W. Mackey

105. Systems Programming.

Covers fundamentals of systems programming including standard tools, shell programming, file I/O, files and directories, system data files and information, Unix processes, process control, synchronization, signals, event-driven programming, terminal I/O, daemons, interprocess communication, basic network programming, and basic user-interface programming. Prerequisite(s): course 101 and Computer Engineering 12 and 12L. Enrollment restricted to School of Engineering majors. D. Long, E. Miller

109. Advanced Programming. W,S

An introduction to object-oriented techniques of software development including data abstraction, inheritance, polymorphism, and object-oriented design. Extensive practice using a computer to solve problems, including construction of graphical user interfaces and a multithreaded client/server applications. Prerequisite(s): course 12B/M or 13H. C. McDowell, W. Mackey

111. Introduction to Operating Systems. W,S

Fundamental principles of operating systems: process synchronization, deadlocks, memory management, resource allocation, scheduling, storage systems, and study of several operating systems. A major programming project will be required. Prerequisite(s): course 101, and Computer Engineering 110 or Computer Engineering 112. E. Miller, D. Long, W. Mackey

112. Comparative Programming Languages. F,W

Covers several programming languages and compares styles, philosophy, and design principles. Principles underlying declarative, functional, and object-oriented programming styles are studied. Students write programs emphasizing each of these techniques.

Prerequisite(s): course 101 or 109. W. Mackey, W. Tan, C. McDowell, C. Flanagan, A. Van Gelder, D. Long

113. Parallel and Concurrent Programming.

Introduction to parallel and concurrent programming. Topics include: types of parallel computers and programming platforms; design, implementation, and optimization of programs for parallel and multicore processors; basic and advanced programming techniques; performance analysis and load balancing; and selected parallel algorithms. (Also offered as Computer Engineering 113. Students cannot receive credit for both courses.) Prerequisite(s): Computer Engineering 12 and 12L and Computer Science 101. Computer Engineering 110 or 112 recommended. J. Renau Ardevol, E. Miller

115. Introduction to Software Engineering. F,W

Emphasizes the characteristics of well-engineered software systems. Topics include requirements analysis and specification, design, programming, verification and validation, maintenance, and project management. Practical and research methods are studied. Imparts an understanding of the steps used to effectively develop computer software. (Formerly Software Methodology.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 101. Enrollment restricted to computer science, computer engineering, and technology and information management majors. E. Whitehead, L. Werner, C. Flanagan

116. Software Design Project. W

Students in teams specify, design, construct, test, and document a complete software system in a specialized application domain. Class time is spent in technical discussions and ongoing design reviews. A formal presentation and demonstration of each project is required. An organizational meeting will be held during the preceding quarter. Projects may be drawn from industry and campus research groups. Students are billed a materials fee. Prerequisite(s): course 115. (General Education Code(s): PR-E-) E. Whitehead, L. Werner, L. De Alfaro

117. Software Design Project II. S

Continuation of course 116. Students work in teams to develop, test, document, and deploy a substantial software project. Teams give a formal presentation and demonstration of each project. Students are billed a materials fee. Prerequisite(s): course 116. E. Whitehead, L. Werner, L. De Alfaro

119. Software for Society.

Provides experience with applying computing to social issues. Case studies on multiple issues. For example: privacy, copyright, voting, education, poverty, energy, activism. Team project in which students develop software to address a pre-identified need of a global or local non-profit. Prerequisite(s): course 101. (General Education Code(s): PE-T-) J. Davis

121. Mobile Applications. S

Introduces programming and application development for mobile devices. Covers the SDK and main programming platforms available on mobile devices, methodologies for developing native applications, division of computation between the mobile platform and servers, and mobile-to-server communications. Introduces platforms based on JavaScript and HTML5 for the development of applications that are portable across platforms. Students develop components of applications, leading to fully functional applications by the end of the course. Course based on emulators and SDK tools, so ownership of a cellphone/tablet is not required for the course. Prerequisite(s): courses 12B and 12M. L. De Alfaro, E. Whitehead

122. Computer Security. F

Introduction to computer security (including selected topics in network security). Access control. Security in programming languages. Basic cryptography. Security protocols. Prerequisite(s): course 111 or permission of instructor. Enrollment restricted to School of Engineering majors. E. Miller

128. Distributed Systems: File Sharing, Online Gaming, and More.

Covers topics in distributed computing including communication, naming, synchronization, consistency and replication, fault tolerance, and security. Examples drawn from peer-to-peer systems, online gaming, the World Wide Web; other systems also used to illustrate approaches to these topics. Students implement simple distributed systems over the course

of the quarter. Prerequisite(s): course 101 or Computer Engineering 150. Course 111 or 105 recommended. D. Long, E. Miller

129. Data Storage Systems.

Covers all aspects of storage systems technology from magnetic media up through system software, including principles of magnetic recording, hard drive technology and evolution, performance measurement, file systems, storage networking, disk arrays, network-attached storage, and alternative storage technologies. Prerequisite(s): course 101, 111, and Physics 5A or 6A. E. Miller, D. Long, S. Brandt

130. Computational Models. F,W

Various representations for regular languages, context-free grammars, normal forms, parsing, pushdown automata, pumping lemmas, Turing machines, the Church-Turing thesis. Prerequisite(s): course 101. P. Tantalo, M. Warmuth, D. Helmbold, P. Kolaitis, A. Van Gelder

132. Computability and Computational Complexity. S

Turing machines, general phase-structure grammars, the Chomsky hierarchy, recursive functions, diagonalization, the Halting problem, computability and unsolvability, computational complexity, time and space bounds, NP-completeness with emphasis on reductions between problems from various areas. Prerequisite(s): course 130. M. Warmuth, D. Helmbold, P. Kolaitis, A. Van Gelder

132W. Computability and Computational Complexity (2 credits). S

Disciplinary Communication (DC) course to be taken concurrently with course 132. Students satisfy the DC requirement by writing a survey paper on a topic related to computability and computational complexity. Possible topics include: an overview of a different model of computation (e.g., quantum computing); an overview of a major complexity class; a critical analysis of the Church-Turing thesis. Prerequisite(s): course 130; satisfaction of the Entry Level Writing and Composition requirements. Concurrent enrollment in course 132 required. Enrollment by permission of instructor. Enrollment limited to 15. M. Warmuth, D. Helmbold, P. Kolaitis, A. Van Gelder

140. Artificial Intelligence. W

Introduction to the contemporary concepts and techniques of artificial intelligence, including any or all of: machine perception and inference, machine learning, optimization problems, computational methods and models of search, game playing and theorem proving. Emphasis may be on any formal method of perceiving, learning, reasoning, and problem solving which proves to be effective. This includes both symbolic and neural network approaches to artificial intelligence. Issues discussed include symbolic versus nonsymbolic methods, local versus global methods, hierarchical organization and control, and brain modeling versus engineering approaches. Lisp or Prolog may be introduced. Involves one major project or regular programming assignments. Prerequisite(s): course 101. M. Walker, The Staff

142. Machine Learning. S

Introduction to machine learning algorithms and their applications. Topics include classification learning, density estimation and Bayesian learning regression, and online learning. Provides introduction to standard learning methods such as neural networks, decision trees, boosting, and nearest neighbor techniques. Prerequisite(s): course 101, Mathematics 23A, and Applied Mathematics and Statistics 131 or Computer Engineering 107. D. Helmbold, M. Warmuth

143. Introduction to Natural Language Processing. S

Introduces the theory and practice of natural language processing (NLP)-- the creation of computer programs that can understand, generate, and learn natural language. Introduces the three major subfields of NLP: syntax (the structure of a sentence); semantics (the explicit meaning of a single sentence); and pragmatics (the implicit meaning of a sentence when it is used in a specific discourse). Projects focus on the techniques useful for a particular application area, alternating in different years. Project application areas include information extraction, narrative understanding, sentiment analysis, dialogue systems, and question answering. Prerequisite(s): course 101. Enrollment limited to 40. M. Walker

146. Game AI.

Course provides a comprehensive introduction to the use of artificial intelligence (AI) in

computer games. Building on fundamental principles of AI, course explains how to create non-player characters (NPCs) with progressively more sophisticated capabilities.

Prerequisite(s): course 101; familiarity with C++. Enrollment restricted to sophomores, juniors, seniors, and graduate students. M. Mateas, The Staff

148. Interactive Storytelling.

Covers a range of design approaches and technologies including storytelling in games, interactive fiction, interactive drama, and artificial intelligence-based story generation.

Through a mixture of readings, assignments, and project work, students explore the theoretical positions, debates, and technical and design issues arising from these approaches. Prerequisite(s): course 101. Enrollment restricted to juniors and seniors. M. Mateas

160. Introduction to Computer Graphics. F,S

Introduces techniques of modeling, transformation, and rendering for computer-generated imagery. Topics: 2D/3D primitives, projections, matrix composition, and shading algorithms. Programming assignments and a major project are required. Students cannot receive credit for both this course and course 260. Prerequisite(s): course 101 and

Mathematics 21 or Applied Mathematics and Statistics 10. Concurrent enrollment in course 160L required. A. Pang, J. Davis, S. Lodha

160L. Introduction to Computer Graphics Laboratory (2 credits). F,S

Complements course 160, gaining additional competence with a number of important software development tools, graphics libraries, and graphical user interfaces. Included are OpenGL program, utilizing rubberbanding, picking, trackballing, display lists, double buffering, lighting, shading, materials and textures; and FLTK program, utilizing sliders, buttons, and dialog boxes. Concurrent enrollment in course 160 required. A. Pang, J. Davis, S. Lodha

161. Introduction to Data Visualization.

Concepts and methods for data analysis, information and scientific visualization, and effective communication of technical data. Topics include: mathematical foundations; scalar, vector, and tensor field visualization; multivariate visualization; and tree and graph visualizations. Applications are drawn from social-network analysis; environmental and space science; and medical imaging. Evaluation based on examinations, programming exercises, and a project. (Formerly Visualization and Computer Animation.) Prerequisite(s): course 160 or equivalent. Concurrent enrollment in course 161L required. S. Lodha, A. Pang

161L. Data Visualization Laboratory (2 credits).

Complements course 161. Students gain additional competence with a number of important software development tools and techniques. Included are Paraview, Visualization Toolkit (VTK), and Insight Toolkit (ITK). Students get hands-on experience with designing transfer functions, isosurfacing, direct volume rendering, vector-field visualization techniques, as well as methods for dealing with non-spatial data. (Formerly Visualization and Computer Animation Laboratory.) Concurrent enrollment in course 161 required. S. Lodha, A. Pang

162. Advanced Computer Graphics and Animation.

Covers concepts and methods for modeling and rendering static and dynamic scenes. Topics include: mathematical foundations (e.g., splines and numerical integration; global illumination models; texture mapping; morphing; physically based animation; behavioral animations; and procedural animations. Evaluation based on examinations, programming exercises, and a project. Prerequisite(s): course 160 or equivalent. Concurrent enrollment in course 162L required. A. Pang, J. Davis, S. Lodha

162L. Advanced Computer Graphics and Animation Laboratory (2 credits).

Complements course 162. Students gain additional competence in a hands-on computational laboratory setting. Representative examples include topics, such as interactive curve and surface design; shaders for advanced effects; crowd and behavioral animation; experiments with particle systems; facial animation; and motion and planning. Prerequisite(s): concurrent enrollment in course 162 is required. A. Pang, J. Davis, S. Lodha

164. Game Engines.

Covers the graphic elements in computer games. Topics include modifying, optimizing,

adding components, and building a game engine. Course evaluation based on exams and several programming projects, including a game built using the student's game engine. Prerequisite(s): courses 160 and 160L. Concurrent enrollment in course 164L required. A. Jhala

164L. Game Engines Lab (2 credits).

Provides hands-on experience in using, designing, and building game engines. Students also explore different special effects, such as particle systems, spring systems, and game physics. Concurrent enrollment in course 164 required. A. Jhala

165. Data Programming for Visualization. W

Presents the basics of open-source programming tools to perform data analysis and create interactive visualizations and maps for the web: data integrity and scraping, statistical computation, simple and novel visualizations, and geomapping. The examples are drawn from social science, public policy, and data journalism. Prerequisite(s): courses 12B and 12M. S. Lodha

166A. Game Theory and Applications I.

Introduces modern game theory, including applications in social science, biology, and engineering. Topics include extensive form, strategic form, mixed strategies, incomplete information, repeated games, evolutionary games, and simulation techniques. (Also offered as Technology & Info Management 166A. Students cannot receive credit for both courses.) Prerequisite(s): Applied Math and Statistics 5 or 7 or Economics 113; and Economics 11B, Applied Math and Statistics 11B, or Mathematics 11B or 19B. Enrollment restricted to juniors and seniors. Enrollment limited to 100. J. Musacchio

166B. Game Theory and Applications II. W

Explores research frontiers in game theory, emphasizing applications in social science, biology, and engineering. Each interdisciplinary team develops a topic, and presents it to the class in oral and written reports and demonstrations. Students must have shown a strong performance in course 166A or equivalent. Students cannot receive credit for this course and Economics 272, Computer Science 272, or Biology: Ecology and Evolutionary 274. (Also offered as Economics 166B. Students cannot receive credit for both courses.) Prerequisite(s): course 166A or Economics 166A; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors. Enrollment limited to 40. (General Education Code(s): W.) The Staff

170. Game Design Studio I. F

First of a three-course capstone sequence for the computer game design program. Students work in teams to develop a comprehensive game design for a substantial computer game, including detailed storyline, level design, artistic approach, implementation technologies, and art-asset pipeline. Emphasis placed on creating novel, artistic game design concepts. Includes design reviews and formal presentations. Companion lectures cover advanced topics in game design, game programming, and software project management. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Courses 20 and 80K and 101 and 109, and any two of: 102, 104A, 104B, 105, 111, 112, 115, 116, 121, 122, 128, 129, 130, 132, 140, 142, 146, 148, 160/L, 161/L, 164/L, 166A, 179, 180, 181, 183; CMPE 110, 112, 113, 118/L, 131, 150/L; AMS 131, 147. The Staff, N. Wardrip-Fruin, M. Mateas, E. Whitehead

171. Game Design Studio II. W

Second of a three-course capstone sequence for the computer game design program. Students work in teams on the software design, implementation, and testing of the computer game designed in course 170. Includes design reviews, progress reviews, and formal presentations. Companion lectures cover topics in software engineering, including design, testing, and project management. Game design and game programming also covered. Students are billed a materials fee. Prerequisite(s): course 170, and satisfaction of the Entry Level Writing and Composition requirements. E. Whitehead, N. Wardrip-Fruin, M. Mateas

172. Game Design Studio III. S

Third of a three-course capstone sequence for the computer game design program. Students work in teams on the software design, implementation and testing of the computer game designed in courses 170 and 171. Includes progress reviews and formal

presentations. Companion lectures cover topics in software engineering, including user and software testing, release engineering and project management; also covered are game design and game programming. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 171. E. Whitehead, A. Jhala, N. Wardrip-Fruin, M. Mateas

177. Creative Strategies for Designing Interactive Media. F

Surveys tactical, structural, contextual, and other methods to enhance creativity and innovation in the design of games and other interactive media. Investigates strategies for creativity and innovation drawn from diverse fields, including interactive affordances, narrative and poetics, biology, contextual inquiry, and design research. To innovate in a field of fixed genres is challenging: the allure of modeling exemplars is strong. Although imitation can be successful in the marketplace, the most creative action occurs on the leading edge of change. Innovation benefits from strategies and methods that are directly aimed at exploring new perspectives and structures to learn through the process of discovery. Enrollment restricted to juniors and seniors. B. Laurel, N. Wardrip-Fruin

178. Human-Centered Design Research. W

Students move through a rigorous design-research process involving skills and principles in human-centered design research as well as selected formal research methods. They learn to use tools for ideation, human-centered qualitative research, domestic probes, mock-ups, and prototypes. Enrollment restricted to juniors, seniors, and graduate students. (General Education Code(s): PR-C.) E. Whitehead, B. Laurel, N. Wardrip-Fruin

179. Game Design Practicum. F

Provides the opportunity to practice the creation of novel computer games. Students learn a new game-making technology, then create three games using this technology. (Also offered as Digital Arts and New Media 179. Students cannot receive credit for both courses.) Prerequisite(s): courses 20 and 80K. May be repeated for credit. (General Education Code(s): PR-C.) The Staff, E. Whitehead, M. Walker, N. Wardrip-Fruin, A. Jhala, M. Mateas

180. Database Systems I. W

Introduction to the concepts, approaches, tools, and methodology of database design. Covers the entity-relationship model, the relational model, relational algebra, relational calculus, commercial languages (such as SQL and QBE), functional dependencies, normal forms, and design theory. Other topics may include knowledge-bases, constraint databases, and alternative database models. Prerequisite(s): course 101. W. Tan, P. Kolaitis, N. Polyzotis

180W. Database Systems (2 credits). W

Disciplinary Communication (DC) course to be taken concurrently with course 180. Students satisfy the DC requirement by producing a database design document, a document with comments on the source code for complex queries, and a literature survey or systems survey. Prerequisite(s): course 101, or permission of instructor; satisfaction of the Entry Level Writing and Composition requirements. Concurrent enrollment in course 180 required. Enrollment limited to 15. W. Tan, P. Kolaitis, N. Polyzotis

181. Database Systems II.

Introduction to the architecture and implementation of database systems. Topics covered include data storage, tree and hash indexes, storage management, query evaluation and optimization, transaction management, concurrency control, recovery, and XML data management. Prerequisite(s): course 180. N. Polyzotis, W. Tan

182. Introduction to Database Management Systems. S

Concepts, approaches, tools, and methodology of database design. Topics include the entity-relationship model; the relational data model; normal forms; commercial languages such as SQL (SQL constraints, SQL triggers, and update languages); query-by-example (QBE); XML data model, and XML query language (XQuery); as well as relational database-management support for XML and object-relational features in database-management systems. Involves a database -application development project. Prerequisite(s): course 12B. Course intended for non-majors; computer science majors should enroll in course 180. N. Polyzotis, W. Tan

183. Web Applications. F,W

The World-Wide Web is one of the main mechanisms by which computer applications are delivered to users. This course introduces the design of Web applications. Students learn the main technologies involved, and build web applications as part of homework assignments and group class projects.(Formerly Hypermedia and the Web.) Prerequisite(s): courses 12B and 12M. (General Education Code(s): PR-E.) L. De Alfaro, E. Whitehead

185. Technical Writing and Communication in Computer Science. S

Writing and communication by computer science professionals to a technical audience. Geared toward students planning to pursue an advanced degree in computer science. Assignments include: cover letter and resume for job application, statement of purpose for graduate school application, algorithm description and analysis, user documentation, proposal preparation, critical analysis of published papers, survey of the literature, term paper, and oral presentations. Prerequisite(s): course 101 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment is restricted to computer science majors, or by permission of the instructor. May be repeated for credit. P. Kolaitis

191. Computer Science and Technology Seminar (2 credits).

Weekly talks by industry experts, university researchers, field practitioners, and video presentations provide an in-depth exposure to a specific or a broad area of computer science and technology. Topics include emerging ideas, opportunities, challenges, and future of the industry. May be repeated for credit. The Staff

192. Supervised Student Teaching/Tutoring. F,W,S

Students hold tutoring hours, run a lab, or lead discussion section in conjunction with a regularly offered course and under close supervision by the course's instructor. Weekly meetings with a regular faculty member to discuss teaching techniques, pedagogy, sensitivity to students' needs, maintaining a comfortable learning environment, and strategies for handling difficult situations. Students submit a report on their teaching experience. Enrollment by permission of instructor and restricted to sophomores, juniors, and seniors. D. Helmbold

192F. Supervised Student Teaching/Tutoring (2 credits). F,W,S

Students hold tutoring hours, run a lab, or lead discussion section in conjunction with a regularly offered course and under close supervision by the course's instructor. Weekly meetings with a regular faculty member to discuss teaching techniques, pedagogy, sensitivity to students' needs, maintaining a comfortable learning environment, and strategies for handling difficult situations. Students submit a report on their teaching experience. Enrollment by permission of instructor and restricted to sophomores, juniors, and seniors. D. Helmbold

193. Field Study. F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a member of the Computer Science Department and using resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives, usually a term paper or project. Cannot normally be repeated for credit. Students submit petition to sponsoring agency. The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a faculty member of the Computer Science Department and a willing sponsor at the field site. Uses resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives by submitting a written and oral presentation. Cannot normally be repeated for credit. Intended for students majoring in computer science. Students submit petition to sponsoring agency. The Staff

194. Group Tutorial. F,W,S

A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194F. Group Tutorial (2 credits). F,W,S

A program of independent study arranged between a group of students and a faculty member. Intended for students majoring in computer science. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195. Senior Thesis Research. F,W,S
Students submit petition to sponsoring agency. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. The Staff
- 195F. Senior Thesis Research (2 credits). F,W,S
Intended for majors. Students submit petition to sponsoring agency. The Staff
198. Individual Study or Research. F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 198F. Individual Study or Research (2 credits). F,W,S
Intended for majors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
199. Tutorial. F,W,S
For fourth-year students majoring in computer science. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 199F. Tutorial (2 credits). F,W,S
For fourth-year students majoring in computer science. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Research and Teaching in Computer Science and Engineering (3 credits). F
Basic teaching techniques for teaching assistants, including responsibilities and rights of teaching assistants, resource materials, computer security, leading discussion or lab sessions, presentation techniques, maintaining class records, electronic handling of homework, and grading. The course examines research and professional training, including use of the library and online databases, technical typesetting, writing journal and conference papers, publishing in computer science and computer engineering, giving talks in seminars and conferences, and ethical issues in science and engineering. Required for all teaching assistants. Enrollment restricted to graduate students. W. Tan, The Staff
201. Analysis of Algorithms. F,W
Rigorous analysis of the time and space requirements of important algorithms, including worst case, average case, and amortized analysis. Techniques include order-notation, recurrence relations, information-theoretic lower bounds, adversary arguments. Analysis of the key data structures: trees, hash tables, balanced tree schemes, priority queues, Fibonacci and binomial heaps. Algorithmic paradigms such as divide and conquer, dynamic programming, union-find with path compression, augmenting paths. Selected advanced algorithms. Introduction to NP-completeness. Enrollment restricted to graduate students; undergraduate students may enroll in this course if they have completed either course 102 or Computer Engineering 177 and have the consent of the instructor. A. Van Gelder, D. Achlioptas, D. Helmbold
203. Programming Languages. S
Covers current issues in programming languages. Language topics include object oriented, concurrent, functional, and logic programming, and other programmable applications such as symbolic manipulators and simulation. Enrollment restricted to graduate students; undergraduate students may enroll for this course if they have completed course 112 and have the consent of the instructor. C. McDowell, A. Van Gelder, C. Flanagan, N. Whitehead
204. Compiler Design.
Advanced study of compiler implementation. Topics include compiler structure back end, run-time environments, storage management, garbage collection, register allocation, code generation, basic blocks, control flow, data flow, local and global optimization, interpretation, machine code generation. Students may not receive credit for this course and course 104B. Taught in conjunction with 104B. Prerequisite(s): course 104A or equivalent. Enrollment restricted to graduate students. Offered in alternate academic years. W. Mackey
210. Computational Models and Complexity.
Finite automata and regular expressions, universal models of computation, computability and unsolvability, relations between complexity classes, hierarchy theorems, reductions, complete problems for the major complexity classes (L, NL, P, NP, PSPACE). Other topics

may include complexity of counting and enumeration problems, complexity of approximation, randomized complexity classes. Prerequisite(s): course 201. M. Warmuth, D. Helmbold, P. Kolaitis

211. Combinatorial Algorithms. W

Fundamental combinatorial algorithms, graph algorithms, flow problems, matching problems, linear programming, integer programming, NP-completeness, approximation algorithms for optimization problems. Prerequisite(s): course 201. Offered in alternate academic years. A. Van Gelder, D. Achlioptas, P. Kolaitis

217. Logic in Computer Science.

The applications and uses of formal systems to computer science. Covers the syntax and semantics of propositional logic and first-order logic, normal forms, soundness and completeness theorems, Herbrand's theorem, unification and resolution, foundations of logic programming, automated theorem proving. Other topics may include deductive databases, database query languages, nonmonotonic reasoning. Enrollment restricted to graduate students. Offered in alternate academic years. P. Kolaitis, A. Van Gelder

221. Advanced Operating Systems.

A detailed study of the issues involved in operating systems design and implementation. Readings cover current research topics and systems of historical significance. Topics include (but are not restricted to) process and memory management, protection, security, synchronization, performance evaluation, file systems, distributed systems. Enrollment restricted to graduate students; undergraduates by interview only. D. Long, E. Miller

223. Advanced Computer Security. S

Overview of research topics in computer and network security. Topics may include cryptographic operations, security properties and policies, authentication and access control, attacks on computer systems and defenses against them, security in programming languages, and network protocols for security. Enrollment restricted to graduate students or consent of instructor. D. Long, E. Miller

229. Storage Systems. W

Topics include storage devices, storage architectures, local file systems, high-performance file systems, and next-generation storage devices and architectures; covers issues of performance, reliability, scalability, robustness, and security. Enrollment restricted to graduate students. E. Miller, C. Maltzahn, D. Long

232. Distributed Systems. S

Overview of research topics in distributed computer systems. Topics may include communication paradigms, process management, naming, synchronization and coordination, consistency and replication, fault tolerance, and security. Examples include distributed operating systems, distributed file and object systems, distributed document systems, and peer-to-peer systems. Enrollment restricted to graduate students. E. Miller, C. Maltzahn, D. Long

240. Artificial Intelligence.

Prepares students for doing research in artificial intelligence. Major topics covered are search and heuristics, knowledge representation, planning, deduction and inference, reinforcement learning, associative pattern retrieval, and adaptive search. Discussion includes current research issues in AI problem-solving methods. Individualized projects. Enrollment limited to 30. M. Walker, The Staff

241. Knowledge Engineering.

Introduction to the acquisition, representation, and application of knowledge in expert systems. Topics include production systems, backward and forward chaining, dependency-directed backtracking, reasoning with uncertainty, certainty factors, fuzzy systems, knowledge representation (rules, frames, and semantic nets), inference engines, and metaknowledge. Discussion includes current research issues in adaptive expert systems. Involves one major project. Undergraduates may enroll in this course if they have completed course 140. Offered in alternate academic years. The Staff

242. Machine Learning. F

Introduction to machine learning algorithms. Covers learning models from fields of statistical decision theory and pattern recognition, artificial intelligence, and theoretical

computer science. Topics include classification learning and the Probably Approximately Correct (PAC) learning framework, density estimation and Bayesian learning, EM, regression, and online learning. Provides an introduction to standard learning methods such as neural networks, decision trees, boosting, nearest neighbor, and support vector machines. Requirements include one major experimental learning project or theoretical paper. Students may not receive credit for both this course and course 142. Enrollment restricted to graduate students. Enrollment limited to 30. D. Helmbold, M. Warmuth

244. Artificial Intelligence in Games. F

Artificial intelligence has long used game-playing as a metric for progress. Key algorithms such as alpha-beta and HPA search studied. Computer algorithms for backgammon, poker, and chess examined. There will be individualized projects. Prerequisite(s): course 201; and course 211 or 240 or 242. Enrollment limited to 20. A. Jhala, M. Mateas

245. Computational Models of Discourse and Dialogue. W

Focuses on classic and current theories and research topics in the computational modeling of discourse and dialogue, with applications to human-computer dialogue interactions; dialogue interaction in computer games and interactive story systems; and processing of human-to-human conversational and dialogue-like language such as e-mails. Topics vary depending on the current research of the instructor(s) and the interests of the students. Students read theoretical and technical papers from journals and conference proceedings and present class lectures. A research project is required. (Also offered as Psychology 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. May be repeated for credit. The Staff, M. Walker

247. AI: Problem Solving and Intelligent Search.

Surveys topics in contemporary deductive artificial intelligence (AI). Coursework involves weekly readings and a project. Prerequisite(s): courses 201 and 240. Enrollment restricted to graduate students. The Staff

248. Interactive Storytelling. S

Covers wide range of practices including hypertext, interactive fiction, embedded narratives in games, interactive drama, and artificial intelligence-based story generation. Through a mixture of readings, assignments, and project work, explores the theoretical positions, debates, and technical and design issues arising from these different approaches.

Enrollment restricted to graduate students. Enrollment limited to 20. N. Wardrip-Fruin, M. Mateas

250. Introduction to Information Theory. F

An introduction to information theory including topics such as entropy, relative entropy, mutual information, asymptotic equipartition property, channel capacity, differential entropy, rate distortion theory, and universal source coding. (Also offered as Electrical Engineering 253. Students cannot receive credit for both courses.) Prerequisite(s): Computer Engineering 107, or Applied Mathematics and Statistics 131 or equivalent course, or permission of instructor. H. Sadjadpour

253. Advanced Programming Languages. S

Covers issues in the design, implementation, analysis, and specification of programming languages. Topics include formal semantics (including operational, axiomatic, and denotational semantics), advanced type systems, program analysis (including abstract interpretation and model checking), specification, and verification. Prerequisite(s): course 203 or equivalent. C. Flanagan

260. Computer Graphics. W

Introduces current research and techniques of modeling, 2D/3D transformation, matrix composition, shading algorithms, and rendering to obtain computer-generated imagery. Programming assignments and major project required. Students cannot receive credit for both this course and course 160. Enrollment restricted to graduate students; undergraduates by interview only. Enrollment limited to 20. A. Pang, J. Davis, S. Lodha

261. Advanced Visualization.

Covers advanced topics in visualization, e.g., tensor-field visualization, uncertainty visualization, information visualization. Topics vary with differing offerings of the course. Course includes lectures, exam, research paper reading/presentation, and projects. Final

project is expected to be at a sufficiently advanced level for submission to a conference. Students work individually or in pairs. Enrollment by permission of instructor. Enrollment restricted to graduate students. A. Pang

262. Computer Animation.

An in-depth treatment of computer animation, including its origins in conventional animation, 2-D animation, inbetweening, motion control, morphing, graphical motion editors, animation languages, motion blur, simulation of articulated body motion, real-time animation, and special-purpose animation hardware. Enrollment restricted to graduate students. Enrollment limited to 15. J. Davis, A. Pang

263. Data Driven Discovery and Visualization.

Explores high-quality interdisciplinary research using socio-economic data and software available on the Internet, and data curation, computation, and visualization to strengthen scientific inquiry to bear on large-scale societal problems. Applications include inequality, poverty, water, energy, environment, health, education, and democracy. Enrollment restricted to graduate students. Enrollment by instructor consent. Enrollment limited to 25. S. Lodha

265. Generative Methods. S

In-depth exploration of algorithms for the automated generation of 2D and 3D models and content. Covers multiple approaches, including noise, grammars, genetic algorithms and programming, parametric design, and answer-set programming. Includes application of techniques to computer-game content and level design. Enrollment restricted to graduate students. M. Mateas, E. Whitehead

272. Evolutionary Game Theory. W

Reviews static equilibrium concepts, games of incomplete information, and the traditional theory of dynamic games in discrete time. Develops recent evolutionary game models, including replicator and best reply dynamics, and applications to economics, computer science, and biology. Prerequisite(s): upper-division math courses in probability theory are strongly recommended. Cannot receive credit for this course and Economics 166B or Computer Science 166B. (Also offered as Biology:Ecology & Evolutionary 274. Students cannot receive credit for both courses.) M. Warmuth, B. Sinervo, D. Friedman

276. Software Engineering.

Introduction to the general principles of software engineering. Covers current and classical topics from both practical and theoretical viewpoints. Topics include software evolution, project management, software inspections, design methods, requirements analysis and specification, software testing, maintenance, software implementation, human interfaces, and software engineering experimentation. (Formerly Computer Engineering 276.) Enrollment restricted to graduate students; undergraduates may enroll in this course if they have completed Computer Science 115. The Staff, E. Whitehead

277. Principles of Database Systems. F

Advanced course on principles of database systems. Main topics include overview of the relational data model and relational query languages; recursive queries, datalog, and fixed-points; query processing and optimization; database design, dependencies, normal forms, and the chase procedure. Additional topics may include information integration, complex objects, semistructured data, and XML. (Formerly Database Systems I.) Prerequisite(s): course 180 (or equivalent) or consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 20. Offered in alternate academic years. W. Tan, P. Kolaitis, N. Polyzotis

278. Design and Implementation of Database Systems. W

Advanced course in implementation techniques for database systems. For students who wish to do research in databases or to learn more about large-scale data processing. Topics include: indexing of complex data; techniques for high-volume concurrency control; query processing and optimization; database recovery; parallel database system architectures; database systems for streaming data; approximate query answering. Additional topics may include: self-managing database systems; advanced query optimization techniques; and query processing techniques for semi-structured data. (Formerly Database Systems II.) Prerequisite(s): course 181 (or equivalent) or consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 20. N. Polyzotis

279. Software Reuse and Component-Based Software Engineering.
Detailed study of interlocking business, organizational, and technical issues in large-scale software reuse and component-based software engineering. Topics include architecture, design for reuse, domain engineering, model-driven development, domain-specific kits, components, frameworks, software agents, generators, problem-oriented languages, library design, reuse tools, patterns, and aspects. Assumes prior exposure to software engineering topics. Prerequisite(s): computer engineering 276 or consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 20. C. McDowell
- 280A. Seminar in Computer Science Research (2 credits).
Weekly seminar covering topics of current research in computer science. Enrollment by permission of instructor. May be repeated for credit. The Staff
- 280D. Seminar in Database Systems (2 credits). W,S
Covers advanced research topics from the recent literature in database systems and related fields. Involves presentations from UCSC students and faculty, and guest talks from researchers in industry and other academic institutions. Enrollment by permission of instructor. Enrollment limited to 30. May be repeated for credit. W. Tan, P. Kolaitis, N. Polyzotis
- 280G. Seminar on Software Engineering (2 credits).
Weekly seminar covering topics of current research in software engineering. Prerequisite(s): permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 30. May be repeated for credit. C. McDowell, C. Flanagan
- 280H. Seminar in Human Computation Systems (2 credits).
Covers advanced topics and current research in the general area of human computation. Material is drawn from several disciplines that involve or deal with human computation, including computer vision, human-computer interaction, databases, and machine learning. The course comprises presentations from faculty, enrolled students, and external visitors. Enrollment restricted to graduate students. May be repeated for credit. J. Davis, N. Polyzotis
- 280J. Seminar on Computer Graphics (2 credits). F,S
Weekly seminar covering topics of current research in computer graphics. Enrollment restricted to graduate students and by permission of instructor. Enrollment limited to 30. May be repeated for credit. J. Davis
- 280S. Seminar on Computer Systems (2 credits). F,W,S
Weekly seminar series covering topics of current research in computer systems. Enrollment by permission of instructor. Enrollment limited to 30. May be repeated for credit. E. Miller, C. Maltzahn, D. Long
- 280W. Seminar in Digital Media (2 credits).
Covers advanced topics and current research in digital media—the interdisciplinary field at the intersection of computer science, media authoring, and models of interpretation from the humanities and social sciences. Focuses on student presentations and seminar participation. Enrollment restricted to graduate students. May be repeated for credit. N. Wardrip-Fruin
- 280X. Expressive AI (2 credits). F,W,S
Weekly seminar covering topics of current research in artificial intelligence applied to interactive art and entertainment, including computer games. Enrollment by permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 30. May be repeated for credit. N. Wardrip-Fruin, M. Mateas
- 280Z. Seminar in Natural Language Processing and Dialogue (2 credits). F,W,S
Covers advanced topics and current research in natural language processing. Focuses on student presentations and seminar participation. Enrollment restricted to graduate students. May be repeated for credit. M. Walker
- 290A. Topics in Algorithms and Complexity Theory: Probabilistic Algorithms and Average Case Analysis. W
Graduate seminar in algorithms and complexity theory on topics from recently published research journal articles and conference proceedings. Topics vary from year to year depending on the current research of the instructor(s) and interests of students. Students

read technical papers from relevant journals and conference proceedings and present class lectures. Guest lectures may supplement the student presentations. A research project and/or paper may be required. Enrollment restricted to graduate students. Enrollment limited to 15. Offered in alternate academic years. May be repeated for credit. D. Achlioptas

290B. Advanced Topics in Computer Graphics. S

A graduate seminar in computer graphics on topics from recently published research journal articles and conference proceedings. Topics vary from year to year depending on interests of students. Primary areas of interest are likely to be scientific visualization, modeling, rendering, scattered data techniques, wavelets, and color and vision models. Students read technical papers and present class lectures. Guest lecturers supplement the student presentations. A research project is required. Enrollment limited to 15. May be repeated for credit. A. Pang, J. Davis, S. Lodha

290C. Advanced Topics in Machine Learning. S

In-depth study of current research topics in machine learning. Topics vary from year to year but include multi-class learning with boosting and SUM algorithms, belief nets, independent component analysis, MCMC sampling, and advanced clustering methods. Students read and present research papers; theoretical homework in addition to a research project. Prerequisite(s): course 242. May be repeated for credit. D. Helmbold, M. Warmuth

290D. Neural Computation.

An introduction to the design and analysis of neural network algorithms. Concentrates on large artificial neural networks and their applications in pattern recognition, signal processing, and forecasting and control. Topics include Hopfield and Boltzmann machines, perceptions, multilayer feed forward nets, and multilayer recurrent networks. Enrollment restricted to graduate students. Offered in alternate academic years. May be repeated for credit. M. Warmuth

290E. Object-Oriented Programming Methodology.

Object-oriented programming methodology is the application of abstract-data types and polymorphism to coding solution. Topics geared to beginning thesis research in this field. Prerequisite(s): courses 201 and 203. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. C. McDowell, I. Pohl

290F. Applications of Combinatorics.

Combinatorial mathematics, including summation methods, working with binomial coefficients, combinatorial sequences (Fibonacci, Stirling, Eulerian, Harmonic, Bernoulli numbers), generating functions and their uses, Bernoulli processes, and other topics in discrete probability. Oriented toward problem solving, applications mainly to computer science, but also physics. Prerequisite(s): Computer Engineering 16 and Applied Mathematics and Statistics 10. Enrollment restricted to graduate students and upper-division undergraduates. Offered in alternate academic years. May be repeated for credit.

The Staff

290G. Topics in Software Engineering.

Research seminar on current topics in software engineering. Topics vary from year to year depending on the current research of the instructor(s) and interests of students. Students read technical papers from relevant journals and conference proceedings. Synthesis and understanding of materials is demonstrated by a required research project. Prerequisite(s): Computer Engineering 276 recommended. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 35. May be repeated for credit. E. Whitehead, C. McDowell, L. De Alfaro, C. Flanagan

290H. Topics in Database Systems.

Focuses on current research topics in database systems. Different offerings cover different topics depending on current research of instructor(s) and the interests of students. Students read technical papers from journals and conference proceedings and present class lectures. A research project is required. Prerequisite(s): course 180 (or equivalent) or 277 or consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. W. Tan, P. Kolaitis, N. Polyzotis

290J. Playable Media. W

Focuses on media, such as computer games, that invite and structure play. Work includes building and critiquing a series of prototypes; studying major examples in the field; and

discussing both theoretical and practice-oriented texts. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Digital Arts and New Media 250D. Students cannot receive credit for both courses.) May be repeated for credit. N. Wardrip-Fruin, M. Mateas

290L. Topics in Crowdsourcing and Collaboration. F

Explores the foundations of crowdsourcing and computer-mediated collaboration. Covers the algorithmic and statistical foundations of crowdsourcing, introducing and analyzing algorithms, and experimenting with concrete systems. Also, provides an introduction to computational systems for mediating user interaction and collaboration. Enrollment restricted to graduate students. L. De Alfaro, N. Polyzotis

290P. Topics in Computational Cinematography.

Focuses on discussion of recent advances in visual storytelling in graphical environments. Major topics covered are: intelligent camera control, shot-compositions, lighting design, interactive storytelling, and computational techniques associated with these applications. Class consists of in-class discussions and student presentations of research papers and a final student project. (Also offered as Digital Arts and New Media 290P. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. A. Jhala

290S. Advanced Topics in Computer Systems.

Focuses on current research topics in computer systems. Topics vary from year to year depending on the current research of the instructor(s) and the interests of the students. Students read technical papers from current journals and conference proceedings, and present class lectures. A research project is required. Prerequisite(s): course 221 recommended. Enrollment restricted to graduate students; qualified undergraduates may enroll with instructor's consent. May be repeated for credit. E. Miller, C. Maltzahn, D. Long

290T. Topics in Computing for Society.

Current research topics on computer technology that is intentionally targeted to benefiting society. Topics vary year to year. Students read papers from current conferences and journals, and present class lectures. A research project is required. Enrollment restricted to graduate students. May be repeated for credit. J. Davis

290X. Cryptography and Computer Security.

Research seminar on encryption and related technologies. Topics include theory of codes, random sequences and generators, public key cryptosystems, private key cyphers, key exchange protocols, quantum computing and cryptography. Major project required.

Prerequisite: interview with instructor. Enrollment limited to 12. May be repeated for credit. The Staff

296. Masters Project (2 credits). F,W,S

Independent completion of a masters project under faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297. Independent Study or Research. F,W,S

Independent study or research under faculty supervision. Although this course may be repeated for credit, not every degree program will accept a repeated course towards degree requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study or Research (2 credits). F,W,S

Independent study or research under faculty supervision. Although this course may be repeated for credit, not every degree program will accept a repeated course toward degree requirements. Formerly offered as Directed Readings in Machine Learning. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Thesis research conducted under faculty supervision. Although the course may be repeated for credit, not every degree program will accept a repeated course towards degree requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Games and Playable Media

[2014-15 General Catalog](#)

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Graduate Courses

210. Game Art Intensive. F

Teaches the basic vocabulary, concepts, and practices of creating 2D and 3D art assets for games, as well as their management and integration into game engines. Includes sprites, models, textures, animations, and an introduction to effects. Enrollment restricted to games and playable media graduate students; others by interview. The Staff

215. Audio Direction. W

Introduces fundamentals of digital audio and its implementation into a game project. Explores elements of acoustic audio therapy, musical theory, and digital audio theory, coupled with hands-on creation. Students work with audio software, synthesis, plug-in processing and microphones to develop and create an audio direction. Enrollment restricted to games and playable media graduate students. A. Romero, B. Romero, E. Whitehead

221. Professional Development for Game Makers I (2 credits). F

First course in a three-course sequence covering the game industry, game jobs, current thinking on games, and becoming a professional game maker. Focuses on presenting yourself and your ideas. Includes elements of writing, speaking, and designing professional communication. Enrollment restricted to games and playable media graduate students; others by interview. The Staff

222. Professional Development for Game Makers II (2 credits). W

Second course in a three-course sequence covering the game industry, game jobs, current thinking on games, and becoming a professional game maker. Focus on design considerations and methodologies employed in the game industry with emphasis placed upon the student's ability to develop designs beyond mere ideas through to execution. Enrollment restricted to games and playable media graduate students. A. Romero, B. Romero, E. Whitehead

223. Professional Development for Games Makers III (2 credits). S

The third course in a three-course sequence covering the game industry, game jobs, current thinking on games, and becoming a professional game maker. Focuses on the business of the game industry, including funding, corporation types and formation, budgeting and burn rates, pitch decks, and marketing. Enrollment restricted to games and playable media graduate students. B. Romero, N. Wardrip-Fruin, E. Whitehead

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270. Game and Playable Media Studio I. F

First course in a three-course sequence covering the fundamentals and advanced topics in game and playable-media development. Focuses on developing innovative project concepts using methods ranging from prototyping to design documents, planning, and initiating project development. Enrollment restricted to games and playable media graduate students; others by interview. The Staff

271. Games and Play Media Studio II. W

The second course in a three-course sequence in which students work in teams to develop an innovative computer game. Coursework involves multiple aspects of game production, including agile methodology; game and level design; development of code to implement game behavior; art direction; and audio design. Students receive frequent critiques on emerging game projects. Prerequisite(s): course 270. Enrollment restricted to games and playable media graduate students. N. Wardrip-Fruin, E. Whitehead

272. Game and Playable Media Studio III. S

The third course in a four-course sequence in which students work in teams to develop an innovative computer game. Coursework involves multiple aspects of game production including agile methodology; game and level design; development of code to implement game behavior; art direction; and audio design. Students receive frequent critiques on emerging game projects. Enrollment restricted to graduate students in the games and playable media program. A. Romero, N. Wardrip-Fruin, E. Whitehead

273. Game Production Intensive (10 credits). S

Fourth course in a four-course sequence in which students work in teams to launch an innovative computer game. Coursework involves multiple aspects of game production, including agile methodology, game and level design, development of code to implement game behavior, art direction, and audio design. The emphasis is on interacting with game media to publicize the game. Students receive frequent critiques on emerging game projects. Enrollment restricted to graduate students in the games and playable media program. A. Romero, N. Wardrip-Fruin, E. Whitehead



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Cowell College

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College Office

(831) 459-2253

<http://cowell.ucsc.edu/>

For college description and list of faculty, see [Colleges](#).

Lower-Division Courses

10. Becoming a Successful Student (2 credits). *

An interactive approach to effective studying, note-taking, critical thinking, and exams.

Also explored: time management; good communication with staff and faculty; major and career exploration; and use of campus resources. Enrollment priority given to first-year students and sophomores. Enrollment restricted to college members, or by permission of instructor. Enrollment limited to 15. The Staff

12. Public Speaking (2 credits). W

Introduces students to the theory and practice of formal and informal public speaking through composition, presentation, and evaluation of informative reports, persuasive speech, introductory remarks, panels, and extemporaneous speech. Enrollment restricted to college members during priority enrollment. Enrollment limited to 20. C. Carlstroem

39. Brain, Mind, and Consciousness. W

An interdisciplinary introduction to the study of the brain, mind, and consciousness. Topics include the philosophy of mind, neuroscience, cognition, and social psychology, and their applications in fields such as health science, technology, and social development. The Staff

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division students under faculty supervision. (See course 192.)
The Staff

50. Library Skills for the Digital Age (2 credits). *

Intended to enhance students' skills in using the most powerful learning tool in any university: the library. Topics: organization of the library; how to begin researching; search engine and database use; judging the quality of sources; using sources responsibly. Disciplinary focus changes from quarter to quarter. Enrollment restricted to first-year and sophomore Cowell college members, or by permission of instructor. Enrollment limited to 22. The Staff

61. Critical Journeys (2 credits). *

For publication in a Cowell literary journal, students substantively revise one of their fall quarter essays by studying a major work that influences, acknowledges, or further clarifies a required reading of the Cowell core course. Prerequisite(s): course 80A or 80B; enrollment restricted to members of Cowell College. Enrollment limited to 20. J. Wilson, C. Carlstroem

<ul style="list-style-type: none"> ■ Community Studies ■ Computer Engineering ■ Cowell College > ■ Critical Race and Ethnic Studies ■ Crown College ■ Digital Arts and New Media ■ Earth and Planetary Sciences ■ Ecology and Evolutionary Biology ■ Economics ■ Education ■ Electrical Engineering ■ Environmental Studies ■ Feminist Studies ■ Film and Digital Media ■ French ■ German ■ Greek ■ Hebrew ■ History ■ History of Art and Visual Culture ■ History of Consciousness ■ Italian ■ Japanese ■ Jewish Studies ■ Kresge College ■ Languages ■ Latin ■ Latin American and Latino Studies ■ Legal Studies ■ Linguistics ■ Literature ■ Mathematics ■ Merrill College ■ Microbiology and Environmental Toxicology ■ Molecular, Cell, and Developmental Biology ■ Music ■ Oakes College ■ Ocean Sciences ■ Physical Education ■ Physics ■ Politics ■ Porter College ■ Portuguese ■ Psychology ■ Russian ■ Science Communication ■ Social Documentation ■ Sociology ■ Spanish ■ Spanish for Heritage Speakers ■ Stevenson College ■ Technology and Information 	<p>62. Studying Conflict and Compassion. W Students gain a multidimensional understanding of the Israeli–Palestinian conflict. Academic speakers present their research. Class time is used to reflect on the speakers' presenting and studies. Enrollment restricted to college members, others by permission of instructor. F. Crosby</p> <p>64. Social Justice: Issues and Debates (2 credits). * Focused followup on social justice topics and readings introduced in the Cowell core course. Allows first-year students to pursue social justice themes in greater depth. Students must have previously taken a Cowell core course (or equivalent). Enrollment restricted to first-year students. Enrollment limited to 20. J. Christianson</p> <p>70A. Introduction to Book Arts. F Students learn techniques of bookbinding, construction, and design, and fundamentals of letterpress printing. Enrollment by permission of instructor. Students are billed a materials fee. (Formerly Bookbinding.) Enrollment limited to 10. (General Education Code(s): A.) G. Young</p> <p>70B. Intermediate Book Arts. W Learn fundamental skills in fine letterpress printing, including hand typesetting and instruction in the operation of printing presses. Basic typography explored as students design and print a small edition of a selected text. Students are billed a materials fee. (Formerly Printing I: Elements of Printing.) Prerequisite(s): course 70A or by permission of instructor. Enrollment limited to 12. (General Education Code(s): A.) G. Young</p> <p>70C. Advanced Book Arts. S Students learn fundamental skills in fine letterpress printing, including hand typesetting and instruction in the operation of printing presses. Basic typography explored as students design and print a small edition of a selected text. Students are billed a materials fee. (Formerly Printing II: Typography and Book Design.) Prerequisite(s): course 70B or by instructor permission. Enrollment limited to 12. May be repeated for credit. (General Education Code(s): A.) G. Young</p> <p>80A. Introduction to University Discourse: Imagining Justice Past and Present. F Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Focuses on conceptions of justice, historic and contemporary, and considers how literary and artistic media may transmit, question, or revise notions of the just. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): T4-Humanities and Arts, C1.) The Staff</p> <p>80B. Rhetoric and Inquiry: Imagining Justice Past and Present. F Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Focuses on conceptions of justice, historic and contemporary, and considers how literary and artistic media may transmit, question, or revise notions of the just. Incorporates independent research. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. Enrollment limited to 22. (General Education Code(s): T4-Humanities and Arts, C2.) The Staff</p> <p>84. Chinese Approaches to Human Values. * Through study of primary sources in translation, considers a range of classic Chinese approaches to basic reflective questions about human experience, with special focus on issues of justice, social engagement, and meaning and authenticity in everyday life. Enrollment restricted to Cowell and Crown Honors students. Enrollment limited to 28. (General Education Code(s): CC.) R. Birnbaum</p> <p>85. Introduction to Chinese Writing Systems. * Gateway course illuminating the operation of the writing systems of greater China. Intended for students who are curious about the world's longest continually used symbol set as well as for those who may be considering a serious commitment to learning the language. D. Keenan</p> <p>86. College Leadership Development (2 credits). *</p>
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Management UCDC Program Writing Program Theater Arts Yiddish	<p>Students newly appointed as residential life assistants in the college prepare for taking up their positions by studying identity and diversity issues; student development; community building; conflict resolution; intercultural competency; and leadership skills. Restricted to students selected for Cowell College Resident Assistantship, and by permission of instructor. May be repeated for credit. The Staff</p> <p>89. Faculty Research Colloquium (2 credits). S Introduction of UCSC as a research university, our notable researchers, and their work. Weekly discussions with UCSC faculty from a variety of disciplines. Enrollment restricted to participants in the first-year honors program. R. Birnbaum</p> <p>93. Field Study. F,W,S Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>93F. Field Study (2 credits). F,W,S Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>94. Group Tutorial. F,W,S A program of independent study arranged between a group of students and a faculty instructor. Students submit petition to sponsoring agency. Enrollment limited to 10. May be repeated for credit. The Staff</p> <p>94F. Group Tutorial (2 credits). F,W,S A program of independent study arranged between a group of students and a faculty instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99. Tutorial. F,W,S Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99F. Tutorial (2 credits). F,W,S Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
Teaching and Administrative Staff Appendices Archive of General Catalogs Nondiscrimination Statement Search the Catalog	<h2>Upper-Division Courses</h2> <p>107. Trust Rules: How to Tell the Good People from the Bad (2 credits). F Students learn practical tools and techniques for assessing trustworthiness, including your own, and applying these tools in a variety of situations. Integrating insights from practical experience, philosophy, and psychology, this course teaches us how to pay attention to red flags in relationships and ultimately develop a network of trustworthy people that will help us succeed in work and in our personal lives. (Formerly Trust Rules: How to Tell Good People from Bad People in Work and Life.) Enrollment restricted to college members or by permission of instructor. Enrollment limited to 20. The Staff</p> <p>110. Introduction to Mock Trial (2 credits). S Introduces Mock Trial, which is open to all students. Covers the basics of argumentation, cross and direct examinations, permissible evidence, witness testimony, and courtroom protocol. Special emphasis is on public speaking. Students write speeches for opening and closing arguments and create questions for witnesses. Students must read the Mock Trial handbook for examples and strategies. Each student has an opportunity for public speaking and creating a coherent legal argument. Enrollment restricted to college members. D. Robertson</p> <p>111. Mock Trial Workshop (2 credits). W Reserved for the Mock Trial team to practice arguments and refine techniques for the competition nationwide. Students drilled on the case from both the perspective of the defense and of the offense. Direct examination and cross examination strategies explored, and practice given in witness testimony. Enrollment limited to 20. May be repeated for credit. D. Robertson</p> <p>118B. Words & Music: Poetry, Musical Theater, Opera. * Study of significant texts enhanced by music for performance. Topics vary annually. Course</p>

compares original texts in English translation with their adaptation to musical theater (My Fair Lady, Oklahoma, etc.) and opera (Carmen, etc.) May be repeated for credit. (General Education Code(s): IH.) The Staff

122. Researching Trust (2 credits). F

How can we know what is good? Are there moral absolutes? These questions have troubled philosophers and theologians for centuries, while psychologists have shifted this conversation to include examination of what people think is good. Students study trust across a variety of texts and cultural perspectives. Enrollment restricted to college members, others by permission of instructor. Enrollment limited to 30. F. Crosby

126. The Trajectory of Justice in America: Eight Cases that Changed the U.S.. *

Reviews changing concepts of justice in constitutional law cases that changed the United States politically and socially. These cases include the Pentagon Papers, the Watergate burglary, Karen Silkwood, the American Sanctuary Movement, and Iran-Contra. Enrollment restricted to juniors, seniors, and graduate students. The Staff

136. La Francophonie. *

In-depth multidisciplinary study of one or more French-speaking regions of the world. Topics may include history, language, society, literature, and the arts. All coursework will be done in French. (Also offered as French 136. Students cannot receive credit for both courses.) Prerequisite(s): French 6 or consent of instructor. May be repeated for credit. The Staff

138A. The Place of Higher Education in a Democratic Society. S

Centers around interviews of alumni and involves a reflective term paper on a specific topic having to do with the role of higher education in a democratic society. Teaches students how to conduct interviews. Prerequisite(s): course 80A or 80B. Enrollment limited to 20. (General Education Code(s): PE-H.) F. Crosby

138B. Life Development (2 credits). *

Visits from alumni form the centerpiece of this course. In teams, students study the lives and the issues of the visitors. The aim is to reflect on the meaning of education in adult development. Prerequisite(s): course 80A or 80B. Enrollment limited to sophomore, junior, and senior Cowell College members. Enrollment limited to 40. F. Crosby

156M. Medical Ethics and Justice in Literature and Film. *

Course approaches literature and literary devices in their capacity to address the patient's experience of illness, medical education and practice, and medical ethics and to understand and assess how considerations of justice impact these themes in medicine. Particular issues raised by a variety of topics are examined and discussed in the context of case examples as presented in literature and film, e.g., informed consent, the doctor-patient relation, withdrawing vs. withholding life-sustaining treatment, organ transplantation, health care reform, rationing/social justice, etc. (Formerly Arts and Sciences.) Enrollment limited to 15. May be repeated for credit. D. Schultz

158A. Special Topics: Oral History. *

Introduction to the art and science of conducting and oral history. Readings include books that offer both theoretical and practical insights. Students conduct interviews and construct oral histories, focusing on the alumni of Cowell College. Enrollment restricted to sophomore, junior, and senior college members. Enrollment limited to 25. The Staff

168. Social Change (2 credits). F,W,S

How do you change the world, working alone and in concert with others? To find out, students work in groups with specific community partners who, in turn, help place students in social-change organizations in Santa Cruz County. Enrollment restricted to college members. May be repeated for credit. (General Education Code(s): PR-S.) D. Baldini

184A. Leadership and Institution Building (2 credits). F

Through lectures by senior administrators and student consensus-and-recommendation teams, students learn how leaders work with constituent groups, build cooperation, and develop implementation plans in an institution such as the University of California, specifically, UC Santa Cruz. Enrollment restricted to undergraduates accepted in the Chancellor's Undergraduate Internship Program. Enrollment limited to 40. (General Education Code(s): PR-S.) R. Hughey

184B. Leadership and Institution Building (2 credits). W
 Through lectures by senior administrators and student consensus-and-recommendation teams, students learn how leaders work with constituent groups, build cooperation, and develop implementation plans in an institution such as the University of California, specifically, UC Santa Cruz. Enrollment restricted to undergraduates accepted in the Chancellor's Undergraduate Internship Program. Enrollment limited to 40. (General Education Code(s): PR-S.) R. Hughey

184C. Leadership and Institution Building (2 credits). S
 Through lectures by senior administrators and student consensus-and-recommendation teams, students learn how leaders work with constituent groups, build cooperation, and develop implementation plans in an institution such as the University of California, specifically, UC Santa Cruz. Enrollment restricted to undergraduates accepted in the Chancellor's Undergraduate Internship Program. Enrollment limited to 40. (General Education Code(s): PR-S.) R. Hughey

192. Directed Student Teaching. F,W,S
 Teaching of a lower-division seminar under faculty supervision. (See course 42.) Upper-division standing required and a proposal supported by a faculty member willing to supervise. The Staff

193. Field Study. F,W,S
 Program of study arranged between a group of students and an instructor, which may involve work with an off-campus or non-departmental agency (e.g., internship or field work). Interview only; prior arrangement with instructor. Enrollment restricted to juniors and seniors. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S
 Program of study arranged between a group of students and an instructor, which may involve work with an off-campus or non-departmental agency (e.g., internship or field work). Interview only; prior arrangement with instructor. Enrollment restricted to juniors and seniors. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S
 A program of independent study arranged between a group of students and an instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194F. Group Tutorial (2 credits). F,W,S
 A program of independent study arranged between a group of students and an instructor. Students submit petition to sponsoring agency. Enrollment restricted to juniors and seniors. May be repeated for credit. The Staff

195. Senior Thesis. F,W,S
 Students submit petition to sponsoring agency. The Staff

198. Independent Field Study. F,W,S
 Provides for college-sponsored individual study programs off campus, for which faculty supervision is not in person (e.g., supervision is by correspondence.) Up to three such courses may be taken for credit in any one quarter. Approval of student's adviser, certification of adequate preparation, and approval by provost required. May be repeated for credit. The Staff

199. Tutorial. F,W,S
 Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S
 Various topics to be arranged. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

10. Critical Race and Ethnic Studies: An Introduction. W

Examines the concept of race, followed by an investigation of colorblindness, multiculturalism, and post-racialism. Race and ethnicity are examined as historically formulated in relationship to the concepts of gender, sexuality, class, nationalism, indigeneity, citizenship, immigration, and inequality. Prerequisite(s): Satisfaction of the Entry Level Writing and C1 requirements. (General Education Code(s): ER.) The Staff

70S. Introduction to the Sikhs (2 credits). W

Introduces the Sikh community, including origins, history, belief system, and contemporary issues. Other topics include: Sikh music, art, literature, and aspects of Sikh society. Attention paid to the Sikh diaspora in the United States and in California in particular, including comparative perspectives with other minority communities. (Formerly Humanities 70S.) N. Singh

Upper-Division Courses

100. Comparative Theories of Race and Ethnicity. W

Examines race and ethnicity as categories of lived identity intersecting with gender, sexuality, class, and culture; historical discourses of difference underwriting social inequalities and movements to redress those inequalities; and concepts critical to the understanding and reshaping of power and privilege. Prerequisite(s): course 10 and satisfaction of the Entry Level and C1 requirements. (General Education Code(s): ER.) V. Cooppan

101. Research Methods and Writing in Critical Race and Ethnic Studies. S

Examines how scholars and activists produce knowledge in critical race and ethnic studies. Interrogates key terms to build a foundation and literacy in research methods. The course is project-based; and requires work on a team. Prerequisite(s): course 10 and satisfaction of the Entry Level Writing and Composition requirements. The Staff

190. Senior Seminar. *

Required research seminar for Critical Race and Ethnic Studies majors in which students write a substantial research paper or a series of short papers. May be organized around a specific theme at the instructor's discretion. Prerequisite(s): courses 10 and 100, and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior CRES majors Enrollment limited to 25. E. Porter

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Crown College

[2014–15 General Catalog](#)

College Office

(831) 459-2665

<http://crown.ucsc.edu/>For college description and list of faculty, see [colleges](#).

Lower-Division Courses

28. Crown Student Leadership Development Seminar (2 credits). W

Explore leadership as it relates to student development at Crown College. Examine how values, ethics, involvement, identity, and theory affect leadership in a variety of content areas. Evaluate student's leadership strengths to determine objectives for improvement.

The Staff

31. Crown College Student Leadership in Action Seminar (2 credits). S

Focuses on developing and establishing leadership skills and styles for new leaders at Crown College. Explores communication styles, group dynamics, community development, programming, moral development and conflict resolution concepts and strategies. Applies theory to action. Enrollment limited to college members and by permission of instructor.

The Staff

60. The Environment on Film: Rhetoric of Ecocriticism. *

Examines the overt as well as the subtle cinematic elements that depict, ponder, and persuade concerning issues of the environment and the role of humans regarding nature, animals, and the human-made landscape. Enrollment restricted to college members during priority enrollment. Enrollment limited to 24. (General Education Code(s): IM, IH.) The Staff

70. Introduction to Broadcast Media: Radio. F,W,S

Comprehensive history of noncommercial radio as a mass-communication medium. Course also serves as an introduction to UCSC's radio station KZSC-FM and broadcasting. Through lectures, hands-on instruction, and written assignments, students learn the fundamentals of program presentation and audio production. Enrollment by permission of instructor. Enrollment limited to 14. (General Education Code(s): PR-S.) M. Bryant, K. Rozendaal

79. Introduction to Ethical Foundations (2 credits). F

Introduces the foundations of ethical decision making. Develops students' skills in understanding and making ethical arguments. Prepares students for the winter quarter sections of course 80A or 80B. Enrollment restricted to first-year Crown College members. K. Crouse, D. Bernick

80A. University Discourse: Ethical Issues in Emerging Technologies. F,W

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Examines ethical challenges brought about by rapidly changing science and technology. Students cannot receive credit

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for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. (General Education Code(s): T6–Natural Sciences or Humanities and Arts, C1.) The Staff

80B. Rhetoric/Inquiry: Ethical Issues in Emerging Technologies. F,W

Explores intersection, interpretation, and persuasion and hones strategies for writing and research. Examines ethical challenges brought about by rapidly changing science and technology. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year Crown College members. (General Education Code(s): T6–Natural Sciences or Humanities and Arts, C2.) The Staff

80F. Science Fictions. *

Examines how science fictions have imagined better and worse worlds, social relations, and identities by using science and technology. Students read novels and short stories from the 19th Century to the present and discuss and debate questions of justice, freedom, difference, and identity. (Formerly "Seminar in Science Fiction.") Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment limited to 22. (General Education Code(s): TA, T7–Natural Sciences or Social Sciences.) The Staff

80J. Cyborg Society: Myths, Realities, Choices. *

Examines content and methodologies of the emerging field of cyborgology. Includes social studies of science, anthropology, sociology, philosophy, politics, art, biology, and informatics. Enrollment limited to 25. (General Education Code(s): PE-T, T5–Humanities and Arts or Social Sciences.) C. Gray

80L. Food Safety and Environmental Quality: The Complexities of a Safe Salad. *

In recent years, outbreaks of food-borne illness have alarmed farmers and consumers alike. This course examines the complexities of ensuring food safety in the complex natural, economic, and social settings that characterize U.S. food-production systems. Enrollment limited to 24. (General Education Code(s): PE-E, T7–Natural Sciences or Social Sciences.) The Staff

80S. Undergraduate Seminar in Science, Technology, and Society. *

An honors seminar for first year students on selected topics that examine the relationship between science, technology, and society. Precise focus of each seminar varies and is announced by the college. Preference given to Crown College students. Enrollment restricted to first-year and sophomore students. Enrollment limited to 20. (General Education Code(s): T2–Natural Sciences.) The Staff

84H. Extreme Environment Virology. W

Students sample viruses from an extreme environment during a field trip, and sequence DNA from that sample and other viruses and assemble their genomes. This is an integrated course in molecular genetics and bioinformatics focusing on extreme environments. Enrollment restricted to Crown and Cowell Honors students. Enrollment limited to 24. (General Education Code(s): SI.) D. Bernick

93. Field Study. F,W,S

Provides for individual programs of study sponsored by the college and performed off campus. Students should review plans with an appropriate fellow of the college. A proposal should be presented to the college academic preceptor no later than the seventh week of the preceding quarter. Credit is granted by the sponsor upon approval of the work performed. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

93F. Field Study (2 credits). F,W,S

Provides for individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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123. Examining Our Life Through Writing. S

Writing-intensive seminar. Based on course readings and discussions, students write reflective response papers at the end of each class and weekly papers on their own lives and what they care most about. Intense class discussions, often started by students sharing their essays. Prerequisite(s): satisfaction of the Composition 1 requirement. Admission by permission of instructor after student reads lengthy syllabus, writes application, and interviews with instructor during faculty office hours. (Formerly Science and Human Values) F. Andrews

185. Career and Internship Preparation (1 credit). F,W,S

For juniors and seniors preparing for an internship experience or career position. Subjects include: self-assessment of career objectives and/or internship goals; exploration of resources and techniques for finding and evaluating potential positions; resume writing; interview techniques; techniques to maximize learning in an internship and advancement in a job; communication; conflict resolution and problem solving in the organizational setting. Students are billed a materials fee. Enrollment limited to 40. A. Goral

191. Student Practicum. F,W,S

The student learns teaching skills by working with a faculty member in a Crown College course. Activities include facilitating discussions, helping students improve skills, and modeling leadership. The student must have demonstrated excellent performance in the course in which he/she will be assisting to be considered. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment by interview only.

Enrollment limited to 1. F. Ferguson

198. Independent Field Study. F,W,S

Provides for college-sponsored individual study programs off campus. Approval of student's faculty sponsor and college academic provost required. The Staff

199. Tutorial. F,W,S

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Digital Arts and New Media

[2014-15 General Catalog](#)

DARC 204

(831) 459-1919

[http:// danm.ucsc.edu](http://danm.ucsc.edu)[Faculty | Program Statement](#)

Upper-Division Courses

179. Game Design Practicum. F

Provides the opportunity to practice the creation of novel computer games. Students learn a new game-making technology, then create three games using this technology. (Also offered as Computer Science 179. Students cannot receive credit for both courses.) May be repeated for credit. (General Education Code(s): PR-C.) The Staff

199. Tutorial. F,W,S

Independent digital arts and new media research project under the guidance of a digital arts and new media faculty member or other faculty. Students submit petition to sponsoring agency. Enrollment restricted to juniors and seniors. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Independent digital arts and new media research project under the guidance of a digital arts and new media faculty member or other faculty. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

201. Recent Methods and Approaches to Digital Arts and Culture. F

Students examine methods and approaches to research and writing in digital art and new media, while exploring key theories concerning technology, art, and culture. Focus is on the interaction between digital technologies and socio/cultural formations. Enrollment restricted to graduate students. S. Murray

202. Dialogues and Questions in Digital Arts and Culture. S

Students engage in dialogues at the intersection of theory and practice with the goal of producing a pre-thesis proposal and essay. Readings and seminar discussions inform the development of project proposals and essays, which theoretically contextualize students' work. (Formerly Digital Arts and New Media 203.) (Also offered as Music 254Q. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. K. O'Riordan

203. Frameworks and Arguments in Digital Arts and Culture. S

Intended to help students develop and write the MFA thesis. Students conduct research on the thesis topic, design outlines, construct strong theoretical arguments, and draft the final

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■ Ecology and Evolutionary Biology
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■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

document. (Formerly course 202, Genealogies and Theories of Digital Arts and Culture.) Enrollment restricted to graduate students. W. Sack

210. Project Design Studio. F

Students work on the design of individual projects by developing project proposals, budgets, "proof of concept" design documents and/or prototypes and exploring tools, technologies, programming languages, hardware, software, and electronics techniques relevant to their projects. Enrollment restricted to graduate students. E. Crichton

211. Critique. S

First-year digital arts and new media graduate students are required to present work-in-progress based on the projects developed in earlier courses and during the current quarter in individual studio critiques with the instructor as well as in group critiques. Enrollment restricted to graduate students. Enrollment limited to 18. The Staff

212. Thesis Proposal (no credit). S

First-year digital art and new media graduate students work on the development and completion of their thesis-project proposal and abstract under the supervision of the program chair and their thesis committees. Enrollment restricted to DANM students. The Staff

215. MFA Exhibition Production. W

Second-year digital arts and new media graduate students work with faculty curator/coordinator to develop thesis projects specifically for the group exhibition context. Students contribute to exhibition design and collateral materials while studying the unique presentation and curatorial challenges of new media. Enrollment restricted to graduate students. S. Graham

216. Digital Bodies. *

Explores the appearance, form, and theoretical status of the human body/political subject in online art. Focuses on representations of race and gender, family resemblances, and local communities, as well as the political and colonial metaphors of spatial interaction operating on the World Wide Web. Visual representations of bodies that take the form of avatars, advertising, robots, and anime studied in their contextual usage. Enrollment restricted to graduate students. Upper-division undergraduates may enroll with permission of instructor. Enrollment limited to 17. J. Gonzalez

217. Computer-Assisted Composition. *

Study of techniques of algorithmic and computer-assisted composition in a variety of contemporary idioms. Topics may include stochastic methods, generative grammars, search strategies, and the construction of abstract compositional designs and spaces. Final project for course involves students formulating and algorithmically implementing their own theoretical assumptions and compositional strategies. (Also offered as Music 206B. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. L. Polansky

219. Introduction to Electronics for Artmaking. F

Intensive introduction to electronic devices used in artmaking, providing hands-on experience with sensors, motors, switches, gears, lights, simple circuits, microprocessors, and hardware storage devices to create kinetic and interactive works of art. Students are billed a materials fee. Enrollment restricted to graduate students. The Staff

220. Introduction to Programming for the Arts. W

Covers aspects of computer programming necessary for digital art projects. Students learn to manipulate digital media using program control for installations, presentations, and the Internet. No prior programming experience required. Enrollment restricted to graduate students. W. Sack

221. Mathematics and the Arts. *

Examines the role of mathematics in the arts since the computer revolution with an emphasis on chaos, fractals, and symmetry. Covers abstract animation and algorithmic music, including the history of leading innovators and techniques from 1950 to the present. Student projects explore the creative process today using cutting-edge technologies. Enrollment restricted to graduate students. Upper-division undergraduates may enroll with permission of instructor. Enrollment limited to 30. May be repeated for

Management UCDC Program Writing Program Theater Arts Yiddish	<p>credit. R. Abraham</p> <p>224. Digital Arts Project Studio. * Provides a context for significant development of digital arts projects: in the first year, individual and collaborative; in the second year, resolution of thesis projects. Individuals and collaborative groups meet with the instructor for focused critical feedback. Students create a public exhibition of their work-in-progress. Enrollment restricted to graduate students. Enrollment limited to 18. E. Crichton</p>
Teaching and Administrative Staff	<p>227. Projected Light in Performance. * Exploration of projected light in performance and art. The history of lighting as art is covered in a hands-on demystifying format from the shadow of a bare light bulb to the latest in automated and projection equipment and techniques. Enrollment restricted to graduate students. Juniors and seniors may enroll with permission of instructor. Enrollment limited to 20. D. Cuthbert</p>
Appendices	<p>231. Human-Computer Interaction. W Theory and hands-on practice to understand what makes user interfaces usable and accessible to diverse individuals. Covers human senses and memory and their design implications, requirement solicitation, user-centered design and prototyping techniques, and expert and user evaluations. Individual research project. Interdisciplinary course for art, social science and engineering graduate students. Students cannot receive credit for this course and course 131. (Also offered as Computer Engineering 231. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. S. Kurniawan</p>
Archive of General Catalogs	<p>233. The Object as Interface. * Combination theory and studio-based exploration into the role of the object in real and virtual space. Provides a broad conceptual and theoretical examination of issues relating to object-making on a physical and dematerialized plane. Enrollment restricted to graduate students. Enrollment limited to 15. W. Hibbert-Jones</p>
Nondiscrimination Statement	<p>241B. Modern Art: Cubism to Pop. W A history of the visual arts from the 1910s to the 1960s beginning in Europe and moving to the United States. Follows key movements of modern art while emphasizing the social, political, and philosophical events that inform it. Students cannot receive credit for this course and History of Arts and Visual Culture 141B. Enrollment restricted to graduate students in digital arts new media, film, music, social documentation, theater, or visual studies. J. Gonzalez</p>
Search the Catalog	<p>250A. Collaborative Research Project Group: Mechatronics. F,W,S Three-quarter collaborative research project group involves faculty-initiated research in the use of a variety of media including video, performance, and sculpture, for the creation of complex, kinetic, audio-visual systems exploring temporality, materiality, experience, and perception. Enrollment restricted to graduate students. Enrollment limited to 8. May be repeated for credit. J. Parker</p>
	<p>250B. Collaborative Research Project Group: Participatory Culture. F,W,S Three-quarter collaborative research project group encompasses a range of faculty-initiated projects in social computing and community-media activism, which involve the design of new technologies to address social problems and facilitate broader participation in culture and politics. Enrollment restricted to graduate students. Enrollment limited to 8. May be repeated for credit. S. Daniel, H. Harrison, N. Harrison</p>
	<p>250C. Collaborative Research Project Group: Performative Technologies. F Three-quarter collaborative research project group generates faculty-initiated new public and performative spaces where digital media, communication networks, and interactive systems may be fused with lighting, movement, stage, and sound design to create shared multimedia experiences for audiences and performers. Enrollment restricted to graduate students. Enrollment limited to 8. May be repeated for credit. M. Chemers</p>
	<p>250D. Playable Media. W Focuses on media, such as computer games, that invite and structure play. Work includes building and critiquing a series of prototypes; studying major examples in the field; and discussing both theoretical and practice-oriented texts. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Computer Science</p>

290J. Students cannot receive credit for both courses.) May be repeated for credit. N.
Wardrip-Fruin, M. Mateas

254I. Empirical Approaches to Art Information. *

Reading and practice in empirical methods, as applied to the study of music, visual art, multimedia production, and performance arts. Topics include semiotics, critiques of empiricism, cultural determinants and contingents of perception, the psychophysics of information, sensory perception (visual and auditory), memory, pattern recognition, and awareness. Students apply existing knowledge in the cognitive sciences to a developing creative project, or develop and conduct new experiments. (Also offered as Music 254I. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 17. May be repeated for credit. B. Carson

254L. John Cage: Innovation, Collaboration, and Performance Technologies. *

In-depth examination of John Cage's interdisciplinary work, his pioneering activity in live electronic technology, and his influence in current multimedia creativity. Approximately one-half of the seminar is devoted to student research and creative projects and reflect Cage's legacy. (Also offered as Music 254L. Students cannot receive credit for both courses.) Enrollment restricted to juniors, seniors, and graduate students. Upper-division undergraduates may enroll with permission of instructor. Enrollment limited to 12. The Staff

267. Workshop in Computer Music and Visualization (2 credits). F,W,S

Graduate-level techniques and procedures of computer music composition and visualization. Practical experience in the UCSC electronic music studio with computer composition systems and software, including visualization and interactive performance systems. Extensive exploration of music and interactive graphic programs such as Max/MSP/Jitter. Enrollment by permission of instructor; appropriate graduate experience required. Enrollment restricted to graduate students. (Also offered as Music 267. Students cannot receive credit for both courses.) Enrollment limited to 12. May be repeated for credit. Z. Watkins

290P. Topics in Computational Cinematography.

Focuses on discussion of recent advances in visual storytelling in graphical environments. Major topics covered are: intelligent camera control, shot-compositions, lighting design, interactive storytelling, and computational techniques associated with these applications. Class consists of in-class discussions and student presentations of research papers and a final student project. (Also offered as Computer Science 290P. Students cannot receive credit for both courses.) The Staff

297. Independent Study. F,W,S

Independent digital arts and new media research project under the guidance of a digital arts and new media faculty member or other faculty with approval of adviser. Project includes readings, research, and a written report. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. Maximum 10 credits. May be repeated for credit. The Staff

297G. Independent Study (3 credits). F,W,S

Independent digital arts and new media research project under the guidance of a digital arts and new media faculty member or other faculty with approval of adviser. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for a maximum 6 credits. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students carry out a master's of fine arts thesis in digital arts and new media research, under the guidance of a thesis committee. The thesis will be an arts project with digital documentation accompanied by a written paper discussing the student's preparatory research as well as the theoretical significance of the project. Enrollment restricted to graduate students. Maximum 10 credits. May be repeated for credit. The Staff

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Earth and Planetary Sciences

[2014-15 Catalog](#)

A232 Earth and Marine Sciences Building

(831) 459-4089

<http://eps.ucsc.edu>

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Lower-Division Courses

1. Oceanography. W

An introduction to the physical environment of the ocean. Origin and evolution of ocean basins; sea-floor morphology; origin, distribution, historical record, and economic significance of marine sediments; ocean currents, waves, tides, and changing sea level; beaches, shorelines, and coastal processes; marine resources, pollution, and human impacts on the oceans. Students may also enroll in and receive credit for Ocean Sciences 1. (General Education Code(s): PE-E, IN.) G. Griggs

2. Earth Catastrophes. F

The role of catastrophic processes in shaping Earth and the environment in which we live. The physical processes causing earthquakes, volcanic eruptions, tsunamis, floods, windstorms, landslides, and meteorite impacts will be described, along with the role played by these rapid processes in the geological and biological evolution of the planet. Interdisciplinary approaches to understanding these phenomena will be discussed. The entire time scale from formation of the universe to the present Earth system will be considered. (Formerly course 80A.) (General Education Code(s): SI, T-2 Natural Sciences.) The Staff

3. Geology of National Parks. S

Geologic concepts and processes responsible for shaping our national parks including mountain building, volcanic and earthquake activity, sedimentation, weathering, erosion, and glaciation. An understanding of how geology impacts our lives is emphasized. Appropriate for both science and non-science majors who wish to enhance their knowledge, enjoyment, and appreciation of our national parks. (General Education Code(s): SI, IN.) S. Schwartz

5. California Geology. F

An introduction to physical geology emphasizing the minerals, rocks, volcanoes, mountains, faults, and earthquakes of California. In-class field trips to study the caves, rocks, and landforms of the campus and the Monterey Bay area. Discussion-1 hour. Concurrent enrollment in 5L required for majors and minors. (General Education Code(s): SI, IN.) E. Knittle

5L. California Geology Laboratory (1 credit). F

Laboratory sequence illustrating topics covered in course 5 with particular emphasis on

■ Community Studies
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■ Critical Race and Ethnic Studies
■ Crown College
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■ Earth and Planetary Sciences >
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

rock and mineral identification and map interpretation. Field trip. Laboratory three hours. Students are billed a materials fee. E. Knittle

7. The History of Life. *

An examination of the major events in the history of life, from the origin of life approximately four billion years ago, to the wave of extinctions that has decimated plants and animals around the globe over the past 30,000 years. (General Education Code(s): SI, IN.) The Staff

8. Planetary Discovery. *

An introductory look at modern solar system exploration, focusing on spacecraft missions presently underway. We will examine the scientific context of each mission, the instrumentation and dynamics of each voyage, and the importance of their discoveries. Open to all students. (Formerly course 80G.) (General Education Code(s): SI, T-2 Natural Sciences.) The Staff

9. Earth History and Global Change. F

Over the past 4.5 billion years, planet Earth has evolved in exciting ways. Environments, climates, and life forms have come and gone in fascinating combinations. Course examines changing physical, biological, and climatological conditions through geologic time, beginning with the evolution of the Earth through changes leading to the current state of the planet, and considers prospects for Earth's future. (Formerly course 80F). (General Education Code(s): PE-E, T2-Natural Sciences.) L. Sloan

10. Geologic Principles. W

Introduction to the scientific study of Earth, the materials composing it, and the processes shaping it. Topics include minerals and rocks, Earth's internal structure, plate tectonics, earthquakes and volcanoes, oceans and the atmosphere, the formation of landscapes and global change. A one-day, optional field trip is included. Concurrent enrollment in 10L required for majors and minors. (General Education Code(s): SI, IN.) The Staff

10L. Geologic Principles Laboratory (1 credit). W

Laboratory sequence illustrating topics covered in course 10, with particular emphasis on rock and mineral identification and map interpretation. Laboratory 3 hours. In-lab field trips. Students are billed a materials fee. A. Fisher

11. Earthquakes. W

Causes and effects of earthquakes. How do we measure, mitigate, and try to predict earthquakes? Plate motion, frictional faulting, earthquake triggering, wave propagation, earthquake damage, related hazards, and other social effects. Hazard reduction through earthquake forecasting and earthquake-resistant design. Class includes one full day weekend field trip to local faults. Advanced algebra and high school geometry recommended. Students are billed a materials fee. (Formerly course 80B.) (General Education Code(s): MF, T-2 Natural Sciences, Q.) The Staff

12. Introduction to Weather and Climate. *

Many meteorological phenomena are familiar to us: clouds, fog, rain, snow, wind, lightning, and severe storms. Climate is the sum of weather over long periods and is changing (e.g., greenhouse warming, ozone depletion, urban smog) due to mankind's activities. Conceptual understanding of how and why the present-day atmosphere behaves as it does and how this may change in the future is the primary goal of this course. Offered in alternate academic years. (General Education Code(s): SR, T2-Natural Sciences, Q.) P. Chuang

20. Environmental Geology. S

Introduction to aspects of geology which affect and are affected by humans. Addresses a broad range of topics including resource management, geologic hazards, air and water issues, population and land use, energy costs and effectiveness, and global change, all from a unique geological/environmental perspective. Lectures include strategies for mitigating these issues. Includes a one-day field trip. Concurrent enrollment in 20L required for majors and minors. (General Education Code(s): SI, IN.) S. Tulaczyk

20L. Environmental Geology Laboratory (1 credit). S

Laboratory sequence illustrating topics covered in course 20, with emphasis on rock and mineral identification, geologic hazard assessment, geologic resource management, and

Management

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land use planning. In-lab field trip. Laboratory 3 hours. Students are billed a materials fee. S. Tulaczyk

65. Natural History of Dinosaurs. S

Explores the origin, evolution, and extinction of dinosaurs with emphasis on paleobiology and paleoecology. Covers fundamental paleontological and evolutionary principles, dinosaur anatomy and behavior, the hot-blooded/cold-blooded debate, dinosaur–bird relationships, diversity, and exploits of the great dinosaur hunters. One and a half hour of discussion each week. (General Education Code(s): SI, IN.) H. Schwartz

81B. Fundamentals of Environmental Science. W

Addresses major issues in physical and biological environmental sciences and provides tools to critically evaluate, debate, and make informed choices regarding one's own impact on the environment. Topics include: climate change, water resources, air pollution, evolution, ecology (from populations to ecosystems), and conservation. Quantitative problem solving is an integral part of this course. (Also offered as College Eight 81B. Students cannot receive credit for both courses.) (General Education Code(s): MF, IN, Q.) L. Fox, P. Chuang

98. Earth Sciences Internship. F,W,S

A supervised learning experience involving practical application of lower division Earth sciences knowledge while working with approved companies, governmental agencies, or research organizations. Students consult weekly with supervising faculty and prepare a final report of their work, to be evaluated both by the sponsoring agency and the faculty supervisor. Consult sponsoring agency for enrollment criteria; after instruction on resume preparation and interview skills, student must interview and be selected for internship by approved sponsoring organizations. May be repeated for credit. E. Silver

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100. Vertebrate Paleontology. *

Introduction to vertebrate history, with an emphasis on vertebrate relationships and the co-evolution of organisms and environments. Specific topics include vertebrate origins, systematics and classification, adaptive revolutions, mass extinctions, and the rise and fall of dinosaurs. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 5 or 10 or 20 or Biology 20C, or Anthropology 1. Concurrent enrollment in course 100L is required. H. Schwartz

100L. Vertebrate Paleontology Laboratory (2 credits). *

Comparative anatomy and functional morphology of vertebrates, and preservation of vertebrate hard parts, using modern and fossil specimens. Laboratory three hours and one 1-day field trip. Concurrent enrollment in course 100 is required. H. Schwartz

101. Invertebrate Paleobiology. F

An introduction to paleobiology; the use of fossil evidence to pose and solve evolutionary and geologic questions. Students are billed a materials fee. (Formerly The Fossil Record.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 5 or 10 or 20 or Biology 20C or Anthropology 1. Concurrent enrollment in course 101L is required. M. Clapham

101L. Invertebrate Paleobiology Laboratory (1 credit). F

Systematics, ecology, and evolutionary history of the major groups of fossil-forming animals. Laboratory 3 hours and one 1-day field trip. (Formerly The Fossil Record Laboratory.) Concurrent enrollment in course 101 is required. M. Clapham

102. Marine Geology. W

Geology of the marine environment. Topics include controls on the types, origin, and distribution of marine sediments; geology of oceanic crust; evolution of continental margins and plate boundaries; introduction to paleoceanography. Discussion: 1 hour. Students cannot receive credit for this course and Ocean Sciences 280. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and course 5 or 10 or 20 or Biology 20C. A. Ravelo

104. Geologic Hazards. F

The recognition, evaluation, and mitigation of geologic hazards: earthquakes and faulting, tsunamis, volcanism, landslides and mass movements, and flooding. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and course 10/L or 5/L or 20/L. S. Schwartz

105. Coastal Geology. S

An investigation of the evolution, morphology, and processes in the coastal zone including the terrestrial (marine terraces, dunes, estuaries, sea cliffs) and marine (beaches, continental shelves, sea level changes, shoreline erosion and protection, waves, tides) components and their interaction. Laboratory: 3 hours. Students are billed a materials fee. Prerequisite(s): course 5 or 10 or 20. G. Griggs

107. Remote Sensing of the Environment. W

Introduction to geographic information systems (GIS) and remote sensing (RS) as valuable tools in the study of geology. Covers application of GIS/RS to study of surface processes, including landslides, hydrologic basins, coastal erosion, modern floods, volcanic activity and surface deformation. Prerequisite(s): course 5 or 10 or 20. Enrollment limited to 36. E. Silver

109. Elements of Field Geology. F,S

Basic tools and techniques used in geologic fieldwork. Preparation, analysis, and interpretation of geologic maps. Nine to 10 days of weekend field trips required, including a six-day geologic mapping exercise. Laboratory: 3 hours. Recommended for courses 120, 130, 150, and required for 188A-B. May not be taken concurrently with course 120, 150, or 188. Students are billed a materials fee. (General Education Code(s): W satisfied by taking this course and courses 188A and 188B.) Enrollment restricted to majors and minors in Earth and planetary sciences and the combined majors with anthropology and environmental studies. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements, course 5 or 10 or 20, and 5L or 10L or 20L, or by permission of instructor. Concurrent enrollment in 109L is required. Enrollment limited to 25. (F) H. Schwartz, (S) J. Hourigan

109L. Field Geology Laboratory (2 credits). F,S

Laboratory exercises essential to the successful completion of fieldwork required in course 109. Topics include topographic maps, Brunton compass, rock identification and description, geologic map analysis, structure section "construction," and landslide recognition. Concurrent enrollment in course 109 required. Enrollment restricted to majors and minors in Earth and planetary sciences and the combined majors with anthropology and environmental studies or by permission of instructor. Enrollment limited to 25. (General Education Code(s): PR-E.) (F) H. Schwartz, (S) J. Hourigan

110A. Evolution of the Earth. F

Investigation of the processes and mechanisms that have produced the present Earth system, with an emphasis on the temporal evolution of the earth from the Archean to the present. Specific topics covered include cyclicity in Earth processes and the evolution of, and interplay between the planet's crust, atmosphere, hydrosphere, and biosphere. Prerequisite(s): courses 5 or 10 or 20, and 5L or 10L or 20L, and Mathematics 11A or Mathematics 19A or Applied Mathematics and Statistics 15A. (General Education Code(s): PE-E.) Q. Williams, J. Zachos

110B. Earth as a Chemical System. W

The chemical properties of Earth materials and the chemical processes by which the planet has evolved to its present state. Specific topics covered include properties of minerals; the genesis of igneous, metamorphic, and sedimentary rocks; and the linkage between the solid Earth and the hydrosphere. Enrollment is permitted by permission code with equivalent or exceptional background, or if enrolled concurrently in Chemistry 1B. Prerequisite(s): courses 5, or 10, or 20, and 5L, or 10L, or 20L, and Chemistry 1B. E. Knittle

110C. The Dynamic Earth. S

Physical processes occurring in the interior of the earth, at its surface and in the oceans and atmospheres including plate tectonics, structural deformation of rocks, and material and heat transport. Students are billed a materials fee. Prerequisite(s): course 5 or 10 or 20; and 5L or 10L or 20L; and course 111 or Mathematics 22 or 23A; and Physics 6A or 5A.

The Staff

- 110L. Evolution of the Earth Laboratory (2 credits). F**
 Laboratory sequence illustrating topics covered in course 110A. Emphasis is on quantifying and evaluating different phenomena related to thermal, tectonic, climatic, and evolutionary processes. Prerequisite(s): concurrent enrollment in course 110A. (General Education Code(s): PR-E.) Q. Williams, J. Zachos
- 110M. Earth as a Chemical System Laboratory (2 credits). W**
 Laboratory sequence illustrating topics covered in course 110B. Emphasizes identification of the major rock-forming minerals and common rock types; principles of basic crystallography. Prerequisite(s): concurrent enrollment in course 110B. E. Knittle
- 110N. The Dynamic Earth Laboratory (2 credits). S**
 Laboratory sequence illustrating topics covered in course 110C. Prerequisite(s): concurrent enrollment in course 110C. The Staff
- 111. Mathematics in the Earth Sciences. F**
 Series and sequences, vectors, 3D analytic geometry, partial differentiation, matrix algebra, and differential equations with applications in the Earth sciences. Topics include matrix manipulation, systems of linear equations, least-squares, Taylor series, gradients, optimization, analytic and numerical solutions to differential equations. Prerequisite(s): courses 5 or 10 or 20, and Mathematics 11B or Mathematics 19B or Applied Mathematics and Statistics 15B. (General Education Code(s): Q.) W. Nimmo
- 112. Practical Geophysics. F**
 Hands-on practice analyzing real-life observational data including earthquake catalogs, seismograms, gravity, and GPS data. Emphasis on data collection, and access and manipulation skills. Introduction to MATLAB programming included. Prerequisite(s): course 110C. E. Brodsky
- 116. Hydrology. S**
 Introduces processes involving water on and near Earth's surface, including meteorology, water properties, surface flows in streams and runoff, flood analysis, ground water, water budgets, sediment transport, erosion, and water quality. Problem set and laboratory each week. Laboratory/field: 3 hours. Students are billed a materials fee. Alternates annually with course 146. Enrollment restricted to majors and minors in Earth and planetary sciences and the combined majors with anthropology and environmental studies.
 Prerequisite(s): course 5 or 10 or 20, Mathematics 11A or 19A or Applied Mathematics or Statistics 15A; and Physics 6A/L, or by permission of the instructor. Course 5L or 10L or 20L and Physics 5B/M are recommended. A. Fisher
- 118. Seismotectonics. ***
 Earthquakes and their relationship to plate tectonics. Topics include seismological analysis of earthquake faulting, types of seismic waves, seismicity distributions, thermal and rheological structure of plates, and seismic investigation of plate dynamics. Prerequisite(s): course 5 or 10 or 20; Mathematics 11B or 19B; and Physics 5A or 6A. Offered in alternate academic years. T. Lay
- 119. Introduction to Scientific Computing. W**
 Introduction to solving scientific problems using computers. A series of simple problems from Earth sciences, physics, and astronomy are solved using a user-friendly scientific programming language (Python/SciPy). (Also offered as Astronomy and Astrophysics 119. Students cannot receive credit for both courses.) Prerequisite(s): Mathematics 11A or Mathematics 19A or Applied Mathematics or Statistics 15A. (General Education Code(s): IN.) M. Krumholz
- 120. Sedimentology and Stratigraphy. S**
 Stratigraphic principles used in classifying sedimentary rocks. Fundamentals of sedimentary mechanics. Analysis and interpretation of facies and depositional systems. Introduction to seismic facies and basin analysis. Course includes four Saturday field exercises. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and course 110A. Course 110B is recommended as preparation. May not be taken concurrently with course 109. M. Clapham
- 120L. Sedimentology and Stratigraphy Laboratory (2 credits). ***
 Laboratory sequence illustrating topics in course 120, including sedimentary petrology,

sedimentary structures, sequence stratigraphy, and geohistory analysis. Prerequisite(s): concurrent enrollment in course 120. M. Clapham

121. The Atmosphere. W

Course focuses on understanding basic atmospheric weather and climate phenomena starting from the fundamentals of physics and chemistry. Using this approach, covers topics such as atmospheric circulation, precipitation, clouds, storms, urban and regional air quality, atmospheric aerosols, and climate and global change. Prerequisite(s): Mathematics 11B or Mathematics 19B or Applied Mathematics and Statistics 15B, and Chemistry 1A, and Physics 5B or 6B. Offered in alternate academic years. P. Chuang

125. Statistics and Data Analysis in the Geosciences. W

Project-based introduction to analytical methods, such as univariate and multivariate statistics, cluster analysis and ordination, and maximum likelihood estimation, using a conceptual approach. Introduction to analysis and programming using the R software package. (Formerly Analytical Paleobiology) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Offered in alternate academic years. (General Education Code(s): SR.) M. Clapham

128. Isotopes: Fundamentals and Applications in Earth and Marine Sciences. *

Explores the fundamentals and concepts of stable, radiogenic, and cosmogenic isotope chemistry with applications relevant to Earth, marine, and biological sciences.

Prerequisite(s): course 110B or permission of instructor. J. Zachos

130. Igneous and Metamorphic Petrology. S

Introduction to the relationship between tectonic environments and the genesis of rock assemblages, primarily igneous and metamorphic. Examples from California and elsewhere are used to illustrate petrogenetic processes and characteristic petrologic features of rocks from all major tectonic settings. Prerequisite(s): course 110B. Concurrent enrollment in course 130L is required. E. Knittle

130L. Igneous and Metamorphic Petrology Laboratory (2 credits). S

An introduction to optical mineralogy and the petrography of igneous rocks. (Formerly Magmas and Volcanos Laboratory.) Prerequisite(s): course 110B. Concurrent enrollment in 130 is required. E. Knittle

134. Thermochemistry of Geologic Systems. *

Introduction to the thermodynamic and kinetic principles with a strong emphasis on applications to Earth materials. Implications for phase equilibria, geothermometry/geobarometry, element partitioning, and physical properties of minerals, magmas, and solutions. Prerequisite(s): course 110B. Offered in alternate academic years. Q. Williams

140. Geomorphology. W

An introduction to the evolution of the Earth's landscape, with emphasis on the processes responsible. Review of climatic and tectonic forcing followed by detailed discussion of weathering, glaciers, hillslopes, wind, rivers, and coastal processes with emphasis on their geographic distribution. One single day and one three-day field trip. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 110A. Concurrent enrollment in 140L is required. The Staff

140L. Geomorphology Laboratory (2 credits). W

Laboratory sequence illustrating topics covered in course 140. These extensive laboratory exercises emphasize the quantification of the geomorphic processes and forms, and on the writing of concise summaries of the science in the form of abstracts. Students are billed a materials fee. Prerequisite(s): Concurrent enrollment in course 140 is required. The Staff

142. Engineering Geology for Environmental Scientists. F

Introduction to the formation, composition, and classification of soils; the chemical interaction of soil and groundwater; and basic soil mechanics: stress-strain behavior, effective stress concept, consolidation, soil testing methods. Applications to problems including slope stability, landslides, liquefaction, subsidence, soil creep, debris flows. Laboratory: 3 hours. Students are billed a materials fee. Prerequisite(s): course 5 or 10 or 20; Mathematics 11A or Mathematics 19A or Applied Mathematics or Statistics 15A. Offered in alternate academic years. S. Tulaczyk

146. Groundwater. *

Explores saturated and unsaturated fluid flow below Earth's surface, well hydraulics, and recourse evaluation and development. Introduces modeling, field techniques, geochemistry, and contaminant transport and remediation. Problem set and laboratory each week; final paper. Laboratory: 3 hours. Students are billed a materials fee. Alternates annually with course 116. Enrollment restricted to majors and minors in Earth and planetary sciences and the combined majors with anthropology and environmental studies. Course 5L or 10L or 20L and Physics 6B/M are recommended as preparation.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and course 5 or 10 or 20; and Mathematics 11A or 19A or AMS 15A; and Physics 6A/L (Physics 6B/M recommended); and Chemistry 1A/L, or by permission of the instructor. A. Fisher

148. Glaciology. *

Introduction to the role of snow and ice in the dynamics of the earth surface system. Snow deposition and metamorphosis. Heat and mass balance at snow and ice surfaces. Flow of glaciers, ice sheets, and sea ice. Methods of climate reconstruction. Ice age theories.

Students are billed a materials fee. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements, and courses 5 or 10 or 20; and Mathematics 11A or Mathematics 19A or Applied Mathematics or Statistics 15A. Offered in alternate academic years. S. Tulaczyk

150. Structural Geology. F

Principles and methods of analysis of brittlely and ductily deformed rocks. Includes descriptions of structures, field analysis of structures, and mechanics of deformation. Three day-long field trips on weekends. Students are billed a materials fee. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements, and course 110A or 110B; course 109 recommended; concurrent enrollment in course 150L is required. J. Hourigan

150L. Structural Geology Laboratory (2 credits). F

Structural analysis of faults, folds, and maps. Use of stereographic projections. Cross section construction and balancing from field data. Concurrent enrollment in course 150 is required. J. Hourigan

152. Tectonics. W

The processes, techniques, and interpretations involved in the study of active crustal movements; constraints from plate tectonics; horizontal and vertical motions and rates; geodesy, including GPS; stress measurement; image interpretation; fault system analysis; paleoseismicity; fluid effects. Examples from the circum-Pacific. Laboratory-3 hours. Students cannot receive credit for this course and course 207. Students are billed a materials fee. (Formerly Active Tectonics.) **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements, and course 10 or 5 or 20 and 10L or 5L or 20L, and Physics 5A or 6A or equivalent per instructor permission. J. Hourigan

160. Planetary Science. F

Broad introduction to planetary science. Topics include the fundamental characteristics of solar system bodies; space exploration of these bodies; formation and evolution of surfaces, atmospheres and interiors of planets, satellites and small bodies. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements, and Mathematics 11B or Mathematics 19B or Applied Mathematics and Statistics 15B; and Physics 5A or 6A. I. Garrick-Bethell

162. Planetary Interiors. W

The chemical and thermal structure and evolution of silicate planet interiors. Topics include equation of state of mantle and core materials, thermal history of the mantle and core, dynamics of mantle convection, geophysical determination of interior structure. Students cannot receive credit for this course and course 262. **Prerequisite(s):** course 160; and course 111 or Mathematics 22 or 23A; and Physics 5C or 6C. Offered in alternate academic years. I. Garrick-Bethell

163. Planetary Surfaces. *

Comparative study of surfaces and atmospheres of planetary bodies in solar system, focusing on comparative planetology and geophysical processes at work, including differentiation, impact cratering, tectonics, volcanism, and geomorphic evolution. Explores terrestrial planets, giant planets and their moons. Students cannot receive credit for this

course and course 263. Prerequisite(s): course 160. Enrollment limited to 20. Offered in alternate academic years. The Staff

164. Planetary Atmospheres. *

A quantitative study of the origin, chemistry, dynamics, and observations of the atmospheres of terrestrial and gas-giant planets. Students cannot receive credit for this course and course 264. Prerequisite(s): course 160. Enrollment limited to 18. W. Nimmo

172. Geophysical Fluid Dynamics. *

Introduces fluid motion influenced by rotation. Topics include the Coriolis force, geostrophic flow, potential vorticity, the shallow water model, quasigeostrophic approximation, planetary waves, Ekman theory, thermal wind, models of the large-scale oceanic and atmospheric circulation, and equatorial dynamics. Taught in conjunction with course 272. Students cannot receive credit for this course and course 272. (Also offered as Ocean Sciences 172. Students cannot receive credit for both courses.) Prerequisite(s): Physics 107 or Applied Mathematics and Statistics 107; Mathematics 22 or 23B recommended. Offered in alternate academic years. The Staff

188A. Summer Field Internship. S

Three weeks of summer field study in geologically complex regions in the White-Inyo Mountains of eastern California. Activities include geologic field mapping on topographic and photographic base maps, stratigraphy, petrology, and structure analysis. A fee is required for participation. Contact sponsoring agency for details. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 109/L, 110A/L, and 110B/M. Enrollment restricted to Earth sciences majors. Concurrent enrollment in course 188B is required. (General Education Code(s): W satisfied by taking this course and courses 109 and 188B.) Interview only via application filed with department. (General Education Code(s): PR-E.) H. Schwartz

188B. Geographic Information Systems with Applications to the Earth Sciences. S

Introduction to basic principles of geographic information systems (GIS). Visualization of earthscapes with applications to problem-solving in the Earth sciences. Laboratory exercises in loading, manipulation, and interpretation of data sets. Field investigations of phenomena visualized in laboratory, including geological description, interpretation, and written report preparation. Lecture and laboratory portions of course occur during spring quarter. Field investigations and report-writing occur in the summer following spring quarter. A fee is required for participation. Contact sponsoring agency for details. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 109/L, 110A/L, and 110B/M. Enrollment restricted to Earth sciences majors. Concurrent enrollment in course 188A is required. (General Education Code(s): W satisfied by taking this course and courses 188A and 109.) Interview only via application filed with department. Enrollment limited to 25. N. Finnegan

190. Earth Sciences Mentorship (1 credit). F

Faculty research activity, analytic facilities, and career counseling in three separate Earth sciences laboratories are offered with varied formats including field trips, discussions, and equipment demonstrations. Three different faculty participate in each offering. Enrollment restricted to Earth sciences, Earth sciences/anthropology, and environmental studies/Earth sciences majors. Enrollment limited to 24. May be repeated for credit. The Staff

191. Climate Change Science and Policy. S

Explores the scientific basis of current and pending climate change, and the state of climate policy issues in California, the nation, and the world. Work includes foundational lectures on both public policy and climate science; additional guest lectures from policy makers, politicians, and scientists. Students are introduced to and become familiar with addressing climate-change issues from both policy and scientific perspectives; research papers and public presentations are required activities. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior majors in Earth sciences and the combined major with anthropology. L. Sloan

193. Planetary Capstone. *

Examines a crosscutting topic in planetary sciences (e.g., volcanism) to satisfy the senior capstone requirement. Students are assessed on the basis of an oral presentation and a written report in which a synthetic review is present. Prerequisite(s): course 160, and

course 111 or Mathematics 22. Enrollment restricted to seniors and graduate students. W. Nimmo

194F. Education Capstone (2 credits). F,W,S

Students write a paper on a lesson plan developed after their CalTeach internship courses. This independent study is supervised by Earth and planetary sciences faculty or ocean sciences faculty, as well as a member of the CalTeach staff or Education Department. Prerequisite(s): Education 185C and 185L. Enrollment restricted to Earth and planetary sciences majors with a concentration in science education. The Staff

195. Senior Thesis. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to seniors. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. (General Education Code(s): W.) The Staff

196B. Teaching Earth Sciences in the University. F,W,S

Students facilitate laboratory and field exercises in conjunction with faculty and teaching assistants in various Earth sciences courses. May not count toward upper-division major requirements. Approval of sponsoring agency; interview and selection by primary instructor of specific courses required. Participation in course 196A is expected. Enrollment restricted to Earth sciences, Earth sciences/anthropology, and environmental studies/Earth sciences majors. The Staff

196C. Teaching Earth Sciences in the University (2 credits). F,W,S

Students facilitate laboratory and field exercises in conjunction with faculty and teaching assistants in various Earth sciences courses. May not count toward upper-division major requirements. Approval of sponsoring agency; interview and selection by primary instructor of specific courses required. Participation in course 196A is expected. Enrollment restricted to Earth sciences, Earth sciences/anthropology, and environmental studies/Earth sciences majors. May be repeated for credit. The Staff

198. Earth Sciences Internship. F,W,S

A supervised learning experience involving practical application of Earth sciences through working with approved companies, governmental agencies, or research organizations. Students consult weekly with supervising faculty and prepare a final report of their work. Consult sponsoring agency for enrollment criteria. After instruction on resume preparation and interview skills, students must interview and be selected for internship by approved sponsoring organizations. Enrollment restricted to Earth sciences, Earth sciences/anthropology, and environmental studies/Earth sciences majors. May be repeated for credit. E. Silver

198F. Earth Sciences Internship (2 credits). F,W,S

A supervised learning experience involving practical application of Earth sciences through working with approved companies, governmental agencies, or research organizations. Students consult weekly with supervising faculty and prepare a final report of their work. May not be counted toward upper-division major requirements. Consult sponsoring agency for enrollment criteria. After instruction on resume preparation and interview skills, student must interview and be selected for internship by approved sponsoring organizations. Enrollment restricted to Earth sciences, Earth sciences/anthropology, and environmental studies/Earth sciences majors. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Introduction to research in laboratory, field, or theoretical subjects. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Introduction to research in laboratory, field, or theoretical subjects. May not be counted toward upper-division major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

203. Introductory Teaching Seminar (1 credit). F

Intended for new Earth sciences graduate students. Focus on preparation, assessment, and feedback. Classroom techniques, organizational and time management strategies, practice

teaching sessions specific to laboratory and/or science instruction. Required follow-up meetings to discuss practical teaching experience. Enrollment restricted to graduate students. The Staff

204. Earth and Planetary Sciences Foundations (4 credits). F

Provides a comprehensive overview of key concepts, dominant paradigms, and research frontiers in Earth and planetary sciences in plenary talks by multiple faculty. Provides a required foundation course for all incoming students pursuing graduate degrees in Earth and planetary sciences. Enrollment restricted to Earth sciences graduate students.

Enrollment limited to 20. The Staff

205. Introductory Graduate Seminar (2 credits). F

Lecture and– seminar-style class intended to welcome new graduate students to the department and to introduce students to the research and interests of departmental faculty and researchers. Includes exercises to develop skills in reading scientific abstracts and papers and in writing abstracts and proposals. Two weekend field trips. Students are billed a materials fee. Enrollment restricted to Earth sciences graduate students. S. Schwartz

206. Great Papers in the Earth Sciences. W

Exposure to the most important ideas in the Earth sciences through exploration of the primary literature. Seminal papers in different subdisciplines of the Earth sciences are read and analyzed to provide breadth and improve students' ability to think critically. Enrollment restricted to Earth sciences graduate students. T. Blackburn, Q. Williams

207. Tectonics. *

An overview of tectonic theory and processes for application to the Earth sciences. The course explores the primary tools of tectonic interpretation including plate kinematics, rheology, plate boundary dynamics, and the behavior of active fault systems. Taught in conjunction with course 152. Students cannot receive credit for this course and course 152. Prerequisite(s): graduate standing or permission of instructor. E. Silver

208. Methods in Paleoclimatology. *

Addresses methods used to reconstruct aspects of paleoclimates and paleoenvironments from the geologic record, focusing primarily on terrestrial records. Topics to be covered include dendrochronology and dendroclimatology, paleopalynology, paleobotany, ice cores, and paleosol studies. Lectures, discussions, and laboratory work. Enrollment restricted to graduate students. Offered in alternate academic years. L. Sloan

210. Overview of Stellar and Planetary Formation and Evolution. *

Overview of current understanding of star and planet formation and evolution. Examines our solar system in the context of the galactic planetary census. Provides a uniform introduction to astronomy and Earth science planetary students. Enrollment restricted to graduate students. G. Laughlin

213. Biogeochemical Cycles. *

Overview of biogeochemical cycles, present and past, and geochemical models. Topics include: marine, terrestrial, and global views of the carbon, nitrogen, phosphorus, silicon, sulfur, and oxygen cycles, and the evolution of these cycles and Earth's redox balance through geologic time. (Also offered as Ocean Sciences 213. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Upper-division undergraduates may enroll with instructor approval. College-level chemistry and an upper-division course in at least one relevant discipline are recommended. M. Delaney

220. Ground Water Modeling. *

Introduction to building and using models to solve hydrogeologic problems. Modeling methods include mainly analytical and finite-difference. Emphasis on using models rather than the details of their functioning, although some coding is required. Comfort with mathematical methods and computers expected. Course designed for graduate students, but available to qualified Earth science majors. Prerequisite(s): graduate standing or permission of instructor required. One year of calculus and courses in differential equations and basic hydrologic principles are recommended as preparation. Offered in alternate academic years. A. Fisher

229. Isotopic Methods in Environmental Science. *

Explores how natural variations in stable isotope ratios answer questions in ecology,

paleobiology, and other environmental sciences. Format includes lectures by the instructor and student presentations on applications following literature-based research on each topic. Enrollment restricted to graduate students. Enrollment limited to 25. P. Koch

240. Communicating Science (3 credits). F

Introduces inquiry-based instructional strategies for communicating a passion for science. These strategies, combined with content knowledge and enthusiasm for sharing it, equips college students to introduce science to K-8 students and teachers in local schools. Enrollment restricted to graduate students. Enrollment limited to 20. A. Paytan

254. The Climate System. S

Focuses on atmospheric and oceanic processes that are important within the Earth's climate system, especially those that operate on annual to centennial time scales. Format includes lectures by the instructors, paper readings, and discussion. Enrollment restricted to graduate students. Offered in alternate academic years. P. Chuang

258. Deep Time Paleoclimates. *

Weekly lectures/readings/presentations focused on the key events in the long-term evolution of Earth's climate (i.e., before the Pliocene), including early Archean, faint, young-sun period; Proterozoic snowballs; Paleozoic glaciations and greenhouse events; the mid-Cretaceous oceanic anoxic events (OAEs); and Paleogene thermal maxima and glacial intervals. Considerable emphasis on evaluating the proxies of climate and mechanisms of climate change (e.g., greenhouse gasses, paleogeography). Enrollment restricted to graduate students. Enrollment limited to 15. Offered in alternate academic years. J. Zachos

260. Introductory Data Analysis in the Ocean and Earth Sciences. W

Introduces data analysis methods regularly encountered within the ocean and earth sciences. Topics include: error propagation; least squares analysis; data interpolation methods; empirical orthogonal functions; and Monte Carlo methods applied to problems drawn from oceanographic and earth sciences datasets. Introduces and uses a high-level computing and visualization package, MATLAB. Student project consists of analysis of the student's own dataset. (Also offered as Ocean Sciences 260. Students cannot receive credit for both courses.) Prerequisite(s): previous course in ocean or earth sciences is recommended. Enrollment restricted to graduate students; undergraduates with permission of instructor. C. Edwards

262. Planetary Interiors. W

The chemical and thermal structure and evolution of silicate planet interiors. Topics include equation of state of mantle and core materials, thermal history of the mantle and core, dynamics of mantle convection, geophysical determination of interior structure. Students cannot receive credit for this course and course 162. Enrollment restricted to graduate students. Enrollment limited to 20. Offered in alternate academic years. I. Garrick-Bethell

263. Planetary Surfaces. *

Comparative study of surfaces of planetary bodies in our solar system, focusing on comparative planetology and geophysical processes at work, including differentiation; on-impact cratering; tectonics; volcanism and geomorphic evolution; and exobiology. Explores terrestrial planets, giant planets and their moons, and trans-Neptunian objects, focusing on modern exploration. Students cannot receive credit for this course and course 163. Enrollment restricted to graduate students. Offered in alternate academic years. W. Nimmo

264. Planetary Atmospheres. *

Quantitative study of the origin, chemistry, dynamics, and observations of the atmospheres of terrestrial and gas giant planets. Students cannot receive credit for this course and course 164. Enrollment restricted to graduate students. W. Nimmo

265. Order of Magnitude Estimation. *

Practice in making rough estimates and leading-order approximations in physical and chemical processes. Enrollment restricted to graduate students. Offered in alternate academic years. W. Nimmo, P. Chuang

266. Geologic Signal Processing and Inverse Theory. *

Theoretical and practical aspects of digital signal analysis including data sampling, spectral estimation, digital filtering, statistical estimation, correlation tools, and principle-component analysis. Emphasis on practical examples of geophysical time series.

Multivariable calculus and linear algebra are required and used extensively in the course.

(Formerly Geological Signal Processing.) Enrollment restricted to graduate students.

Enrollment limited to 15. May be repeated for credit. E. Brodsky

270. Global Seismology. *

Introduction to quantitative earthquake and global Earth structure seismology. Topics include basic elasticity, wave characteristics, seismic ray theory, wave reflection, surface waves, normal modes, seismic instrumentation, application of seismic waves to reveal Earth structure and resulting models, representation of earthquake sources such as explosions and faulting, earthquake rupture scaling, modern methods of modeling seismic recordings to study source complexity, and an introduction to seismotectonics. Laboratory: 3 hours. Enrollment restricted to graduate students. Offered in alternate academic years. T. Lay

271. Current Research Topics in Deep Earth Processes. **

Students and instructor lead discussions of recent and significant publications in geophysics and chemistry of deep Earth. Articles structured around current theme of interest are selected by participants and approved by instructor. Emphasis on defining multidisciplinary significance of each article and its relationship to fundamental processes in deep Earth, including core and mantle. Designed for graduate students but available to qualified Earth sciences majors. May be repeated for credit. T. Lay

272. Geophysical Fluid Dynamics. *

Introduces fluid motion influenced by rotation. Topics include the Coriolis force, geostrophic flow, potential vorticity, the shallow water model, quasigeostrophic approximation, planetary waves, Ekman theory, thermal wind, models of the large-scale oceanic and atmospheric circulation, and equatorial dynamics. Students cannot receive credit for this course and course 172. (Also offered as Ocean Sciences 272. Students cannot receive credit for both courses.) Physics 227 is recommended as preparation. Enrollment restricted to graduate students. Offered in alternate academic years. C. Edwards

275. Magnetohydrodynamics. *

Study of fluid dynamics and magnetic fields with a focus on convection and magnetic field generation in planets and stars. Students develop a computer program for modeling magneto-convection. Computer programming experience required. Enrollment restricted to graduate students. Offered in alternate academic years. The Staff

278A. Advanced Seismology. *

Elastic wave propagation. Advanced topics in ray theory, WKBJ solutions in seismology, singularities and nonlinearities, surface wave theory, propagating matrices, normal modes, and inversion theory. Selected topics in time series analysis and seismic signal processing, seismic wave dispersion. Course designed for graduate students but available to qualified Earth sciences majors. Physics 110B and 114B are recommended as preparation. Enrollment restricted to graduate students. May be repeated for credit. T. Lay

280D. Short Course in Atmospheric/Climate Science (3 credits). **

Addresses specialized topics in atmospheric and/or climate science that are too narrow for a full (5-credit) format. Examples include: cloud physics; atmospheric boundary layer; aerosol physics and chemistry; atmospheric radiation; atmospheric thermodynamics. Enrollment restricted to graduate students. May be repeated for credit. P. Chuang

290. Proseminar.

Special topics offered from time to time by visiting professors or staff members. May be repeated for credit. The Staff

290B. Topics in Glaciology. F

Advanced review of the physics and chemistry of ice and snow. Mass and heat balance of ice masses. Motion of glaciers and ice sheets. Subglacial and englacial hydrology. Thermodynamics of ice masses and the linkage to climate. Enrollment restricted to graduate students. May be repeated for credit. S. Tulaczyk

290C. Topics in Geophysics. F

Different problems and approaches will be stressed from year to year such as geotectonics, paleomagnetism, or properties and processes in the mantle and core. Enrollment restricted to graduate students; qualified Earth sciences majors by permission of instructor. I. Garrick-Bethell

290D. Petrology and Plate Tectonics. *

Selected topics illustrating relationships between igneous and metamorphic rocks and plate tectonics are explored in detail. Designed for graduate students but available to qualified Earth sciences majors. May be repeated for credit. The Staff

290E. Topics in Planetary Science. *

We examine one well-defined topic in planetary science, beginning with a summary of current knowledge and concluding with the latest research literature. Topics will vary from year to year and may include planetary collisions, terrestrial planets, origin of planetary systems, small bodies, the New Mars, and satellites of Jupiter. Achievement will be evaluated based on class participation, exams, and a research project. Open to undergraduate majors with permission of instructor. Enrollment restricted to graduate students. May be repeated for credit. The Staff

290F. Topics in Coastal Processes (2 credits). F,W,S

Instructor and students lead discussions and make presentations on current research, problems, and publications in coastal processes. These topics include littoral drift, sediment transport and storage on the inner shelf, shoreline erosion/change and its documentation, and related issues. Enrollment restricted to graduate students. May be repeated for credit. G. Griggs

290G. Topics in Global Tectonics. *

Explores different problems of special interest in global tectonics with the approach of integrating marine and terrestrial geologic and geophysical information. Course designed for graduate students but available to qualified Earth sciences majors. May be repeated for credit. E. Silver

290H. Topics in Hydrogeology. *

Selected topics in groundwater, hydrothermal systems, and related subjects. Discussion of theoretical models, field and laboratory approaches, and recent research. Topics vary from year to year. Course designed for graduate students but available to qualified Earth sciences majors. Offered in alternate academic years. May be repeated for credit. A. Fisher

290I. Topics in Geomorphology. S

Discussion of journal articles focused on a theme in contemporary geomorphology. Topics include: coupling of climate; tectonics and landscape evolution; mechanics of bedrock river channels; fundamentals of fluvial gravel transport; and inference of tectonic rates and processes from analysis of topography. Enrollment restricted to graduate students; qualified undergraduates may enroll by permission of instructor. May be repeated for credit. N. Finnegan

290J. Topics in Earthquake Physics. *

Why do earthquakes happen? Topics include friction, fracture, earthquake triggering, stress in the crust, observed source scalings, and seismicity statistics. Emphasis on observations and current research topics. Enrollment restricted to graduate students and advanced undergraduates. E. Brodsky

290K. Paleontology Seminar (3 credits). *

Seminar discussion based on current readings in the literature around some topic in the history and evolution of life. Course designed for graduate students but available to qualified upper-division science students. Offered in alternate academic years. May be repeated for credit. M. Clapham, P. Koch

290L. Topics in Climate Change. *

Explores current issues and recent developments in the field of past, present, and future climate change. Topic is different each year, but focuses on the interaction between different components of Earth's environment and the effect of that interaction on climate change. Designed for graduate students but open to qualified undergraduates. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. L. Sloan

290M. Topics in Atmospheric Science. *

Selected topics encompassing atmospheric physics and chemistry. Topics vary from year to year. Sample topics include: atmospheric physics, atmospheric chemistry, boundary layer meteorology, aerosol science, and atmospheric thermodynamics. (Formerly Topics in

Atmospheric Chemistry.) Designed for graduate students, but qualified undergraduates may enroll with permission of instructor. May be repeated for credit. P. Chuang

290N. Topics in Mineral Physics. *

Selected topics encompassing the physics and chemistry of Earth's interior, planetary physics, high-pressure experimental geophysics and material properties at high pressure and temperature. Topics vary from year to year. Enrollment restricted to graduate students and qualified Earth sciences majors by permission of instructor.. May be repeated for credit. E. Knittle

290P. Interdisciplinary Topics in the Earth Sciences. *

An understanding of the chemical and physical properties and processes in the earth is sought by integrating information from several subdisciplines in the Earth sciences. Topics vary from year to year, focusing on areas of active research. Course designed for graduate student but available to qualified Earth sciences majors. Prerequisite(s): graduate standing or permission of instructor. Course designed for graduate student but available to qualified Earth sciences majors. May be repeated for credit. S. Schwartz

290Q. Topics in Outer Solar System. *

Exploration of the planets and satellites beyond the asteroid belt, with an emphasis on the underlying physical processes at work. Course includes lectures, computer practicals, and student presentations. Enrollment restricted to graduate students. May be repeated for credit. W. Nimmo

290R. Topics in the Chemistry and Physics of the Earth. *

Explores problems and current research developments in the application of physics and chemistry to planetary interiors. Topics differ from year to year and include, but are not limited to, research related to the accretion, differentiation, evolution, and structure of the terrestrial planets. Course designed for graduate students but available to qualified Earth sciences majors. May be repeated for credit. Q. Williams

290T. Current Research Topics in Paleoceanography and Paleoclimatology. *

Students and instructor lead discussions of recent and significant problems in paleoceanography and paleoclimatology. Articles structured around current themes of interest are selected by the instructor. Emphasis on major climatic transitions or events which noticeably influenced evolution of biota. Course designed for graduate students but available to qualified Earth sciences majors. J. Zachos

290U. Topics in Thermochronology. *

Surveys the use of thermochronometry to quantify the rates of tectonic processes. Topics include heat conduction and diffusion; radioactive decay; analytical methods; and modeling of thermochronologic data. Seminars review seminal papers from the literature. Enrollment restricted to graduate students. Enrollment limited to 20. J. Hourigan

290X. Topics in Modeling Planetary Interiors. *

Introduces computer modeling of thermal convection in planetary interiors. Students learn to write and run a basic computer code using spectral and finite-difference methods, then are shown how to improve the numerical method and physics. Basic computer programming experience is required (for example, in Fortran, C, IDL, or MATLAB). Course designed for and enrollment restricted to graduate students, but available to qualified science majors. May be repeated for credit. G. Glatzmaier

292. Seminar (no credit). F,W,S

Weekly seminar attended by faculty, graduate students, and upper-division undergraduate students. The Staff

293. Graduate Research Seminar (1 credit). S

Weekly seminar series covering a broad spectrum of topics in the Earth sciences. Graduate students give 15- to 20-minute oral presentations on current or anticipated research. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Permission of instructor required. The Staff

297. Independent Study. F,W,S

Permission of instructor required. The Staff

298. Earth Sciences Internship. F,W,S

A supervised learning experience involving practical, graduate-level application of Earth sciences through working with approved companies, governmental agencies, or research organizations. Students consult weekly with supervising faculty and prepare a final report of their work. Consult sponsoring agency for enrollment criteria. After instruction on resume preparation and interview skills, students must interview and be selected for internship by approved sponsoring organizations. The Staff

299. Thesis Research. F,W,S

Permission of instructor required. The Staff

* Not offered in 2014-15

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Ecology and Evolutionary Biology Department

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Physical and Biological Sciences Undergraduate Affairs Office

142 Jack Baskin Engineering Bldg.

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<http://undergrad.pbsci.ucsc.edu>[EEB Faculty](#) | [EEB Program Statement](#)

Lower-Division Courses

20B. Development and Physiology. F,W,S

Topics in morphology, physiology, development, genetics, and endocrinology selected to exemplify current issues and perspectives in organismic biology. Prerequisite(s): BIOL 20A. (F) M. Peterson, (WS) R. Dunkin

20C. Ecology and Evolution. F,W,S

Introduction to ecology and evolution covering principles of evolution at the molecular, organismal, and population levels. Evolutionary topics include genetic and phenotypic variation, natural selection, adaptation, speciation, and macroevolution. Also covers behavioral, population, and community ecology including applied ecological issues. B. Marinovic

75. Scientific Diving Certification (2 credits). F,S

Prerequisite for course 161/L, Kelp Forest Ecology, and all research diving performed under the auspices of UCSC or other academic institutions. Course work includes lectures and scuba diving. Topics include subtidal sampling techniques, navigation, low visibility diving, search and recovery, rescues, small boat use, oxygen administration for divers, technical blue water deep diving, physics, and physiology. Apply online at

<http://www2.ucsc.edu/sci-diving>. Students are billed a course materials fee that covers costs for equipment use, materials, and transportation. Prerequisite(s): skill level equal to Advanced Scuba Diver Certification, pass scuba physical, provide own scuba gear, be certified in CPR and First Aid; and interview: pass swim test and scuba skills test.

Enrollment limited to 16. S. Clabuesch

80S. Lies, Damn Lies, and Statistics. *

Probability and statistics underlie much of our everyday experience and, as such, there is a fundamental need for an understanding of the use, and misuse, of statistics. This course is taught through case studies based in biology, politics, economics, crime, education, disease, conservation, and other fields of interest. For example, does a change in crime rate really affect your probability of being a victim of a crime? The goal is to provide all students with sufficient understanding probability and statistics to determine if everyday and often sensationalistic reporting of "statistical" results is meaningful. (General Education Code(s): SR.) P. Raimondi

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology >
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

85. Natural History of the UCSC Natural Reserves. *
Lectures and field trips familiarize students with the flora and fauna of the UCSC Natural Reserves. Field trips focus on surveying and identifying vertebrates and plants at each UCSC Natural Reserve (Fort Ord, Campus Reserve, Big Creek, Younger Lagoon, and Ano Nuevo). (General Education Code(s): PE-E.) The Staff

95. Seymour Center Docent Training (2 credits). W
Taught as a series of seminars, course provides a survey of marine sciences and the role of scientific research in understanding and conserving the world's oceans. Topics include: marine biology, ecology, conservation, coastal geology, and climate change. This series is intended to prepare students to interpret research and inform the public by leading tours at the Seymour Marine Discovery Center at the Long Marine Lab. Enrollment by application and interview. (General Education Code(s): PR-S.) M. Carr

99. Tutorial. F,W,S
Individual, directed study for undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

107. Ecology. W,S

Focuses on physiological, behavioral, and population ecology, and on linking ecological processes to evolution. It includes basic principles, experimental approaches, concepts of modeling, and applications to ecological problems. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, and BIOE 20C. (W) B. Lyon, (S) J. Estes

108. Marine Ecology. W

Paradigms and designs in marine ecology. A review of the paradigms that have shaped our understanding of marine ecology; analysis and discussion of experiments with these paradigms. Students cannot receive credit for this course and course 208. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, and BIOE 20C; BIOE 107 or 140 recommended. Enrollment restricted to juniors and seniors. M. Carr, P. Raimondi

109. Evolution. F,W

An examination of the history and mechanisms of evolutionary change. Topics include molecular evolution, natural and sexual selection, adaptation, speciation, biogeography, and macroevolution. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, BIOE 20C, and BIOL 105. (F) K. Kay, (W) G. Pogson

112. Ornithology. *

Introduction to the evolution, ecology, behavior, and natural history of birds, using exemplary case histories to illustrate key concepts in evolution, ecology, and behavior. Prerequisite(s): BIOE 107, BIOE 109, or BIOE 140. Concurrent enrollment in BIOE 112L is required. B. Lyon

112L. Ornithology Field Studies (2 credits). *

Field trips introduce students to field identification skills and field investigation of census, foraging behavior, migration, social behavior, and communication. Examination of specimens in the laboratory will be used to highlight the diversity and taxonomy of birds. Students are billed a materials fee. Some field trips may require students to provide their own transportation. Prerequisite(s): BIOE 107, BIOE 109, or BIOE 140. Concurrent enrollment in BIOE 112 is required. Offered in alternate academic years. B. Lyon

114. Herpetology. *

Lectures introduce students to evolution, development, physiology, behavior, ecology, and life history of reptiles and amphibians. The materials integrate with conceptual and theoretical issues of ecology, evolution, physiology, and behavior. Prerequisite(s): BIOE 107, BIOE 109, BIOE 110, or BIOE 140. Concurrent enrollment in BIOE 114L required. Offered in alternate academic years. B. Sinervo

114L. Field Methods in Herpetological Research (2 credits). *

Field trips introduce students to natural history, censusing techniques, physiological ecology, and behavioral analysis of reptiles and amphibians. Laboratories introduce

<p>Management</p> <p>UCDC Program</p> <p>Writing Program</p> <p>Theater Arts</p> <p>Yiddish</p> <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>students to techniques for analyzing behavior and physiology. Field studies culminate with a group project in a natural setting. Some field trips may be held on weekends due to weather considerations. Some field trips may require students to provide their own transportation, some transportation will be provided by UCSC. Students are billed a materials fee. Prerequisite(s): BIOE 107, 109, 110, or 140. Concurrent enrollment in BIOE 114 is required. Offered in alternate academic years. B. Sinervo</p> <p>117. Systematic Botany of Flowering Plants. W An examination of the taxonomy and evolution of flowering plants. Special topics include phylogenetics and cladistics, plant species concepts, and modern methods of systematic research. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Must be taken concurrently with BIOE 117L. K. Kay</p> <p>117L. Systematic Botany of Flowering Plants Laboratory (2 credits). W Weekly laboratory concerned primarily with California flora and plant families. Several field trips. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Must be taken concurrently with BIOE 117. K. Kay</p> <p>118. Plants and Society: the Biology of Food, Shelter, and Medicine. S Introduces plant biology as it affects human society. Topics include the origins of agriculture, the morphology and chemistry of food plants, the material uses of plant products, the biology of medicinal plants, and plant diversity and bioprospecting. Prerequisite(s): BIOL 20A and BIOE 20B; and BIOE 20C or ENVS 23 and ENVS 24 J. Pittermann, I. Parker</p> <p>120. Marine Botany. S An introduction to the biology of marine algae, fungi, and angiosperms with regard to form and function. Major boreal, temperate, and tropical marine plant communities. Lecture format. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Must be taken concurrently with BIOE 120L. The Staff</p> <p>120L. Marine Botany Laboratory (2 credits). S One laboratory weekly and several field trips. Focuses on marine algae, fungi, and angiosperms. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Must be taken concurrently with BIOE 120. The Staff</p> <p>122. Invertebrate Zoology. W An examination of invertebrates and their habitats. Lecture format. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. BIOE 122L must be taken concurrently. B. Marinovic</p> <p>122L. Invertebrate Zoology Laboratory (2 credits). W An examination of invertebrates and their habitats. Weekly laboratories or field trips. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. BIOE 122 must be taken concurrently. B. Marinovic</p> <p>124. Mammalogy. F Introduces the biology of mammals, including their classification, evolution, behavior, reproductive strategies, and general ecology. Examines the diagnostic traits of mammals; provides a survey of the living orders along with their diagnostic features, physiological and behavioral specializations, and adaptations. Prerequisite(s): BIOL 20A; and BIOE 20B and 20C. Concurrent enrollment in course 124L is required. The Staff</p> <p>124L. Mammalogy Laboratory (2 credits). F Focuses on the identification of mammals and their specific traits. Exercises provide hands-on experience at identifying mammal orders, families, and species. Field trip provides students with field techniques in mammalogy. Prerequisite(s): BIOL 20A; and BIOE 20B and 20C. Concurrent enrollment in course 124 is required. The Staff</p> <p>127. Ichthyology. * An introduction to the biology of jawless, cartilaginous, and bony fishes—their classification, evolution, form, physiology, and ecology. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. BIOE 127L must be taken concurrently. Offered in alternate academic years. G. Bernardi</p> <p>127L. Ichthyology Laboratory (2 credits). * One laboratory session a week and several field trips to study the biology of fish. Students</p>
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are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. BIOE 127 must be taken concurrently. Offered in alternate academic years. G. Bernardi

128. Ecology and Physiology of Large Marine Vertebrates. S

Lectures and laboratory computer exercises familiarize students with research methods, study design, statistics, and research tools for large marine vertebrates (seals, birds, fish, and sharks). Research topics include: animal tracking; diving physiology; behavior; foraging ecology; and energetics. Prerequisite(s): BIOL 20A; and BIOE 20B and 20C. P. Robinson

128L. Large Marine Vertebrates Field Course. S

Lectures combined on fieldwork with large marine vertebrates in the laboratory and lectures with large marine vertebrates in the field (Monterey Bay, Ano Nuevo). Fieldwork familiarizes students with research methods, study design, and statistical approaches for research on large marine vertebrates (seals, birds, fish, and sharks). Research includes: animal tracking; physiology; behavior; foraging ecology; and energetics. Students are billed a materials fee. Prerequisite(s): BIOL 20A; and BIOE 20B, 20C, and 128. Enrollment limited to 24. P. Robinson

129. Biology of Marine Mammals. S

A survey of cetaceans, pinnipeds, sirenians, and sea otters, including natural history, systematics, physiology, behavior, anatomy, and conservation. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C; BIOL 110 is recommended. D. Costa

129L. Biology of Marine Mammals Laboratory (2 credits). S

Covers the basics of marine mammal taxonomy, anatomy, and field methods with an emphasis on local field identification and understanding of local species. Will include field trips to Long Marine Lab, Ano Nuevo, and Monterey Bay. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Must be taken concurrently with BIOE 129. D. Costa

131. Animal Physiology. W

Principles and concepts underlying the function of tissues and organ systems in animals with emphasis on vertebrate systems. Students cannot receive credit for this course and BIOL 130. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. R. Mehta, T. Williams

131L. Animal Physiology Laboratory (2 credits). W

Experiments conducted with primary focus on quantitative physiological principles of organ systems and intact organisms. Students cannot receive credit for this course and course 130L. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Concurrent enrollment in BIOE 131 is required. R. Mehta, T. Williams

133. Exercise Physiology. S

An advanced-level course concerning physiological and biochemical processes associated with human performance. Emphasis is on the integration of organ systems for exercise. Topics include metabolism and fuel utilization, cardiovascular and respiratory dynamics during activity, and the effects of training. Requires a good understanding of basic physiological function and anatomy. Prerequisite(s): BIOL 20A, BIOE 20B and 20C. BIOE 131 recommended. Concurrent enrollment in BIOE 133L required. Offered in alternate academic years. T. Williams

133L. Exercise Physiology Laboratory (2 credits). S

An introduction to basic measurement techniques used in assessing the physiological response of humans to exercise. Sessions cover oxygen consumption, respiratory rate, and heart rate monitoring during aerobic and anaerobic activity. Students are billed a materials fee. Prerequisite(s): BIOL 20A, and BIOE 20B and 20C. BIOE 131 recommended. Concurrent enrollment in BIOE 133 is required. Offered in alternate academic years. T. Williams

134. Comparative Vertebrate Anatomy. F

Course focuses on vertebrate form and function: an integration of physiology and biomechanics. Topics include: the physiology and biomechanics underlying vertebrate locomotion; vertebrate feeding; and the morphological changes associated with different locomotion and feeding strategies through evolutionary time. Prerequisite(s): BIOL 20A, BIOE 20B and BIOE 20C; Physics 6A. Concurrent enrollment in BIOE 134L is required. R. Mehta

134L. Comparative Vertebrate Anatomy Laboratory (2 credits). F

Course focuses on the gross dissections all major clades of vertebrates: development, form, and diversity of organ systems and basic principles of evolution; vertebrate classification; and functional morphology, with emphasis on feeding and locomotion. Anatomical dissections integrated with the associated lecture material focusing on biomechanics, form, and function. Students are billed for a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B and BIOE 20C; Physics 6A. Concurrent enrollment in BIOE 134 is required. R. Mehta

135. Plant Physiology. W

Cellular and organismal functions important in the life of green plants. Prerequisite(s): BIOL 20A and BIOE 20B and 20C; concurrent enrollment in course 135L is required. J. Pitermann

135L. Plant Physiology Laboratory (2 credits). W

Weekly laboratory concerning the cellular and organismal functions of green plants. Students are billed a materials fee. Prerequisite(s): BIOL 20A and BIOE 20B and BIOE 20C; concurrent enrollment in course 135. J. Pitermann

137. Molecular Ecology. W

This combination lecture/laboratory course explores the use of molecular (DNA and/or protein) data in ecological and conservation research. Topics covered include data collection; marker choice; estimating genetic diversity and population structure; the inference of mating systems; and environmental genomics. Prerequisite(s): courses 20B and 20C and BIOL 20A and BIOL105. Concurrent enrollment in course 137L is required. Enrollment limited to 24. B. Shapiro

137L. Molecular Ecology Laboratory (2 credits). W

This combination lecture/laboratory course explores the use of molecular (DNA and/or protein) data in ecological and conservation research. Topics covered include data collection; marker choice; estimating genetic diversity and population structure; the inference of mating systems; and environmental genomics. Prerequisite(s): courses 20B and 20C and BIOL 20A and BIOL105. Concurrent enrollment in course 137 is required.

Enrollment limited to 24. B. Shapiro

140. Behavioral Ecology. F

An introduction to social and reproductive behavior. Emphasis on studies of vertebrates in their natural habitat. Ideas concerning the evolution of social behavior, mating systems, and individual reproductive strategies. Case histories of well-studied animals that illustrate key principles in courtship and mating, parental behavior, and food-getting behavior.

Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. B. Sinervo

141L. Behavioral Ecology Field Course. W

A field-based course introducing students to concepts and methods for studying behavioral ecology in nature. Students will conduct observations and field experiments on various local model organisms including elephant seals, hummingbirds, sparrows, lizards, ants, bees, frogs, and salamanders. Students are billed a materials fee. Prerequisite(s): BIOE 107 or BIOE 140 or BIOE 110; satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 25. Offered in alternate academic years. (General Education Code(s): W.) B. Sinervo, B. Lyon

145. Plant Ecology. F

An exploration of the ecology of plant form, function, distribution, abundance, and diversity. Topics include plant adaptations to environmental conditions, life history variation, competition, reproductive ecology, herbivory, and patterns of diversity. Lecture with discussions of original papers and independent field project. Students cannot receive credit for this course and course 245. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. BIOE 107 is recommended. I. Parker

145L. Field Methods in Plant Ecology. F

Hands-on exploration of the concepts and techniques of plant ecology. A combination of lab, greenhouse, and field-based exercises (irrespective of weather conditions). Statistical analysis and scientific writing. One required weekend field trip. Students cannot receive credit for this course and course 245L. Students are billed a materials fee. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, and BIOE 20C. Concurrent enrollment in BIOE 145 is required. BIOE 107 is recommended. (General Education Code(s): W.) I. Parker

147. Community Ecology. S

Develops the major themes of community biology: structure, trophic dynamics, succession, complex interactions among species, herbivory, evolution and coevolution. Uses case histories of well-studied marine and terrestrial systems. Students cannot receive credit for this course and course 247. Prerequisite(s): BIOE 107, 108, 145, 155 or 159A; or Environmental Studies 24 by permission of instructor. L. Fox

148. Quantitative Ecology. *

Quantitative treatment of the central concepts and applications of theoretical ecology. Emphasis on the mathematical modeling of single populations and species interactions, and the integration of models with data. Topics include stochastic and deterministic processes of extinction; discrete- and continuous-time models of growth and population viability analysis relevant to small and harvested populations; numeric and analytical investigations of dynamics and stability; introduction to model-fitting in information theoretic framework using R and/or MATLAB. Prerequisite(s): BIOE 107. M. Tinker

149. Disease Ecology. S

Focuses on the ecological and evolutionary processes that drive the transmission of pathogens between hosts; the impact of disease on host populations; and what causes the emergence of an infectious disease. Includes theoretical framework, description of field techniques, and discussion of wildlife and human diseases including malaria, West Nile virus, Lyme disease, HIV, avian influenza (bird flu), Chikungunya, tuberculosis, chytridiomycosis, and Ebola. Prerequisite(s): BIOL 20A, and BIOE 20B and 20C and 107. A. Kilpatrick

150. Ecological Field Methods. S

Lectures and laboratory computer exercises designed to familiarize students with research methods, study design, statistical approaches, and analysis tools for ecological research. Students cannot receive credit for this course and Environmental Studies 104A. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C; concurrent enrollment in BIOE 150L is required. BIOE 107, 108, 140, or 147 recommended. Enrollment limited to 25. D. Croll

150L Ecological Field Methods Laboratory. S

Field-oriented course in the study of animal ecology and behavior. Combines overview of methodologies and approaches to field research with practical field studies. Students are billed a materials fee. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C; concurrent enrollment in BIOE 150 is required. BIOE 107, 108, 140, or 147 recommended. Enrollment limited to 25. (General Education Code(s): W.) D. Croll

151A. Ecology and Conservation in Practice Supercourse: Ecological Field Methods. *

An intensive, on-site learning experience in terrestrial field ecology and conservation, using the University of California Natural Reserves. Students study advance concepts in ecology, conservation, and field methods for four weeks, then experience total immersion in field research at the UC Natural Reserves. Lectures, field experiments, and computer exercises familiarize students with research methods, study design, statistical approaches, and analytical tools for ecological research. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151B-C-D or ENVS 109B-C-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Environmental Studies 109A. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

151B. Ecology and Conservation in Practice Supercourse: Ecological Field Methods**Laboratory. ***

Field-oriented course in ecological research. Combines overview of methodologies and approaches to field research with practical field studies. Students complete field projects in ecology and also learn the natural history of the flora and fauna of California. Students are billed a materials fee. Enrollment by application. Prerequisite(s): Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-C-D or ENVS 109A-C-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as

Environmental Studies 109B. Students cannot receive credit for both courses.) (General Education Code(s): W.) D. Croll, E. Zavaleta

151C. Ecology and Conservation in Practice Supercourse: Functions and Processes of Terrestrial Ecosystems. *

From lectures and discussion of terrestrial community and ecosystem ecology, students work individually or in small groups to present an idea for a project, review relevant literature, develop a research question/hypothesis, design and perform an experiment, collect and analyze data, and write a report. The instructor evaluates the feasibility of each student's project before it begins. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-B-D or ENVS 109A-B-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Environmental Studies 109C. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

151D. Ecology and Conservation in Practice Supercourse: Conservation in Practice. *

Focuses on current issues in environmental and conservation biology and the emerging field methods used to address them. From field-oriented lectures about current issues in environmental and conservation biology, students pursue research project as individuals and small groups to develop hands-on experience with field skills in conservation research and resource management. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-B-C or ENVS 109A-B-C is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Environmental Studies 109D. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

155. Freshwater Ecology. F

Provides an overview of the physical, chemical, and biological processes that characterize inland waters such as lakes, streams, rivers, and wetlands. Also addresses relationships between humans and freshwater, and discusses these challenges in conservation.

Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. E. Palkovacs

155L. Freshwater Ecology Laboratory. S

Field and laboratory study of the ecology of freshwater systems including lakes, streams, and estuaries. Students gain experience sampling and identifying freshwater organisms, designing and analyzing ecological experiments, and writing scientific reports. Enrollment limited to 24. E. Palkovacs

158L. Marine Ecology Laboratory. *

Supervised individual research projects in experimental marine biology. Students carry out a complete research project, including (1) the formation of hypotheses; (2) the design and implementation of experiments; (3) collection, analysis, and interpretation of data; and (4) write-up of an oral presentation. Students are billed a materials fee. Prerequisite(s): BIOE 108; satisfaction of the Entry Level Writing and Composition requirements. Offered in alternate academic years. (General Education Code(s): W.) M. Carr, P. Raimondi

159A. Marine Ecology Field Quarter: Marine Ecology with Laboratory. F

Total immersion in marine ecology for very motivated students. Students develop a research project during first five weeks on campus and then spend five weeks of immersion in directed research without distraction in isolated locations off campus (past locations include the Gulf of California in Mexico and Moorea in French Polynesia). Not available through University Extension. No other courses may be taken during this quarter. Students must sign a contract agreeing to standards of behavior outlined in the UCSC Rule Book and by the instructors. Students are billed a materials, transportation (not airfare), and room and board fee. Paradigms and designs in marine ecology. A review of the paradigms that have shaped our understanding of marine ecology and analysis and discussion of experiments with these paradigms. Students carry out a complete research project, including the formation of hypotheses; the design and implementation of experiments; the collection, analysis, and interpretation of data; and the write-up and oral presentation of results. Admission by interview during previous winter quarter. BIOE 159A, 159B, 159C,

and 159D are equivalent to BIOE 127, 127L, 108, and 158L for major requirements. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; BIOE 159A, 159B, 159C, and 159D must be taken concurrently. Enrollment limited to 26. Offered in alternate academic years. (General Education Code(s): W.) P. Raimondi, G. Bernardi

159B. Marine Ecology Field Quarter: Ichthyology with Laboratory. F

An introduction to the biology of jawless, cartilaginous, and bony fishes—their classification, evolution, form, physiology, and ecology. Admission by interview during previous winter quarter. BIOE 159A, 159B, 159C, and 159D are equivalent to BIOE 127, 127L, 108, and 158L for major requirements. BIOE 159A, 159B, 159C, and 159D must be taken concurrently. Enrollment limited to 26. Offered in alternate academic years. P. Raimondi, G. Bernardi

159C. Marine Ecology Field Quarter: Methods in Field Ecology. F

Students learn quantitative methods for field experiments and surveys. Emphasis will be on marine environments, but there will also be exposure to terrestrial systems. This is the lecture component to course 159D. No text is required for this course; instead, readings from the current literature will be assigned. Students are evaluated on written independent field project proposals and class participation. Admission by interview during previous winter quarter. BIOE 159A, 159B, 159C, and 159D are equivalent to BIOE 127, 127L, 108, and 158L for major requirements. BIOE 159A, 159B, 159C, and 159D must be taken concurrently. Enrollment limited to 26. Offered in alternate academic years. P. Raimondi, G. Bernardi

159D. Marine Ecology Field Quarter: Methods in Field Ecology Laboratory. F

This is laboratory portion of course 159C. Students carry out independent field projects under the supervision of course instructors. All work is done during the 5–6 week off-campus portion of course 159. Students are evaluated on field techniques, the final write-up of their independent field projects, and class participation. Admission by interview during previous winter quarter. BIOE 159A, 159B, 159C, and 159D are equivalent to BIOE 127, 127L, 108, and 158L for major requirements. BIOE 159A, 159B, 159C, and 159D must be taken concurrently. Enrollment limited to 26. Offered in alternate academic years. P. Raimondi, G. Bernardi

161. Kelp Forest Ecology. *

Study of organization of kelp forests as models for examining biological communities. The physical and biotic factors responsible for community organization of kelp forests are explored using original literature and data collected in BIOE 161L. Class meets one full morning each week. Prerequisite(s): by interview only; BIOL 20A, BIOE 20B, and BIOE 20C are required. Students must pass the University Research Diving Certification (contact the diving safety officer, Institute of Marine Sciences, for further information). Enrollment restricted to seniors. BIOE 161L must be taken concurrently; BIOE 107, 120/L, 122/L are recommended. Enrollment limited to 24. Offered in alternate academic years. M. Carr, P. Raimondi

161L. Kelp Forest Ecology Laboratory. *

Fieldwork using SCUBA to quantitatively and qualitatively examine the abundance and distribution of organisms in kelp forests, with additional laboratory work. Culminates with a directed individual research project. Class meets one full morning each week. Students are billed a materials fee. Admission by interview. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C; satisfaction of the Entry Level Writing and Composition requirements; BIOE 161 must be taken concurrently; BIOE 107, 120/L, 122/L are recommended. Students must pass the University Research Diving Certification (contact the Diving Safety Officer, Institute of Marine Sciences, for further information). Enrollment limited to 24. Offered in alternate academic years. (General Education Code(s): W.) M. Carr, P. Raimondi

163. Ecology of Reefs, Mangroves, and Seagrasses. W

Integrated treatment of coral reefs, sea grasses, and mangroves emphasizing interactions and processes through time. Major topics: biological and geological history, biogeography, evolution and ecology of dominant organisms, biodiversity, community and ecosystem ecology, geology, biogeochemistry, global change, human impacts. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Concurrent enrollment in BIOE 163L is required. D. Potts

163L. Ecology of Reefs, Mangroves, and Seagrasses Laboratory (2 credits). W

An interdisciplinary laboratory exploration of the anatomy, morphology, adaptations, diversity, evolution, and ecology of corals, mangroves, and seagrasses and of their physical, chemical, and geological environments. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C. Concurrent enrollment in BIOE 163 is required. D. Potts

165. Marine Conservation Biology. F

Initially undertakes an in-depth comparison of the biology and conservation of marine versus terrestrial ecosystems. With this foundation, course examines marine biodiversity loss resulting from overexploitation, habitat loss, species introduction, and pollution, with particular emphasis on the resulting trophic cascades, biodiversity losses, and climate change. Students cannot receive credit for this course and Environmental Studies 120. Prerequisite(s): BIOL 20A, BIOE 20B, and BIOE 20C; OCEA 101 recommended. D. Croll

172. Population Genetics. F

Basic population genetics and selected topics will be covered, including genetics of speciation, tempo and mode of evolution, genetics of social behavior, natural selection in human populations, and the impact of molecular studies on evolutionary theory. Students cannot receive credit for this course and BIOE 272. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C, and BIOL 105. Concurrent enrollment in BIOE 172L is required. Offered in alternate academic years. G. Pogson

172L. Population Genetics Laboratory (2 credits). F

A companion course to 172, Population Genetics, that applies the theory developed in that course to related disciplines including conservation biology, ecology, agriculture, and population biology. Original scientific literature relating to the theory developed in BIOE 172 is read, and applied problem sets are solved by the students. Students cannot receive credit for this course and BIOE 272L. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C, and BIOL 105. Concurrent enrollment in BIOE 172 is required. Offered in alternate academic years. G. Pogson

182F. Exploring Research in EEB (2 credits). *

Provides undergraduate students with exposure to research in the laboratory of an Ecology and Evolutionary Biology (EEB) faculty member, affiliate, or adjunct. Students are not expected to do independent research but rather to assist in laboratory or field research projects under the supervision of the faculty mentor or appointed researcher.

Prerequisite(s): Undergraduate research contract on file with the department. M. Carr

183L. Undergraduate Research in EEB (3 credits). *

Designed to ensure that students are intellectually engaged in the planning or implementation of a supervised or independent research project, achieve a fundamental understanding of implementing the scientific method, and develop their scientific writing and presentation skills. Prerequisite(s): concurrent enrollment in course 183W and an Undergraduate Research Contract on file with the department. (General Education Code(s): W satisfied by taking this course and course 183W.) The Staff

183W. Undergraduate Research in EEB--Writing (2 credits). F,W,S

Ensures that students are intellectually engaged in the planning or implementation of a supervised or independent research project, achieve a fundamental understanding of implementing the scientific method, and develop their scientific writing and presentation skills. (General Education Code(s): W satisfied by taking this course and course 183L.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and course 107, 108, or 109; and an undergraduate research contract on file with the department. Concurrent enrollment in course 183L required. D. Potts, B. Sinervo, M. Carr

188. Introduction to Science Writing. S

A rigorous examination and practice of the skills involved in writing articles about science, health, technology, and the environment for the general public. Covers the essential elements of news writing and explanatory journalism, including developing a story idea, interviewing scientists, fact checking, composition, and editing of multiple drafts about scientific research. (Also offered as Science Communication 160. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and C1, C2 requirements. Enrollment restricted to junior and senior biological sciences majors. Enrollment limited to 18. (General Education Code(s): W.) R. Irion

190. Senior Seminar (2 credits). S

Satisfies the senior exit requirement for all biological sciences majors. (Also offered as Biology: Molecular Cell & Dev 190. Students cannot receive credit for both courses.) J. Lee

193. Independent Research in EEB. F,W,S

Supervised undergraduate research on a project with an Ecology and Evolutionary Biology (EEB) faculty member, adjunct, or affiliate mentor. Prerequisites: course 183W and an undergraduate research contract on file with the department. M. Carr

193F. Independent Research in EEB (2 credits). *

Supervised undergraduate research on a project with an Ecology and Evolutionary Biology (EEB) faculty member, adjunct, or affiliate mentor. Prerequisites: course 183W and an undergraduate research contract on file with the department. M. Carr

195. Senior Thesis. F,W,S

An individually supervised course, with emphasis on independent research. Students required to submit a senior thesis. Enrollment restricted to majors in biology, ecology and evolution, marine biology, plant sciences, and the combined major with environmental studies. Students submit petition to sponsoring agency. The Staff

198. Independent Field Study. F,W,S

Provides for individual programs of study (a) by means other than the usual supervision in person, or (b) when the student is doing all or most of the course work off campus. With permission of the department, may be repeated for credit, or two or three courses taken concurrently. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for two units of independent field study (a) by means other than the usual supervision in person, or (b) when the student is doing all or most of the course work off campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Reading, discussion, written reports, and laboratory research on selected biological topics, using facilities normally available on campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Two-unit Tutorial. Reading, discussion, written reports, and laboratory research on selected biological topics, using facilities normally available on campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200A. Scientific Skills. F

Expose graduate students to teaching skills, understanding the scientific method, searching and organizing literature, grant proposal and scientific writing, data management and presentation, and scientific speaking. Students are evaluated on their participation and the quality of a written research proposal. Enrollment restricted to graduate students. M. Carr

200B. Advanced Organismal Biology. F

Consists of lectures focusing on pivotal topics in ecology and evolution. Relevant background material is developed followed by a critical analysis of readings from the primary literature. Designed to give graduate (and advanced undergraduate) students direct contact with the major areas of research that are currently at the forefront of organismal biology. Enrollment restricted to graduate students. B. Lyon, J. Estes, D. Costa

208. Marine Ecology. W

Paradigms and designs in marine ecology. A review of the paradigms that have shaped our understanding of marine ecology; analysis and discussion of experiments with these paradigms. Students cannot receive credit for this course and course 108. Enrollment restricted to graduate students. M. Carr

245. Plant Ecology. F

An exploration of the ecology of plant form, function, distribution, abundance, and

diversity. Topics include plant adaptations to environmental conditions, life history variation, competition, reproductive ecology, herbivory, and patterns of diversity. Lecture with discussions of original papers and independent field project. Students cannot receive credit for this course and course 145. Prerequisite(s): BIOE 107 or ENVS 24 or permission of instructor. Concurrent enrollment in BIOE 245L is required except by permission of instructor. Enrollment restricted to graduate students. I. Parker

245L. Field Methods in Plant Ecology Laboratory. F

Hands-on exploration of the concepts and techniques of plant ecology. A combination of lab, greenhouse, and field-based exercises (irrespective of weather conditions), statistical analysis, and scientific writing. One required weekend field trip. Students cannot receive credit for this course and course 145L. Concurrent enrollment in BIOE 245 is required. Enrollment restricted to graduate students. Enrollment limited to 2. I. Parker

247. Community Ecology. S

Develops the major themes of community ecology: structure, trophic dynamics, succession, complex interactions among species, herbivory, evolution, and coevolution. Uses case histories of well-studied marine and terrestrial systems. Students cannot receive credit for this course and course 147. Enrollment restricted to graduate students. L. Fox

258L. Experimental Marine Ecology. *

Supervised individual research projects in experimental marine biology. Students carry out a complete research project, including (1) the formation of hypotheses, (2) the design and implementation of experiments, (3) collection, analysis, and interpretation of data, and (4) the write-up of an oral presentation. Prerequisite(s): BIOE 208; and interview to assess ability to carry out field project. Enrollment limited to 20. Offered in alternate academic years. M. Carr, P. Raimondi

272. Population Genetics. F

Basic population genetics and selected topics are covered including genetics of speciation, tempo and mode of evolution, genetics of social behavior, natural selection in human populations, and the impact of molecular studies on evolutionary theory. Students cannot receive credit for this course and Biology 172. Concurrent enrollment in BIOE 272L is required. Enrollment restricted to graduate students. Offered in alternate academic years. G. Pogson

272L. Population Genetics Laboratory (2 credits). F

A companion course to 272, Population Genetics, that applies the theory developed in that course to related disciplines including conservation biology, ecology, agriculture, and population biology. Original scientific literature relating to the theory developed in course 272 is read, and applied problem sets are solved by the students. Students cannot receive credit for this course and course 172L. Must be taken concurrently with BIOE 272.

Enrollment restricted to graduate students. Offered in alternate academic years. G. Pogson

274. Evolutionary Game Theory. W

Reviews static equilibrium concepts, games of incomplete information, and the traditional theory of dynamic games in discrete time. Develops recent evolutionary game models, including replicator and best reply dynamics, and applications to economics, computer science, and biology. Prerequisite(s): upper-division math courses in probability theory are strongly recommended. Cannot receive credit for this course and Economics 166B or Computer Science 166B. (Also offered as Computer Science 272. Students cannot receive credit for both courses.) B. Sinervo, The Staff

279. Evolutionary Ecology. W

Analysis of the ways in which ongoing evolution and coevolution shape the ecological structure and dynamics of populations, species, and species interactions across geographic landscapes. Enrollment restricted to graduate students. The Staff

281A. Topics in Basic and Applied Marine Ecology. F,W,S

Seminar focusing on concepts in basic and applied ecology. Structure rotates quarterly between graduate student research and readings of journal articles and textbooks. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. M. Carr

281B. Topics in Molecular Evolution (2 credits). F,W,S

A discussion of current research and literature review on the subject of molecular evolution. Primary focus on recent results on molecular phylogenetics and molecular population genetics. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. G. Bernardi

281C. Topics in Physiological Ecology. F,W,S

An intensive seminar focusing on the interaction between physiological constraint and life history options and solutions employed by animals. Topics vary from comparative physiology to ecological theory. Participants are required to present results of their own research or review papers of interest. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. D. Costa

281E. Topics in Freshwater Ecology. F,W,S

Current topics in freshwater ecology, eco-evolutionary dynamics, fisheries, and fish ecology. Enrollment restricted to graduate students. Qualified undergraduates may enroll with permission from instructor. Enrollment limited to 18. May be repeated for credit. E. Palkovacs

281F. Ecological Research Topics. F,W,S

Intensive research and discussions on plant-animal interactions. All students undertake a research project and meet weekly with the faculty sponsor to monitor progress. The group meets weekly to discuss experimental design and analysis, specific problems related to the students' research, relevant research papers, or manuscripts that the group members are writing. Each student gives a formal presentation of research plans or progress each quarter. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. L. Fox

281H. Topics in Comparative Marine Physiology. F,W,S

Intensive seminar on selected topics in marine physiology. Students present results from their own research and discuss recent advances from the literature. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. R. Mehta

281I. Topics in Disease Ecology, Population Biology, and Conservation. F,W,S

Selected topics in population biology and disease ecology. Students present results from their own research and discuss recent advances from the literature. (Formerly "Topics in Plant Population and Disease Ecology") Enrollment restricted to graduate students; qualified undergraduates may enroll by permission of instructor. Enrollment limited to 18. May be repeated for credit. A. Kilpatrick

281J. Topics in Research on Biochemical Ecology. *

Seminar in which students give critically evaluated presentations regarding current research on selected topics in plant ecology with an emphasis on biochemical ecology. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 12. May be repeated for credit. J. Langenheim

281K. Topics in Plant Evolution. F,W,S

Intensive seminar on selected topics in plant evolution. Students present results from their own research and discuss recent advances from the literature. Enrollment restricted to graduate students; qualified undergraduates may enroll by permission of instructor. Enrollment limited to 18. May be repeated for credit. K. Kay

281L. Topics in Behavioral and Evolutionary Ecology. F,W,S

An intensive seminar on selected topics in behavioral and evolutionary ecology. Students are expected to discuss the current literature and present literature reviews, research proposals, and preliminary results from their ongoing research. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. B. Lyon

281N. Topics in Marine Vertebrate Ecology. F,W,S

Seminar on the ecology of marine vertebrates. Topics vary from the factors that explain the distribution of marine predators to island biogeography and the ecosystem effects of introduced vertebrates on islands. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. D. Croll

281O. Topics in Plant-Water Relations. F,W,S

Intensive seminar focusing on fundamental and evolutionary concepts in plant-water relations. Students present results from their own research and discuss recent advances from the literature. Enrollment restricted to graduate students; qualified undergraduates may enroll by permission of instructor. Enrollment limited to 18. May be repeated for credit. J. Pittermann

281P. Topics in Plant Population Ecology. F,W,S

An intensive seminar on selected topics in plant ecology and population biology. Students present results from their own research and discuss recent advances from the literature. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission from instructor. Enrollment limited to 12. May be repeated for credit. I. Parker

281Q. Topics in Molecular Evolutionary Genetics. F,W,S

An intensive seminar on selected topics in molecular evolutionary genetics. Students are required to present results from their own research projects, present a critical review paper at least once during the quarter, and submit a written research proposal. Enrollment restricted to graduate students; qualified undergraduate students may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. G. Pogson

281R. Topics in Marine Ecology and Evolutionary Biology. F,W,S

An intensive seminar series focusing on fundamental concepts in marine ecology. Emphasis changes quarter to quarter. At least one quarter per year is devoted to discussion of graduate student research. Other quarters involve reading and evaluating current and classic literature on marine ecology and evolutionary biology. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. P. Raimondi

281S. Topics in Ancient DNA and Paleogenomics. F,W,S

Topics in population genetics and genomics, focusing on work involving paleontological and archaeological material. Students present weekly written and oral reports of their research projects. Once each term, students critique a recent publication. Enrollment restricted to graduate students. Qualified undergraduates may enroll with permission from instructor. May be repeated for credit. B. Shapiro

281T. Species Interactions and Coevolution. F,W,S

The genetics and ecological structure of species interactions, and the role of coevolution between species in shaping biodiversity. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. J. Thompson

281U. Topics in Invertebrate Biology. F,W,S

An intensive study about concepts, theory, and techniques for graduate students conducting research on the ecology, genetics, evolution, systematics, or biodiversity of marine invertebrates. Enrollment restricted to graduate students; advanced undergraduates may enroll with permission of instructor. Enrollment limited to 15. May be repeated for credit. D. Potts

281V. Topics in Behavioral Ecology. F,W,S

A discussion of current topics and methods in behavioral ecology and life history evolution. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. B. Sinervo

281W. Topics in Exercise and Environmental Physiology. F,W,S

A weekly seminar discussion on current research and techniques in mammalian exercise and environmental physiology. Areas covered include locomotor physiology, exercise testing and cardiovascular monitoring, and biomechanics. Oral presentation of ongoing research or current literature required from each student. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. T. Williams

286. Experimental Design and Data Analysis. W

Focuses on problems and designs in ecology and population biology. Topics include basic experimental design; exploratory data analysis—from a graphical perspective; hands-on statistics; and graphical theory. Structured around a statistical analysis and graphics computer program to teach students to design their own surveys and experiments and

analyze their data correctly. Students cannot receive credit for this course and course 186. Prerequisite(s): one course in statistics or by permission of instructor. Enrollment restricted to graduate students. P. Raimondi

286L. Experimental Design and Data Analysis Lab (2 credits). W
Required lab that accompanies Biology 286. Lab will focus on hands-on statistical problem solving, graphical presentations and experimental design issues. Concurrent enrollment in course 286 is required. Enrollment restricted to graduate students. P. Raimondi

293. Readings in Ecology and Evolution (2 credits). W,S
Weekly readings and discussions of recent research papers in ecology, evolution, and related topics from organismal biology. Enrollment restricted to graduate students. May be repeated for credit. A. Kilpatrick, L. Fox

294. Ecology, Evolutionary Biology Seminar (no credit). F,W,S
Selected topics of current interest to ecologists and evolutionary biologists presented by weekly guest speakers. Enrollment restricted to graduate students. T. Williams, B. Shapiro, D. Croll

295. Advanced Ecology and Evolutionary Biology Seminar (no credit). F,W,S
Course consists of extended weekly meetings organized around an advanced theme in theoretical or applied evolutionary biology, ecology, physiology, behavior, or other aspect of organismal biology. Course is targeted at students who already have reached a professional level of expertise in their field and advanced master students. Enrollment restricted to graduate students. Enrollment limited to 24. The Staff

297. Independent Study. F,W,S
Independent study for graduate students who have not yet settled on a research area for their thesis. Students submit petition to sponsoring agency. The Staff

299. Thesis Research. F,W,S
Students submit petition to sponsoring agency. The Staff

* Not offered in 2014-15

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Lower-Division Courses

1. **Introductory Microeconomics: Resource Allocation and Market Structure.** F,W,S

For all interested students as well as prospective economics majors. Examines how markets allocate resources in different kinds of economies. Topics include competitive markets, monopoly, financial markets, income distribution, market failures, the environment, and the role of government. (General Education Code(s): PE-H, IS.) The Staff

2. **Introductory Macroeconomics: Aggregate Economic Activity.** F,W,S

For all interested students and prospective economics majors. Examines how the overall level of national economic activity is determined, including output, employment, and inflation. Explores the roles of monetary and fiscal policies in stabilizing the economy and promoting growth, with a focus on contemporary policy debates. (General Education Code(s): PE-H, IS.) The Staff

10A. **Economics of Accounting.** F,W

Introduction to accounting principles and practice; preparation and analysis of financial statements; study of internal control procedures. Courses 10A and 10B satisfy the Accounting 1A-B requirement at UC Berkeley. The Staff

10B. **Economics of Accounting.** W,S

Managerial accounting emphasizing analysis and control; accounting for corporations; introduction to taxation, budgeting, and equity/debt financing; management decision making. Courses 10A and 10B satisfy the Accounting 1A-B requirement at UC Berkeley. Prerequisite(s): course 10A. The Staff

11A. **Mathematical Methods for Economists I.** F,W,S

Introduction to mathematical tools and reasoning, with applications to economics. Topics are drawn from differential calculus in one variable and include limits, continuity, differentiation, elasticity, Taylor polynomials, and optimization. Students cannot receive credit for both this course and Mathematics 11A or 19A or Applied Mathematics and Statistics 15A. (Also offered as Applied Mathematics and Statistics 11A. Students cannot receive credit for both courses.) (Also offered as Applied Math and Statistics 11A. Students cannot receive credit for both courses.) Students who have already taken Mathematics 11A or 19A should not take this course. Prerequisite(s): score of 300 or higher on the mathematics placement examination (MPE), Applied Math and Statistics 2, 3, or 6, or Mathematics 3. (General Education Code(s): MF, IN, Q.) The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
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■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

11B. Mathematical Methods for Economists II. F,W,S
Mathematical tools and reasoning, with applications to economics. Topics are drawn from multivariable differential calculus and single variable integral calculus, and include partial derivatives, linear and quadratic approximation, optimization with and without constraints, Lagrange multipliers, definite and indefinite integrals, and elementary differential equations. Students cannot receive credit for both this course and Mathematics 11B or 19B or Applied Math and Statistics 15B. (Also offered as Applied Math and Statistics 11B.) Students cannot receive credit for both courses.) Prerequisite(s): course 11A, or Applied Mathematics and Statistics 11A, or Mathematics 11A, or Mathematics 19A. (General Education Code(s): MF, IN, Q.) The Staff

30. Introduction to Entrepreneurship. S

Provides an overview of the role and importance of entrepreneurship in the economy and society; a framework for approaching entrepreneurship and innovation; and exposure to the core competencies required of all entrepreneurs. The course incorporates case studies and speakers (often actual entrepreneurs) to provide context for the entrepreneurial topics covered in the course. The Staff

42. Student-Directed Seminar. *

Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff

80A. The Theory, Hope, and Crisis of Capitalism. W

Assessment of modern-day capitalism from the three major economic paradigms-liberal, conservative, radical. Theories of Smith, Marx, and Keynes are explored in contemporary writing, with focus on the U.S. from WW II to present. Students cannot receive credit for this course and course 189. (General Education Code(s): T3-Social Sciences.) D. Kaun

80G. Money and the Arts: Two All-Consuming Passions. F

Analysis of the performing arts: a commodity providing a rich and varied source of satisfaction, an occupation for thousands of talented and creative individuals, and an activity whose funding (public versus private) is the source of significant controversy. Students cannot receive credit for this course and course 137. (General Education Code(s): T3-Social Sciences.) D. Kaun

80H. Wall Street and the Money Game. *

Provides a demystifying introduction to financial markets. Examines the theory of stock market investment, the workings of the international money market, the implications of corporate takeovers, and the regulation of the economy by the Federal Reserve Board. (General Education Code(s): T3-Social Sciences.) The Staff

93. Field Study. F,W,S

Supervised fieldwork experience, off campus, in an area connected with economics or business. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

93F. Field Study (2 credits). F,W,S

Supervised off-campus fieldwork experience in an area connected with economics or business. Prerequisite(s): permission of instructor; students submit petition to sponsoring agency. The Staff

99. Tutorial. F,W,S

May be repeated for credit. The Staff

Upper-Division Courses

100A. Intermediate Microeconomics. F,W,S

Covers major theoretical issues arising in the study of resource allocation, the function of markets, consumer behavior, and the determination of price, output, and profits in competitive, monopolistic, and oligopolistic market structures. Also considers issues of welfare and public policy. Students cannot receive credit for this course and course 100M. Prerequisite(s): courses 1; 2; and 11B or Applied Mathematics and Statistics 11B or Mathematics 22 or 23A. The Staff

100B. Intermediate Macroeconomics. F,W,S

<ul style="list-style-type: none"> Management UCDC Program Writing Program Theater Arts Yiddish <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>Covers major theoretical issues arising in the study of income, employment, interest rates, and the price level. Examines the role of monetary and fiscal policy in economic stabilization. Also considers these issues as they relate to the global economy. Students cannot receive credit for this course and course 100N. Prerequisite(s): courses 1; 2; and 11B or Applied Mathematics and Statistics 11B or Mathematics 22 or 23A. The Staff</p> <p>100M. Intermediate Microeconomics, Math Intensive. *</p> <p>Mathematically sophisticated version of course 100A. Provides analytically rigorous treatment of the subject using a calculus-intensive presentation of microeconomic theory. For specific topics, see course 100A. Students cannot receive credit for this course and course 100A. Prerequisite(s): courses 1; 2; and 11B or Applied Mathematics and Statistics 11B, or Mathematics 22 or 23A. The Staff</p> <p>100N. Intermediate Macroeconomics, Math Intensive. *</p> <p>Provides rigorous, mathematical-intensive treatment of topics covered in course 100B. Core is devoted to model-based analysis of questions in macroeconomics. Use of mathematical tools allows study of advanced topics and data-intensive applications. See course 100B for specific topics. Students cannot receive credit for this course and course 100B. Prerequisite(s): courses 1; 2; and 11B or Applied Mathematics and Statistics 11B, or Mathematics 22 or 23A. The Staff</p> <p>101. Managerial Economics. F</p> <p>Analysis of the theory and practice of decision making in business firms, applying the concepts and techniques of microeconomics. Topics may include pricing schemes, non-price competition, internal organization of firms, incentive contracts, asymmetric information, and game theory. Case studies are used to illustrate some topics.</p> <p>Prerequisite(s): courses 100A or 100M, and 113. The Staff</p> <p>104. Is There Truth in Numbers: The Role of Statistics in Economics. W,S</p> <p>Applies the techniques of econometrics and experimental economics to the understanding of economics. A "hands-on" course where real economic data is used in an interactive way so that students develop the art of empirical analysis. Prerequisite(s): courses 100A or 100M, and 113, and Entry Level Writing and Composition requirements. The Staff</p> <p>105. Topics in Macroeconomic Theory. S</p> <p>A seminar in advanced macroeconomics focusing on a selection of theoretical issues. Emphasis is on detailed modeling and analysis of macroeconomic processes.</p> <p>Prerequisite(s): course 100B or 100N, and 113. The Staff</p> <p>110. Managerial Cost Accounting and Control. S</p> <p>Focuses on how cost data are used by managers in the planning and control of both private- and public-sector organizations. Specific topics include organization of the management and control function, use of cost data for the pricing of goods and services, the effect of cost systems on management performance, and capital budgeting.</p> <p>Prerequisite(s): course 10B. The Staff</p> <p>111A. Intermediate Accounting I. F</p> <p>Principles, control, and theory of accounting for assets; accounting as an information system; measurement and determination of income. Projects involving spreadsheet software required. Students cannot receive credit for this course and course 209A.</p> <p>Prerequisite(s): course 10B. R. Shepherd</p> <p>111B. Intermediate Accounting II. W</p> <p>Principles, control, and theory of accounting for liabilities and equities; preparation and analysis of cash flow statements and earnings per share computation. Projects involving spreadsheet software required. Students cannot receive credit for this course and course 209B. Prerequisite(s): course 10B. R. Shepherd</p> <p>112. Auditing and Attestation. W</p> <p>For business management economics majors interested in careers that emphasize accounting, finance, or technology management. Also for students who intend to take the CPA exam. Covers audit techniques, risk analysis, and development of control structures for major financial processes including cash, investments, accounts receivable, inventories, accounts payable, debt, equity capital, and related information systems security.</p> <p>Prerequisite(s): course 10B. The Staff</p>
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113. Introduction to Econometrics. F,W,S

Practical methods for organizing and analyzing economic data, testing economic hypotheses, and measuring economic relationships. Regression analysis is the main empirical method, and basic statistical and probability theory is included. Students gain hands-on computer experience with an econometric software package. Students cannot receive credit for this course and Applied Mathematics and Statistics 113. Prerequisite(s): courses 1 and 2; Applied Mathematics and Statistics 5 or 7; and one of the following: course 11B, Applied Mathematics and Statistics 11B, Mathematics 22, or Mathematics 23A. Courses 100A or 100B strongly recommended as preparation. (General Education Code(s): SR, Q.) The Staff

114. Advanced Quantitative Methods. W

Application of statistical methods to estimating and testing economic relationships, i.e., econometric techniques. Topics include the effects of misspecification, choice of functional form, serial correlation, heteroscedasticity, limited dependent variables, and simultaneous equations. Includes discussion of existing empirical work and econometric projects by students. Prerequisite(s): courses 100A or 100M, and 113. The Staff

115. Introduction to Management Sciences. W

The scientific study of management decision making. Topics include linear, integer, and non-linear programming. Special emphasis on a wide variety of practical applications, including production scheduling, optimal transportation assignments, and optimal inventory policy. Prerequisite(s): course 100A or 100M. The Staff

117A. Income Tax Factors for Individuals. W

Introduces federal taxation for individuals. Topics for study include taxable income, gross income exclusions and inclusions, capital gains, depreciation, business and itemized deductions, personal and dependency exemptions, passive activity losses, tax credits, and methods of accounting. Prerequisite(s): course 10B. The Staff

117B. Tax Factors of Business and Investment. F

Focuses on various tax subjects providing a strong foundation in tax concepts and preparation for work in either public or corporate accounting. Topics include historical perspective of the U.S. tax system, introduction to estate and gift taxes, employment and self-employment taxes, tax concepts and laws, business expenses, capital recovery, tax credits, capital gains and losses, capital investments, and corporate operations. (Formerly course 117.) Prerequisite(s): course 10B. The Staff

119. Advanced Accounting. S

Accounting for business organizations; partnerships; government and non-profit organization funds; branches, consolidations, and installment sales. Projects involving spreadsheet software required. Prerequisite(s): courses 111A and 111B. The Staff

120. Economic Development. S

A comparative approach to the study of the economic development of low-income countries. Various obstacles to growth are identified, and different types of solutions are analyzed. Prerequisite(s): courses 1, 2, and 113. (General Education Code(s): E.) The Staff

121. Economic Growth. W

Studies economic growth from theoretical, empirical, and historical perspectives. Topics include: theories of economic growth and their empirical importance, technology and innovation, social institutions and growth, and competing explanations of the global distribution of wealth. Prerequisite(s): courses 1, 2, 11A, and 11B (or the equivalent); course 100B is strongly recommended. The Staff

125. Economic History of the U.S. S

The development of the American economy from colonial times to the present, with emphasis on the interaction between institutional structure and economic development. Topics include the economics of slavery, the rise of big business, and the causes of the Great Depression. Prerequisite(s): courses 1 and 2. Related course work in history also helpful. Enrollment restricted to juniors and seniors. The Staff

126. Why Economies Succeed or Fail: Lessons from Western and Japanese History. F

Examines the emergence of capitalism and the world's first industrial revolution in Britain, continental Europe industrialization, Soviet economic growth and collapse, and the

Japanese economic miracle. Asks about the historical sources of long-run economic development, stagnation, and decline. Draws lessons for current debates over free market versus more interventionist policies, economic reform in the former Communist nations, and economic rivalry between the U.S. and Japan. Prerequisite(s): courses 1 and 2. Related course work in history also helpful. Enrollment restricted to juniors and seniors. The Staff

128. Poverty and Public Policy. S

Studies the causes, consequences, and governmental response to urban poverty in the U.S. Topics include how public policy, the macroeconomy, race, gender, discrimination, marriage, fertility, child support, and crime affect and are affected by urban poverty. Emphasizes class discussion and research. (Also offered as Legal Studies 128. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of Entry Level Writing & Composition requirement; courses 100A or 100M; and course 113. Enrollment restricted to economics, business management economics, global economics, legal studies, or economics combined majors. Enrollment limited to 35. (General Education Code(s): W, E.) The Staff

130. Money and Banking. W

The institutional structure of central banking and of bank and nonbank financial intermediation in the U.S.; theoretical and empirical investigations of the role of monetary policy in macroeconomic stabilization and economic growth. Prerequisite(s): courses 100B or 100N, and 113. The Staff

131. International Financial Markets. F

International financial management analyzes the key financial markets and instruments that facilitate trade and investment activity on a global scale. Inquiry spans two areas: (1) economic determinants of prices in international financial markets; and (2) decisions facing private individuals and enterprises, with topics including capital financing, investment, and risk management. Prerequisite(s): courses 100A or 100M, and 100B or 100N. The Staff

133. Security Markets and Financial Institutions. S

An examination of all major financial markets: equities, bonds, options, forwards, and futures. Uses modern financial theory, including asset pricing models such as CAPM and APT. Prerequisite(s): courses 100A or 100M, and 113. The Staff

135. Corporate Finance. W

An analysis of financial policies of business enterprises. Topics include cash flow analysis, stock and bond valuation, asset pricing models, capital budgeting, financial market institutions, and financial planning. Prerequisite(s): courses 10A, 100A or 100M, and 113. The Staff

136. Business Strategy. W

The strategic management process, techniques for analyzing single-business and diversified companies, implementing strategy, organization, business planning, financial strategy, competitive analysis, entrepreneurial skills. Prerequisite(s): courses 10A and either 100A or 100M. Concurrent enrollment in course 136L is not required. The Staff

137. Performing Arts in the Public and Private Economy. F

Analysis of the performing arts: a commodity satisfying a rich and varied source of satisfaction, an occupation for thousands of talented and creative individuals, and an activity whose funding (public versus private) is the source of significant controversy. Economics 1 is strongly recommended as a preparation. Students cannot receive credit for this course and course 80G. D. Kaun

138. The Economics and Management of Technology and Innovation. F

Examines the analytics of issues in technology and innovation, including cooperation in research and development (R&D), standardization and compatibility, patents and intellectual property rights, and strategic management, using economic models and firm case studies. Prerequisite(s): course 100A or 100M, or permission of instructor. The Staff

139A. The Economics of Electronic Commerce. S

An analysis of the broad spectrum of issues affecting commercial uses of the Internet and the next-generation information infrastructure. Uses economics to examine market structure, pricing quality, intellectual property rights, security, electronic payments and currencies, and public policy implications. Prerequisite(s): course 100A or 100M, or

permission of instructor. The Staff

139B. E-Commerce Strategy. *

Introduction and review of economic principles for e-commerce. Overview of trends in e-commerce. Online retailing of physical products; digital products; financial services; housing and related markets. Online business-to-business transactions. Internet infrastructure industry. Government regulation of e-commerce and business strategy responses. Prerequisite(s): course 139A. The Staff

140. International Trade. S

The theory of international production and trade. The effects of tariffs and quantitative trade restrictions; the nature of economic integration; multinational firms; effects of trade and protection on economic stability and welfare. Prerequisite(s): course 100A or 100M. The Staff

141. International Finance. W

Topics include national accounting, balance of payments theories, parity conditions in international finance, exchange rate determination models, forward-looking financial instruments, international monetary systems, country interdependence and exchange rate regimes, international monetary integration, and Eurocurrency market. Prerequisite(s): course 100B or 100N. The Staff

142. Advanced Topics in International Economics. *

Selected issues in contemporary international economics: theory, empirical evidence, and public policy. Seminar emphasizing discussion and individual research. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, courses 100A or 100M, and 100B or 100N, and 140 or 141. (General Education Code(s): W.) The Staff

143. Policy Issues in the International Economy. S

Covers selected issues concerning the international economy. Topics include: U.S. competitiveness; U.S. trade policy; immigration; trade and the environment; developing countries; foreign investment; foreign exchange markets; and international economic institutions. Prerequisite(s): courses 1, 2, and 100A or 100M. The Staff

148. Latin American Economies. W

This course is designed to familiarize students with the economic and business environment in Latin America. Prerequisite(s): courses 1 and 2. The Staff

149. The Economies of East and Southeast Asia. *

Examines the pattern of international trade, investment, and industrial structure in Asia. Examines competing explanations of rapid growth of Japan, Korea, and Taiwan; presents an overview of economic developments in China, Hong Kong, and Taiwan. Concludes with an analysis of high technology trade and multinationals in Asia in 2000 and beyond. Prerequisite(s): courses 1 and 2. The Staff

150. Public Finance. F

Economics of taxation, including incidence, equity issues, efficiency, and supply side effects. Close attention to taxes in the U.S. system and tax-reform issues. Students cannot receive credit for this course and course 250. Prerequisite(s): course 100A or 100M, and course 100B or 100N. The Staff

156. Health Care and Medical Economics. *

Health economics theory and review of studies of the health industry, including current topics. Focuses on the structure of the U.S. health care system, including analysis of health policy issues. Relationship to models of perfect competition and efforts at reform. Prerequisite(s): courses 100A or 100M and 113. The Staff

159. The Economics of Organizations. *

Uses an economic approach to shed light on questions such as why and how organizations are formed, and what consequences they may have on the adoption of different types of organizations for economic performance. Also emphasizes differences between the "internal markets" within organizations and market transactions. Prerequisite(s): course 100A or 100M. The Staff

160A. Industrial Organization. W

The structure and conduct of American industry with strong emphasis on the role of

government, regulation, anti-trust, etc. The evolution of present-day industrial structure. The problems of overall concentration of industry and of monopoly power of firms. Pricing, output decisions, profits, and waste. Approaches include case study, theory, and statistics. (Also offered as Legal Studies 160A. Students cannot receive credit for both courses.) Prerequisite(s): course 100A or 100M. The Staff

160B. Government and Industry. *

The influence of government regulation on industry and the allocation of resources is rigorously examined using theory and statistics. Areas of regulation include transportation and power, pollution and congestion, rent control, and liability insurance regulation. Both optimal and actual regulation are examined from the point of view of effectiveness, efficiency, social welfare, and re-distribution. Prerequisite(s): course 100A or 100M. The Staff

161A. Marketing. F,S

The evolution of markets and marketing; market structure; marketing cost and efficiency; public and private regulation; the development of marketing programs including decisions involving products, price, promotional distribution. (Formerly course 161.) Prerequisite(s): course 100A or 100M. The Staff

161B. Marketing Research. W

Prepares students to conduct market research and use it in solving real management problems. Students work with a company to solve marketing-based problems. Students conduct research, process data, and make a presentation to the company's management. Course work involves marketing, statistics, and communications; material is both qualitative and quantitative. Prerequisite(s): courses 113 and 161A. The Staff

162. Legal Environment of Business. *

A study of law and the legal process, emphasizing the nature and function of law within the U.S. federal system. Attention is given to the legal problems pertaining to contracts and related topics, business association, and the impact of law on business enterprise. (Also offered as Legal Studies 162. Students cannot receive credit for both courses.)

Prerequisite(s): course 100A or 100M. The Staff

164. Economics and the Telecommunications Industry. *

Covers the economics of the telecommunications industry including telephone, cellular telephone, and data communications. Particular emphasis on the Internet, satellite, paging, cable television, radio and television broadcasting. Examines the industry structure and implications of moving from a regulated environment to competition. Topics examined from a competitive strategic standpoint as well as public policy perspective. Prerequisite(s): courses 100A or 100M, and 113. The Staff

165. Economics as an Experimental Science. F

The design, execution, and analysis of laboratory experiments in economics. Students study experimental methodology, critically survey the published literature, and design an experiment. Literature includes lab studies of investigations in auctions, markets, social choice theory, and game theory. Prerequisite(s): course 100A or 100M, and course 113. Enrollment limited to 40. (General Education Code(s): W.) The Staff

166A. Game Theory and Applications I.

Introduces modern game theory, including applications in social science, biology, and engineering. Topics include extensive form, strategic form, mixed strategies, incomplete information, repeated games, evolutionary games, and simulation techniques. (Also offered as Computer Science 166A and Technology & Info Management 166A. Students cannot receive credit for more than one course.) Prerequisite(s): Applied Math and Statistics 5 or 7 or Economics 113; and Economics 11B, Applied Math and Statistics 11B, or Mathematics 11B or 19B. Enrollment restricted to juniors and seniors. Enrollment limited to 100. J. Musacchio

166B. Game Theory and Applications II. W

Explores research frontiers in game theory, emphasizing applications in social science, biology, and engineering. Each interdisciplinary team develops a topic, and presents it to the class in oral and written reports and demonstrations. Students must have shown a strong performance in course 166A or equivalent. Students cannot receive credit for this course and Economics 272, Computer Science 272, or Biology: Ecology and Evolutionary

274. (Also offered as Computer Science 166B. Students cannot receive credit for both courses.) Prerequisite(s): course 166A or Computer Science 166A; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors. Enrollment limited to 40. (General Education Code(s): W.) The Staff

169. Economic Analysis of the Law. S

The application of the theories and methods of neoclassical economics to the central institutions of the legal system, including the common law doctrines of negligence, contract, and property; bankruptcy and corporate law; and civil, criminal, and administrative procedure. (Also offered as Legal Studies 169. Students cannot receive credit for both courses.) Prerequisite(s): course 100A or 100M or permission of instructor. The Staff

170. Environmental Economics. F

Economic analysis of environmental issues. Environmental pollution and deterioration as social costs. Economic policy and institutions for environmental control. Influences of technology, economic growth, and population growth on environmental quality.

Prerequisite(s): course 100A or 100M. The Staff

171. Natural Resource Economics. *

The application of economic analysis to the use of renewable and nonrenewable natural resources. Efficiency and distributional aspects of natural resource scarcity. Measurement of the benefits and costs. Optimal extraction or use policies. Common property and externalities. Government policies. Prerequisite(s): course 100A or 100M. The Staff

175. Energy Economics. S

Applications of micro, welfare, and international economic theory and methodology to the energy field. Questions considered include optimal allocation of natural resources; pricing and investment; regulations and taxes; import and export control; redistributive policies. Prerequisite(s): course 100A or 100M. The Staff

180. Labor Economics. *

A study of the changing nature and composition of the U.S. labor force. Topics include the demand for and supply of labor; wage determination; the role and impact of unions in the labor market; racial, ethnic, and gender differences in job and income opportunities and the role of discrimination in explaining these differences; and the theory of human capital, all considered from the traditional neoclassical as well as institutional and radical perspectives. Prerequisite(s): course 100A or 100M. Course 113 is strongly recommended as preparation. The Staff

183. Women in the Economy. *

Study of gender roles in economic life, past and present. Topics include occupational structure, human capital acquisition, income distribution, poverty, and wage differentials. The role of government in addressing economic gender differentials is examined. (Also offered as Legal Studies 183. Students cannot receive credit for both courses.)

Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; courses 1, 2, and 100A or 100M; course 113 strongly recommended. (General Education Code(s): W.) The Staff

184. Labor Wars in Theory and Film. *

This seminar focuses on the impact of trade unions and labor-market discrimination on the U.S. work force. The neo-classical, institutional, and radical/Marxist approaches to these questions are employed in the analysis. Films, both fictional and documentary, are utilized as primary source material. Prerequisite(s): permission of instructor based on quality of work in economics; courses 100A or 100M, 100B or 100N, and 113; satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 20. (General Education Code(s): W.) D. Kaun

186. Mathematical Methods for Economic Analysis. F

Presents mathematical methods commonly used in graduate-level economic analysis: basic matrix algebra, real analysis, functions, continuity concepts, differentiation, Taylor expansions, and implicit function theorem and optimization. Prerequisite(s): interview only; enrollment restricted to students admitted to the APEF M.S. Program. The Staff

188. Management in the Global Economy. W

An overview of how firms do business in the global economy. Focus is on the firm, but also explores the impact of corporate decision-making on national welfare. Emphasizes how national economic policies and international institutions influence firm strategy and industrial structure. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 100A or 100M; course 100B or 100N strongly recommended as preparation. (General Education Code(s): W.) The Staff

189. Political Economy of Capitalism. W

An assessment of modern day capitalism from the three major economics paradigms—liberal, conservative, radical. Theories of Smith, Marx, and Keynes are explored in contemporary writing, with focus on the U.S. from WW II to present. Students cannot receive credit for this course and course 80A. Prerequisite(s): courses 1 and 2; courses 100A or 100M, and 100B or 100N are recommended as preparation. D. Kaun

190. Senior Proseminar. *

Courses focus on problems of interest to advanced students of economics. They offer a flexible framework, so those interested in specific issues can read, present papers, and develop their ideas. The Staff

191. Economics Teaching Practicum. F,W,S

Each student serves as facilitator for small discussion group in connection with core economics courses. Facilitators complete course readings and meet with instructor as a group to discuss the teaching process. May not be counted toward upper-division major requirements. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar, course 42, under faculty supervision. May not be counted toward the upper-division major requirements. Students submit petition to sponsoring agency. The Staff

193. Field Study. F,W,S

Provides for department-sponsored individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor (in contrast to course 198 where faculty supervision is by correspondence). May not be counted toward the upper-division major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Provides for department-sponsored individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor. May not be counted toward the upper-division major requirements. Students spend 8–10 hours per week at job site. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Advanced Topics in Management. *

Honors course providing detailed analysis of specialized topics in management. Possible topics include: venture capital, the financial services industry, e-business, behavioral finance, advanced consumer behavior, entrepreneurship, high-tech marketing, risk management, and option value approaches to business strategy. Students cannot receive credit for this course and course 194F. Prerequisite(s): courses 100A or 100M, 100B or 100N, and 113. Enrollment by permission of instructor, and review of performance in economics courses. Enrollment restricted to senior and junior business management economics majors. (Formerly Advanced Topics in Business Management Economics.) Enrollment limited to 30. The Staff

194F. Advanced Topics in Management (2 credits). *

Detailed analysis of specialized topics in management. Possible topics include: venture capital, the financial services industry, e-business, behavioral finance, advanced consumer behavior, entrepreneurship, high-tech marketing, risk management, and option value approaches to business strategy. Students cannot receive credit for this course and course 194F. Prerequisite(s): courses 100A or 100M, 100B or 100N, and 113. Enrollment by permission of instructor, and review of performance in economics courses. Enrollment restricted to senior and junior business management economics majors. Enrollment limited to 30. The Staff

195. Senior Thesis. F,W,S

A supervised research project. If the project is of unusual scope, the course may be repeated for credit. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, students submit petition to sponsoring agency. (General Education Code(s): W.) The Staff

197. Economic Rhetoric: Using Economic Theory and Empirical Evidence in Arguing Policy. F,W,S

Economics students are expected to learn to effectively communicate economic theory and evidence relating to economic policy to audiences that do not have economics degrees. The skills to be learned are both written and oral communication. Students learn to present convincing policy arguments in position papers, executive summaries, and in oral presentation that may include charts and other means of communication.

Prerequisite(s): Entry Level Writing & Composition requirement; one of the following courses: 100A,100M,100B,100N, or 113. Restricted to sophomore,junior,senior economics, business-management economics, global economics and combined economics/math majors. The Staff

198. Independent Field Study. F,W,S

Provides for department-sponsored individual study program off campus for which faculty supervision is not in-person, but by correspondence. May not be counted toward the upper-division major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for department-sponsored individual study program off campus for which faculty supervision is not in person, but by correspondence. May not be counted toward the upper-division major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

May be repeated for credit, but may be counted only once toward the upper-division major requirements. Undergraduates may not take graduate courses for credit as 199. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Specialized study with individual faculty. May not be applied toward the major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Microeconomic Analysis. F

Survey of partial equilibrium analysis, market distortions, consumer choice and production and trade theory, perfect and imperfect competition, price discrimination, and intertemporal choice theory. Enrollment restricted to applied economics and finance graduate students. The Staff

201. Applications in Microeconomics. S

Applies concepts and tools developed in course 200 to problems encountered in private- and public-sector output and labor markets. The focus is empirical; topics include analysis of labor supply and labor demand and the role of government labor market policies, analysis of pricing policies and regulation, estimation of the returns to schooling, estimation of demand and cost functions, and the role of unions in the economy. Course 200 is strongly recommended as preparation. Enrollment restricted to applied economics and finance graduate students. The Staff

202. Macroeconomic Analysis. F

Aggregate economic analysis: determinants of aggregate expenditures and output, the roles of monetary and fiscal policy, recent developments in macro theory; macro policy issues. Enrollment restricted to applied economics and finance graduate students. The Staff

204A. Advanced Microeconomic Theory. F

Economic theory of individual and market behavior, including constrained optimization, duality, theory of the consumer, theory of the producer, dynamic optimization, behavior under uncertainty, intertemporal choice, asymmetric information, game theory, partial and

general equilibrium, pure and applied welfare economics, public goods and externalities. Illustrative examples emphasize international applications. Courses must be taken in sequence. Enrollment restricted to graduate students or by permission of instructor. The Staff

204B. Advanced Microeconomic Theory. W

Economic theory of individual and market behavior, including constrained optimization, duality, theory of the consumer, theory of the producer, dynamic optimization, behavior under uncertainty, intertemporal choice, asymmetric information, game theory, partial and general equilibrium, pure and applied welfare economics, public goods and externalities. Illustrative examples emphasize international applications. Courses must be taken in sequence. Prerequisite(s): course 204A. The Staff

204C. Advanced Microeconomic Theory. S

Economic theory of individual and market behavior, including constrained optimization, duality, theory of the consumer, theory of the producer, dynamic optimization, behavior under uncertainty, intertemporal choice, asymmetric information, game theory, partial and general equilibrium, pure and applied welfare economics, public goods and externalities. Illustrative examples emphasize international applications. Courses must be taken in sequence. Prerequisite(s): course 204B. The Staff

205A. Advanced Macroeconomic Theory. F

Modern macroeconomic theory: determination of national income; employment, inflation, and exchange rates; theories of growth and business cycle fluctuations; international transmission of inflation and other disturbances; recent developments in the analysis of macroeconomic policy; modern theoretical and empirical analysis of aggregate relationships. Courses must be taken in sequence. Enrollment restricted to graduate students or by permission of instructor. The Staff

205B. Advanced Macroeconomic Theory. W

Modern macroeconomic theory: determination of national income; employment, inflation, and exchange rates; theories of growth and business cycle fluctuations; international transmission of inflation and other disturbances; recent developments in the analysis of macroeconomic policy; modern theoretical and empirical analysis of aggregate relationships. Courses must be taken in sequence. Prerequisite(s): course 205A. The Staff

205C. Advanced Macroeconomic Theory. S

Modern macroeconomic theory: determination of national income; employment, inflation, and exchange rates; theories of growth and business cycle fluctuations; international transmission of inflation and other disturbances; recent developments in the analysis of macroeconomic policy; modern theoretical and empirical analysis of aggregate relationships. Courses must be taken in sequence. Prerequisite(s): course 205B. The Staff

209A. Accounting 1. F

Principles, control, and theory of accounting for assets; accounting as an information system; measurement and determination of income. M.S. level projects required. Students cannot receive credit for this course and course 111A. Enrollment restricted to graduate students. The Staff

209B. Accounting II. W

Principles, control, and theory of accounting for liabilities and equities; preparation and analysis of cash flow statements and earnings per share computation. M.S. level projects required. Students cannot receive credit for this course and course 111B. Enrollment restricted to graduate students. The Staff

210A. Mathematical Methods for Economic Analysis. *

Mathematical methods commonly used in economic analysis are discussed. Covers basic matrix algebra, real analysis, functions, continuity concepts, differentiation, Taylor expansion, implicit function theorem, and optimization. Prerequisite(s): qualifications as determined by instructor; inquire at department office. The Staff

210B. Mathematical Methods for Economic Analysis. F

A course in introductory mathematical economics which covers standard optimization problems, difference and differential equations, optimal control theory, decisions under uncertainty, game theory, and stochastic calculus. Course 210A or equivalent is strongly

recommended as preparation. The Staff

211A. Advanced Econometrics. F

Advanced econometric methods are introduced. Topics include the standard regression analysis, simultaneous equation estimation, nonlinear models, qualitative response models, panel data analysis, and univariate and multivariate time series analysis. Enrollment restricted to graduate students or by permission of instructor. The Staff

211B. Advanced Econometrics. W

Advanced econometric methods are introduced. Topics include the standard regression analysis, simultaneous equation estimation, nonlinear models, qualitative response models, panel data analysis, and univariate and multivariate time series analysis. Course 211A is strongly recommended as preparation for course 211B. The Staff

211C. Topics in Empirical Research. S

A topic course in econometrics designed for graduate students interested in quantitative analysis. Selected topics, including standard and recently developed econometric techniques, are critically and thoroughly discussed. In addition to methodology, focuses on exploring the research potential and applications of advanced econometric techniques. Courses 211A and 211B are strongly recommended as preparation. The Staff

212. Empirical Project in Econometrics (2 credits). *

Empirical project or paper in econometrics to demonstrate student's ability to conduct applied econometric analysis. Ph.D. requirement to be completed by beginning of student's third year of study. Prerequisite(s): courses 211A and 211B. May be repeated for credit. The Staff

216. Applied Econometric Analysis I. F

The use of statistical techniques for the testing of economic hypotheses and the estimation of parameters, with emphasis on regression analysis. Includes methods of dealing with serial correlation, errors in variables, multicollinearity, and heteroscedasticity. Experience with common statistical packages. Enrollment restricted to applied economics and finance graduate students. The Staff

217. Applied Econometric Analysis II. W

Focuses on the application of advanced econometric and time series techniques to economic issues. Computer assignments and empirical applications are used to discuss and illustrate the practical aspects of simultaneous equation systems, nonlinear models, qualitative response models, time series model specification, unit root test, and cointegration analysis. Course 216 is strongly recommended as preparation. Enrollment restricted to applied economics and finance graduate students. The Staff

220A. Development Economics: Theory and Cases. S

Surveys traditional development economics and the neoclassical resurgence in development theory. Topics include sources of growth, income distribution, population and human capital development, savings, fiscal and monetary mobilization and allocation, foreign investment and aid, and macroeconomic policies. Case study focus in the second quarter. Courses 204A and 205A are strongly recommended as preparation. The Staff

220B. Development Economics: Theory and Cases. W

Surveys traditional development economics and the neoclassical resurgence in development theory. Topics include sources of growth, income distribution, population and human capital development, savings, fiscal and monetary mobilization and allocation, foreign investment and aid, and macroeconomic policies. Case study focus in the second quarter. Courses 204A and 205A are strongly recommended as preparation. The Staff

221A. Advanced Monetary Economics I. S

Covers major issues in monetary economics, focusing on the core theoretical models employed in monetary economics. Topics include: money in general equilibrium; money-in-the-utility function approaches; cash-in-advance models; search-based models; welfare costs of inflation; optimal inflation tax; informational frictions in monetary economies; financial and credit frictions; nominal price and wage frictions; time-dependent and state-dependent models of price adjustment; and money in new Keynesian models.

Prerequisite(s): course 205 A-B-C, or by permission of instructor. Enrollment restricted to graduate students. The Staff

221B. Advanced Monetary Economics II. *

Covers major issues in monetary economics, focusing on the core lessons for design and implementation of monetary policies. Topics include: welfare-based policy objectives; optimal policy under discretion; optimal commitment policies; model dynamic stochastic general equilibrium (DSGE) for policy analysis; open economy models for monetary policy analysis; learning; model uncertainty and policy design; empirical evidence on the channels of monetary policy transmission; monetary policy operating procedures; zero nominal interest-rate bound; international transmission of monetary policy; policy and asset prices. Prerequisite(s): course 205 A-B-C, or by permission of instructor. Enrollment restricted to graduate students. The Staff

233. Finance I. W

Applications of economic analysis in private finance. Topics include risky choice and intertemporal choice theory, asset pricing models, efficient market hypotheses, market institutions, and derivative securities. Course 200 is strongly recommended as preparation. Enrollment restricted to applied economics and finance graduate students. The Staff

234. Financial Institutions and Markets. *

This course examines the evolving microstructure of financial markets, instruments, and institutions. Topics include the role of banks and other financial intermediaries and the trading practices for domestic and international financial instruments, including equity, debts, futures, and options. Prerequisite(s): course 233. The Staff

235. Corporate Finance. *

Application of modern financial theory to corporate decision making. Topics covered include capital budgeting and the firm's investment decision, capital structure, dividend policies, and the implications of corporate governance for enterprise financial goals.

Prerequisite(s): course 233. The Staff

236. Financial Engineering. S

This course surveys the financial risks faced by corporation, banks, and other financial institutions that arise from changes in interest rates, foreign exchange rates, commodity prices, and stock prices. It examines the characteristics, payoffs, and pricing of financial derivatives and other instruments for managing risk, including options, forwards, futures, swaps, structured notes, and asset-backed securities. Several cases will be used to illustrate how actual firms solve financial risk management problems. Prerequisite(s): course 233. Enrollment restricted to applied economics and finance graduate students. The Staff

239. Current Topics in Finance. *

Topics in finance selected by the instructor. Prerequisite(s): course 233. The Staff

240A. Advanced International Trade Theory I. F

The theory of international trade and commercial policy. Both traditional analyses and recent developments are covered. Topics include both normative and positive theoretical analyses, as well as empirical testing of theory. Enrollment restricted to graduate students. Courses 204A-B-C are strongly recommended as preparation. The Staff

240B. Advanced International Trade Theory II. S

This is the second quarter of a two-quarter sequence. It deals with most major current advanced research topics in trade. It is both theoretical and empirical and is designed to acquaint students with recent research in the field. Research topics include models of political economy of trade policies; trade and labor markets; regionalism and multilateralism; trade and environment; theories, determinants, and implications of foreign direct investments; economic geography. Prerequisite(s): course 240A. The Staff

240C. Advanced International Trade Theory III. *

Covers the empirical aspects of international trade issues. Topics include the testing and estimation of various trade models such as the Ricardian model, Heckscher-Ohlin-Vanek model, intra-industry trade models, trade models associated with multinational corporations, models of trade and intellectual property rights, the impact of trade on income inequality, and trade between developed and developing economies.

Prerequisite(s): course 240B. Enrollment restricted to graduate students. The Staff

241A. Advanced International Finance I. F

Financial aspects of aggregate capital and trade flows and income determination in open economies. Specific topics include financial risk in the international setting, international borrowing and lending, money and exchange rate regimes, income determination and macroeconomic policy, current issues in international monetary reform. The Staff

241B. Advanced International Finance II. W

An examination of the formulation and implementation of international economic policy from both theoretical and empirical perspectives. Topics include case studies in fiscal, monetary, exchange rate, tariff, and other regulatory policies. The Staff

241C. Advanced International Finance III. *

Focuses on empirical applications in international finance. Topics include structural and reduced form models of exchange rates, interest parity conditions, purchasing power parity, capital controls, capital flows to emerging markets, and government intervention in foreign exchange markets. Courses 202 and 203 or 205A-B-C strongly recommended as preparation. The Staff

243. History of the International Economy. *

Studies the evolution and functioning of the international economy from the days of the gold standard to the present. Particular attention is paid to the interwar period with its problems of structural transformations and their relation to the Great Depression and its immediate aftermath, the rise and fall of the Bretton Woods system, the experience of floating exchange rate regimes, the rise of the "new industrial countries," and the problems of international indebtedness. Courses 204A and 205A are strongly recommended as preparation. The Staff

249A. International Trade and Development Policy I. *

Focuses on a range of real-life issues in international trade and development. Topics include North American Free Trade Agreement (NAFTA), the semiconductor industry, the Boeing-Airbus aircraft trade problems, the World Trade Organization (WTO) and developing countries, U.S./Japan trade, trade and the environment, and U.S./China trade. Enrollment restricted to graduate students. The Staff

249B. International Trade and Development Policy II. *

Emphasizes government policies to promote growth. Topics include the "Washington Consensus," the East Asian "model," and recent policy changes in East Asia, Latin America, Eastern Europe, and the former Soviet Union. Prerequisite(s): course 249A. Enrollment restricted to graduate students. The Staff

250. Advanced Public Finance. S

Theory of the role of public sector expenditures and taxes in market economies. Analyzes efficiency and equity arguments for government intervention. Topics include the role of public debt and deficits in economies, international effects of tax and spending policies, and economic theories of public sector decision making. Courses 204A and 205A are strongly recommended as preparation. Students cannot receive credit for this course and course 150. The Staff

259A. Cost-Benefit Analysis. *

Applications of economic analysis in public finance, largely from the revenue side: taxation. The issues considered include the effects of taxation on consumer welfare, consumption, labor, capital, production, growth. Course 200 is strongly recommended as preparation. Students cannot receive credit for this course and course 153. The Staff

259B. Public Policy Analysis. *

Applications of welfare and microeconomic theory and methodology to the public expenditure question: cost-benefit. Effects of the taxes discussed in course 259A and sophisticated tools used in the face of these and other distortions with regard to measurement of benefits, costs, and the discount rate. Course 200 strongly recommended as preparation. The Staff

270. Advanced Topics in Applied Microeconomics. *

Advanced topics and current research in microeconomic theory, including game theory and general equilibrium analysis. Courses 204A-B and 205A are strongly recommended as preparation. (Formerly Advanced Topics in Microeconomic Theory.) The Staff

271. Advanced Topics in Macroeconomic Theory. W

Advanced topics and current research in macroeconomic theory, including DSGE models, empirical issues, and optimal policy analysis. Prerequisite(s): courses 204A-B-C, 205A-B-C, and 211A-B-C are strongly recommended as preparation. The Staff

272. Evolutionary Game Theory. W

Reviews static equilibrium concepts, games of incomplete information, and the traditional theory of dynamic games in discrete time. Develops recent evolutionary game models, including replicator and best reply dynamics, and applications to economics, computer science, and biology. Prerequisite(s): upper-division math courses in probability theory are strongly recommended. Cannot receive credit for this course and Economics 166B or Computer Science 166B. (Also offered as Computer Science 272. Students cannot receive credit for both courses.) The Staff

273. Advanced Applied Microeconomics. F

Covers topics in applied microeconomics, including labor economics, public economics, and demography. Discusses advanced econometric techniques and theory commonly used in applied microeconomics and microeconomic theory. Students make extensive use of statistical packages and large data sets to complete course assignments. Upper-division econometric and microeconomics courses strongly recommended. The Staff

274. Workshop in Macroeconomics and Monetary Economics (3 credits). F,W,S

For Ph.D. students in economics who are at the early stages of their research careers as well as for those who are engaged in dissertation work in macroeconomics and monetary economics. Topics vary from quarter to quarter depending on the interests of participants. Prerequisite(s): courses 205A, 205B, and 205C, or by consent of instructor. Enrollment restricted to graduate students. May be repeated for credit. The Staff

275. Workshop in Applied Microeconomics (3 credits). F,W,S

For Ph.D. students in economics who are at the early stages of their research careers as well as for those who are engaged in dissertation work in applied microeconomics or other empirical work. Topics vary from quarter to quarter depending on the interests of participants. Enrollment restricted to graduate students. May be repeated for credit. The Staff

276. Workshop in Experimental Economics (3 credits). F,W,S

For economics doctoral students who are at early stages of their research careers as well as those engaged in dissertation research using laboratory experiments and related techniques. Topics vary from quarter to quarter depending on the interest of participants. Enrollment by permission of instructor. May be repeated for credit. D. Friedman

290. Topics in International Economics. *

Covers several advanced topics in the history of international economics, international trade, and international finance. Topics include imperfect competition and trade, strategic trade policies, increasing returns, and the pattern of trade, economic geography, exchange rate target zones, and balance of payment crises. Topics vary from year to year. Courses 204A-B-C and 205A-B-C are strongly recommended as preparation. The Staff

291. Workshop in Applied Economics. *

Experience in applied projects, report writing and presentation, drawing on previous course work. The Staff

293. Field Study. F,W,S

Students will undertake analytical projects in public or private institutions. The material covered must be different from that of the thesis topic. The Staff

294A. Applied Economics Laboratory (2 credits). F

Practical experience in managing computerized data sets and running statistical packages. Covers SAS, RATS, TSP, Bridge Equity System, LIMDEP, GAUSS, and MAPLE programs; and internet, IFS, OECD, and SPIRS EconLit databases. May be repeated for credit. The Staff

294B. Applied Economics Seminar (2 credits). F,W,S

Weekly seminar designed to present students with current working applications in various fields of applied economics and finance. Enrollment restricted to graduate students. May be repeated for credit. The Staff

294C. Economics Guest Seminar Series (1 credit). F

Biweekly seminars presented by visiting faculty and industry leaders who are experts in their fields provide in-depth insight on topics relevant to graduate students in economics. Enrollment restricted to graduate students. The Staff

295A. Directed Reading. F

Reading in research area of student interest, with faculty supervision through weekly discussion. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

295B. Directed Reading. W

Reading in research area of student interest, with faculty supervision through weekly discussion. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

295C. Directed Reading. S

Reading in research area of student interest, with faculty supervision through weekly discussion. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

296A. Third Year Ph.D. Seminar. F

Student presentations of literature and/or original research in areas of student research interest. Student discussion of presentations under faculty supervision. Prerequisite(s): courses 204C, 205C, 211B, 240A, 240B, 241A, and 241B are required preparation. The Staff

296B. Third Year Ph.D. Seminar. *

Student presentations of literature and/or original research in areas of student research interest. Student discussion of presentations under faculty supervision. Prerequisite(s): courses 204C, 205C, 211B, 240A, 240B, 241A, and 241B are required preparation. The Staff

296C. Third Year Ph.D. Seminar. *

Student presentations of literature and/or original research in areas of student research interest. Student discussion of presentations under faculty supervision. Prerequisite(s): courses 204C, 205C, 211B, 240A, 240B, 241A, and 241B are required preparation. The Staff

297. Independent Study. F,W,S

Independent study and research under faculty supervision. Students submit petition to sponsoring agency. The Staff

298. Dissertation Research. F,W,S

Research toward Ph.D. dissertation under faculty supervision. Prerequisite(s): advancement to candidacy and students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

May be taken once to meet course requirements for the master's degree. Students submit petition to sponsoring agency. The Staff

* Not offered in 2014-15

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Lower-Division Courses

50A. CAL Teach 1: Science and Mathematics (2 credits).

Introductory seminar exploring secondary students, teaching, and schools in the context of science and/or mathematics instruction. Concurrent participation in a secondary school internship required. Course material supports and enhances students' placement experiences. Prerequisite(s): Acceptance into CAL Teach and concurrent participation in a secondary school internship in a science or math classroom. Enrollment limited to 25. (General Education Code(s): PR-S.) The Staff

50B. CAL Teach 1: Mathematics (2 credits). F,W

Introductory seminar exploring secondary students, teaching, and schools in the context of mathematics instruction. Concurrent participation in a secondary school internship required. Course material supports and enhances students' placement experiences. Prerequisite(s): Acceptance into CAL Teach and concurrent participation in a secondary school internship in a math classroom. Enrollment limited to 25. (General Education Code(s): PR-S.) The Staff

50C. CAL Teach 1: Science (2 credits). F,W

Introductory seminar exploring secondary students, teaching, and schools in the context of science instruction. Concurrent participation in a secondary school internship required. Course material supports and enhances students' placement experiences. Prerequisite(s): Acceptance into CAL Teach and concurrent participation in a secondary school internship in a science classroom. Enrollment limited to 25. (General Education Code(s): PR-S.) The Staff

60. Introduction to Education: Learning, Schooling, and Society. F,S

Explores the foundations of learning and teaching, the social and political forces within schools and school systems in the U.S., and the educational policies and practices in culturally and linguistically diverse communities. (General Education Code(s): IS, E.) L. Bartlett, D. Ash

96. Theory and Practice of Peer-Guided Learning for Tutors and Learning Assistants (2 credits). F,W

Provides first-time tutors and supplemental-instruction learning assistants with the theoretical background and practical interactive teaching and learning strategies essential for planning, implementing, and evaluating effective peer-guided learning. Employment by Learning Support Services required. H. Gritsch De Cordova

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100A. Cal Teach 2: Science and Mathematics (2 credits). F

Examines students, schools, and science and/or mathematics instruction with emphasis on developing an instructional project aligned with state-mandated content standards. Concurrent participation in a secondary school internship required. Course content supports and enhances students' internship experience. (Formerly course 75A.) (General Education Code(s): W satisfied by taking this course and course 185L.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 50A, 50B, or 50C; and acceptance into the Cal Teach program. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. The Staff

100B. Cal Teach 2: Mathematics (2 credits). S

Examines students, schools, and mathematics instruction with emphasis on developing an instructional project aligned with state-mandated content standards. Concurrent participation in a secondary school internship required. Course content supports and enhances students' internship experience. (Formerly course 75B.) (General Education Code(s): W satisfied by taking this course and course 185L.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 50A, 50B, or 50C; and acceptance into the Cal Teach program. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. The Staff

100C. Cal Teach 2: Science (2 credits). S

Examines students, schools, and science instruction with emphasis on developing an instructional project aligned with state-mandated content standards. Student must concurrently participate in a K-12 school internship. Concurrent participation in a secondary school internship required. Course content supports and enhances students' internship experience. (Formerly course 75C.) (General Education Code(s): W satisfied by taking this course and course 185L.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 50A, 50B, or 50C; and acceptance into the Cal Teach program. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. The Staff

102. Education, Media, and Society. F

Focusing on ways the media (both news and the entertainment industry) portrays schools, teachers, and students to the public, investigates the way society views education, the way education is presented in the media, and the way education is influenced by society. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. (General Education Code(s): IM.) R. Glass

104. Ethical Issues and Teaching. W

Emphasizes a philosophical exploration of the moral complexities of teaching. Students read theoretical investigations of these complexities, and examine case studies that pose difficult moral questions and illuminate the dilemmas of everyday life in classrooms. Course is grounded in a dialogical approach to learning. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. R. Glass

115. K-12 Student Assessment. *

Provides an overview of educational testing. Appropriate use and interpretation of standardized, classroom achievement and special needs assessments are examined. Issues on fair testing of diverse populations of students are discussed within each topic area. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 50. The Staff

120. The Arts in Schools: Aesthetic Education Theory and Practice. W

Explores the historical legacy of the arts within education; considers aesthetic education as an inter-arts philosophical and practical endeavor; studies alternatives to the current situation of the arts in education; develops theory, curricula and methods necessary to teach the arts. Addresses both elementary and secondary teaching in the arts. Meets third-

Management UCDC Program Writing Program Theater Arts Yiddish	<p>course requirements. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. (General Education Code(s): IM.) B. Olsen</p> <p>125. Multicultural Children's Literature for Elementary Classrooms. S Offers opportunities for undergraduate and graduate students to learn about fundamental aspects of children's literature, increase their knowledge of range and quality of children's literature, enhance their understanding of multicultural children's literature, and develop ways to integrate children's literature into elementary- and middle-school curriculum areas. (Formerly Introduction to Teaching Children's Literature in Grades K-8.) Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. J. Scott</p>
Teaching and Administrative Staff	
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Search the Catalog	<p>128. Immigrants and Education. F Research and theory on the education of immigrant students. Major topics include the Americanization movement and America's changing demography, identity maintenance and change, home-school relations, and educators' roles in meeting the needs of culturally and linguistically diverse student populations. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. (General Education Code(s): ER, E.) E. Mosqueda</p>
	<p>135. Gender and Education. F Addresses the changing but continuing patterns of unequal expectations, opportunities, and treatment throughout the educational system for all students, female and male, who do not match a standard model of gender performance. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. C. Cruz</p>
	<p>140. Language, Diversity, and Learning. S Explores the intersection between language, diversity, and education to examine the education of youth who have been historically underserved by schools. Topics include dialect and register variation; language policy; and sociocultural perspectives on learning/teaching of language. Enrollment restricted to junior and senior students.</p>
	<p>Enrollment limited to 70. (General Education Code(s): ER, E.) L. Pease-Alvarez</p>
	<p>141. Bilingualism and Schooling. S Introduces participants to issues related to the schooling of students who speak languages other than or in addition to English. Uses a multidisciplinary perspective to understand the circumstances these students face in schools and considers approaches and policies that best meet their needs. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. (General Education Code(s): E.) G. Bunch</p>
	<p>160. Issues in Educational Reform. S Explores a variety of perspectives on key educational policy issues including desegregation, bilingual education, affirmative action, charter schools, national and state curriculum standards, student assessment and the assessment and certification of teachers.</p>
	<p>Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. R. Ogawa</p>
	<p>164. Urban Education. S Focuses on urban schooling through critical readings, fieldwork, group projects, and extensive writing. Students explore how socialization, marginalization, and assimilation impede or support academic success, how class intersects with "race", and how "culture" affects one's orientation to education. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. Satisfies American History and Institutions Requirement. (General Education Code(s): E.) E. Mosqueda</p>
	<p>170. East Asian Schooling and Immigration. W Focuses on an historical and contemporary study of education in Japan, China, Korea, Hong Kong, and Taiwan, and the adaptation to schooling in the U.S. of immigrant families from those cultures. Topics include the effects on schooling of language acquisition, religion and cultural practices, family patterns, socioeconomic status, career aspirations, and parental expectations. (Formerly Schools and Asian Cultures.) Prerequisite(s): Enrollment restricted</p>

to juniors, seniors, or education minors. Enrollment limited to 70. (General Education Code(s): CC.) J. Gordon

171. South and Southeast Asian Schooling and Immigration. S
Historical and contemporary study of education in India, Vietnam, Cambodia, Laos, and the Philippines, and the adaptation to schooling in the U.S. of immigrant families. Topics include: effects of language acquisition; religion and cultural practices; family patterns; socioeconomic status; career aspirations; and parental expectations. Prerequisite(s): Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. (General Education Code(s): CC.) J. Gordon

173. Seminar in Critical Pedagogy. F
Philosophical and pedagogical exploration of relationships among oppression, power, society, education, and change. Examines how history, power, economics, and discrimination shape societal perspectives and schooling practices, and considers ways to transform education. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. May be repeated for credit. The Staff

177. Teaching Culturally and Linguistically Diverse Students Math and Science. W
Examines equity issues in the learning and teaching of math and science in culturally and linguistically diverse school settings. Draws on multicultural, bilingual, and math/science education perspectives. Intended for undergraduate majors considering a K-12 teaching career. Satisfies an elective requirement for the minor in education program. Prior completion of course 180 is advised. Enrollment restricted to education or STEM minors, physics education majors, or students with math education concentration or Earth sciences science education concentration, or biology B.A. bioeducation. Enrollment limited to 70. (General Education Code(s): ER.) E. Mosqueda

178. Advanced Educational Studies. *
Advanced academic development, field research, and guided experiential learning for students planning to work in education. Enrollment by interview only. Enrollment restricted to juniors and seniors. May be applied only once to the minor. May be repeated for credit. The Staff

180. Introduction to Teaching. F,W
Designed to encourage students to think about teaching in new ways. Assumptions about teaching and schooling are examined as well as considering what it takes to teach so that children learn and understand. Not a course in how to teach, but an opportunity to reconsider what teaching should try to accomplish and what kinds of learning teachers should foster. Practicum in the schools of 30 hours per quarter required. Prerequisite(s): course 60. Enrollment restricted to education minors or by permission of instructor. Enrollment limited to 120. (General Education Code(s): PR-S.) B. Olsen, P. Stoddart

181. Race, Class, and Culture in Education. S
Examines the schooling experience and educational attainment of racial/ethnic minority students in the U.S. Focuses primarily on domestic minorities. Addresses issues of variability between and within minority groups and the role of cultural, structural, and psychological factors in the educational attainment of these students. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. (General Education Code(s): ER, E.) C. Cruz

182. American Teacher. *
Examines multiple and competing images of "teachers" and, more specifically, notions of the "good teacher"; also explores social, cultural, historical, and policy context of teachers' work in the U.S. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. The Staff

183. Children's Mathematical Thinking. *
Provides an introduction to children's mathematical thinking and an overview of major themes, issues, and questions that researchers in mathematics education have studied in relation to children's mathematical thinking. Prerequisite(s): course 60. Enrollment restricted to junior and senior education minors. Enrollment limited to 70. J. Moschkovich

185B. Introduction to Mathematics Education. W Provides an introduction to principles and practices for mathematics education; examines how research on learning and teaching mathematics informs approaches to teaching mathematics; provides an introduction to national and state standards, mathematics curricula, and other current issues in mathematics education. (Formerly Introduction to Teaching Mathematics.) Enrollment restricted to majors in mathematics, physics, Earth sciences, computer science, computer engineering, and electrical engineering or to STEM minors or by permission of the instructor. Enrollment limited to 70. J. Moschkovich
185C. Introduction to Teaching Science. S An introduction to the principles and practices for teaching science in secondary classrooms. Course examines theoretical and practical approaches to teaching science, provides an introduction to national and state standards and an overview of science curricula and current issues in science teaching. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 70. J. Shaw
185L. Introduction to Teaching: Cal Teach 3 (3 credits). W Supplements theoretical and practical introduction to the teaching of science or mathematics with subject-pedagogical approaches. Concurrent participation in an advanced Cal Teach internship provides context to apply theory and practical techniques. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 50A, 50B, or 50C; course 100A, 100B, or 100C; course 185B or 185C. Enrollment restricted to juniors and seniors or education minors. (Formerly course 180A.). (General Education Code(s): W satisfied by taking this course and one of the following: courses 100A, 100B, and 100C.) Enrollment limited to 30. The Staff
187. Cognition and Instruction. * Addresses the question, "How do people learn?" by examining theories of learning and research on cognition, learning, and instruction. Enrollment restricted to juniors, seniors, or education minors. Enrollment limited to 60. The Staff
194. Group Projects. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff
194F. Group Projects (2 credits). F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff
197A. Cal Teach Special Project (1 credit). F,W,S Work with K-12 students on science or math projects, ideally involving inquiry-based learning. Site supervision provided by a credentialed teacher. Project-dependent reading and writing assignments negotiated with instructor. Projects will be offered as available or initiated by student. Enrollment by interview only. Pre-requisite(s): course 50A, 50B, or 50C. Enrollment restricted to majors in the physical and biological sciences and majors in the school of engineering. May be repeated for credit. The Staff
197B. Cal Teach Special Project (2 credits). F,W,S Work with K-12 students on science or math projects, ideally involving inquiry-based learning. Site supervision provided by a credentialed teacher. Project-dependent reading and writing assignments negotiated with instructor. Projects will be offered as available or initiated by student. Enrollment by interview only. Pre-requisite(s): course 50A, 50B, or 50C. Enrollment restricted to majors in the physical and biological sciences and majors in the school of engineering. May be repeated for credit. The Staff
197C. Cal Teach Special Project (3 credits). F,W,S Work with K-12 students on science or math projects, ideally involving inquiry-based learning. Site supervision provided by a credentialed teacher. Project-dependent reading and writing assignments negotiated with instructor. Projects will be offered as available or initiated by student. Enrollment by interview only. Pre-requisite(s): course 50A, 50B, or 50C. Enrollment restricted to majors in the physical and biological sciences and majors in the school of engineering. May be repeated for credit. The Staff
198. Independent Field Study. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff
198F. Independent Field Study (2 credits). F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Beginning Student Teaching. F

A required course that introduces students to the diverse cultural and linguistic settings of today's classrooms. Classroom practices, instructional strategies, and analysis are emphasized. First course in the student teaching placement series. Placements are used to examine and apply teaching methods while developing classroom management skills. Class meetings include discussion and demonstration of teaching methods. (Formerly Applied Classroom Analysis and Methods: Beginning Student Teaching.) Enrollment restricted to MA/credential students. The Staff

201. Intermediate Student Teaching. W

Designed to provide students enrolled in the UCSC teacher education program a coherent, integrated, pre-professional experience in public school classrooms. Students assume part-time student teaching responsibilities totalling 14–16 hours per week under the direct supervision of an exemplary classroom teacher. Weekly seminars and ongoing supervision by department staff are required. Prerequisite(s): course 200. Enrollment restricted to MA/credential students. The Staff

201A. Intermediate Student Teaching: Single Subject. W

Provides advanced pre-professional experience for single subject teaching candidates who progressively assume full-time responsibility for public school student teaching beginning in winter quarter. Taken concurrently with course 201. Weekly supervision and seminars with teacher supervisors are required. Prerequisite(s): course 200. Enrollment restricted to MA/credential students. The Staff

202A. Advanced Student Teaching. S

Designed for students who have extensive field and course experience in education, and who wish to qualify for the single-subject or multiple-subject teaching credential by undertaking a quarter of full-time, supervised student teaching. Prerequisite(s): course 201. Enrollment restricted to M.A./credential students. The Staff

202B. Advanced Student Teaching. S

Designed for students who have extensive field and course experience in education, and who wish to qualify for the single-subject or multiple-subject teaching credential by undertaking a quarter of full-time, supervised student teaching. Prerequisite(s): course 201. Enrollment restricted to M.A./credential students. The Staff

202C. Advanced Student Teaching. S

Designed for students who have extensive field and course experience in education, and who wish to qualify for the single-subject or multiple-subject teaching credential by undertaking a quarter of full-time, supervised student teaching. Prerequisite(s): course 201. Enrollment restricted to M.A./credential students. The Staff

203. Teaching English Language Development: Foundations, Approaches, and Strategies. W

This course will help future educators develop a practical theory for teaching English as a second language in K–5 schools. Topics include the theoretical foundation for language acquisition; current trends and research in the field; the role of culture in teaching English learners; language assessment; and the design of instructional units. Also focuses on teaching social studies to English learners. Enrollment restricted to M.A./credential students. (Formerly, Methods of English Language Development: Multiple Subject Credential) Enrollment restricted to MA/credential students. The Staff

204. Methods of English Language Development: Single Subject. F

Course helps future educators develop a practical theory for teaching English in the elementary and secondary schools to students who speak other languages. Topics include current trends in the field, language assessment ,and the design of instructional units. Enrollment restricted to MA/credential students. G. Bunch

205. Teaching, Learning, and Schooling in a Diverse Society: Multiple Subject. *
Required for master's students in education. Three basic units comprise the subject matter: teaching/learning, with such topics as development, learning, pedagogy, and socialization theories; second, schooling, as the context of teaching/learning both in its existent structures and its reform movements; third, the sociocultural context in which educational institutions exist, topics such as cultural and historical forces, political and economic condition, family, and community structures. Enrollment restricted to MA/credential students. The Staff
206. Teaching, Learning, and Schooling: Single Subject. *
Required for master's students in education. Three basic units comprise the subject matter: teaching/learning, with such topics as development, learning, pedagogy, and socialization theories; schooling, as the context of teaching/learning both in its existent structures and its reform movements; and the sociocultural context in which educational institutions exist, including topics such as cultural and historical forces, political and economic conditions, family, and community structures. Enrollment restricted to MA/credential students.
Enrollment limited to 30. The Staff
207. Social Foundations of Education. *
A sustained inquiry into the social, political, economic, and historical foundations of schools with an emphasis on community attitudes toward education. Student narratives of engagement and resistance will provide a basis for insights and interventions useful to educators. Enrollment restricted to MA/credential students. The Staff
208. Portfolio Development (2 credits). *
Provides student and faculty adviser with time to confer over the completion of the required portfolio. Enrollment restricted to MA/credential students. The Staff
210. Health, Safety, and Community (2 credits). *
Addresses the preparation of teachers for creating a supportive, healthy environment for student learning. Covers topics related to physical, emotional, and social health. Enrollment restricted to MA/credential students. The Staff
211. Topics in Elementary Education: Teaching Special Populations (2 credits). F
Addresses the preparation of teachers for meeting needs of special populations within the general education setting. Covers basic knowledge, skills, and strategies. Enrollment restricted to MA/credential students. The Staff
- 212A. Bilingualism and Biliteracy: History, Politics, Theory, and Practice (2 credits). F
Taught in Spanish. Prepares future bilingual teachers to be knowledgeable about history, politics, theory, and practices related to bilingual instructional programs. Topics: second-language acquisition, bilingual-program models, equity pedagogy. Enrollment restricted to MA/credential students. The Staff
- 212B. Bilingualism and Biliteracy: Language, Literacy and Content Instruction (2 credits). W
Taught in Spanish. Prepares future bilingual teachers to teach language, literacy, and the content areas in ways that address the needs of culturally and linguistically diverse students. Topics: literacy in two languages; academic language; assessment. Enrollment restricted to MA/credential students. The Staff
- 212C. Bilingualism and Biliteracy: Community and School Partnerships (2 credits). S
Taught in Spanish. Provides opportunities for future bilingual teachers to develop culturally relevant practices that build collaboration between the school, students' families, and community. Topics: Latino culture and history, school-parent communication. Enrollment restricted to MA/credential students. The Staff
213. Child and Adolescent Development for Educators (2 credits).
Addresses theories of child and adolescent development and how these theories apply to student success in school. Topics include: cognitive, social, emotional, and physical development, and how this knowledge influences decisions teachers make about instruction and their interaction with students. Enrollment restricted to graduate students.
Enrollment limited to 25. The Staff
217. Topics in Elementary Education: Physical Education (2 credits). *
Examines pedagogical understanding in teaching physical education. Introduces candidates to theoretical and research basis in physical education and content standards and

frameworks. Also investigates and presents instructional practices. Enrollment restricted to MA/credential students. The Staff

218. Topics in Elementary Education: Visual Arts (2 credits). *

Examines pedagogical understanding in teaching visual arts. Introduces candidates to theoretical and research basis for teaching visual arts and content standards and frameworks. Also investigates and presents instructional practices. Enrollment restricted to MA/credential students. The Staff

219. Topics in Elementary Education: Performing Arts (2 credits). *

Examines pedagogical understanding in teaching performing arts. Introduces candidates to theoretical and research basis for teaching performing arts and content standards and frameworks. Also investigates and presents instructional practices. Enrollment restricted to MA/credential students. The Staff

220. Reading and Language Arts for Elementary Classrooms. F

This course provides both a theoretical and practical foundation for literacy instruction, emphasizing reading and language arts instruction in grades K-8. Interactive instruction and field experience will be used to examine curricula, methods, materials, and literacy evaluation. Enrollment restricted to MA/credential students. J. Scott

221. Science Learning and Teaching in Elementary Classrooms. W

Examines constructivist and sociocultural approaches to the learning and teaching of science in elementary classrooms, including beliefs about the nature of science and theories of how children learn science. Provides a critical overview of curricula, instructional theories, and multiple approaches to teaching the "big ideas" in elementary science. Students are billed a materials fee. Enrollment restricted to MA/credential students. J. Shaw

222. Mathematics Learning and Teaching in Elementary Classrooms. F

This course is required for the multiple subject credential. Examines constructivist and sociocultural approaches to the learning and teaching of mathematics in elementary classrooms, including the nature of mathematics and theories of how children learn mathematics. Provides an introduction to mathematics teaching standards and a critical overview of curricula, instructional theories, and multiple approaches to teaching the "big ideas" in elementary mathematics. Enrollment restricted to MA/credential students. A. England, J. Wilson

225. Reading Across the Curriculum in Middle School and Secondary. *

Provides a theoretical and practical foundation for teaching reading within content area instruction in middle school and secondary classrooms. Field experiences and interactive instruction will facilitate learning about strategies, curricula, methods, materials, and observation. Intended for students pursuing a single subject credential. Enrollment restricted to MA/credential students. The Staff

226. English Teaching: Theory and Curriculum. F

Required for the single subject English credential student. Examines sociocultural approaches to the learning and teaching of English in secondary classrooms, including theories of how children learn English language, literature, and composition. Enrollment restricted to MA/credential students. B. Olsen

227. English Teaching for Secondary Classrooms. W

Prepares English single subject credential candidates for student teaching in winter and spring. Course focuses on developing curricula and strategies in the content area. Through classroom placements, students observe and apply techniques to develop curriculum units used in student teaching. Enrollment restricted to MA/credential students. The Staff

228. Math Education: Research and Practice. F

Examines research on the learning and teaching of mathematics. Topics include the nature of mathematics cognition and learning, how children learn mathematics, mathematical discourse, and perspectives on addressing diversity in mathematics classrooms. Course is required for M.A./credential students in secondary (single subject) mathematics and of Ph.D. students in mathematics education. Enrollment restricted to MA/credential students. J. Moschkovich

229. Teaching Mathematics in the Secondary Classroom. W

Examines constructivist and sociocultural approaches to teaching mathematics in the

secondary classroom. Course will provide an introduction to mathematics teaching standards and a critical overview of curricula, instructional theories, and multiple approaches to teaching the "big ideas" in secondary mathematics. Required for mathematics secondary credential. Prerequisite(s): course 228. Enrollment restricted to MA/credential students. The Staff

230. Science Education: Research and Practice. F

Examines theoretical approaches to the learning and teaching of science including the nature of scientific knowledge, theories of how children learn science, approaches to scientific discourse, and perspectives on addressing diversity in science classrooms. Course is required for single subjects science credential. Enrollment restricted to MA/credential students. D. Ash

231. Teaching Science in the Secondary Classroom. W

Examines constructivist and sociocultural approaches to teaching science in secondary classrooms. Course will provide a critical overview of curricula, instructional theories, and multiple approaches to teaching the "big ideas" in science. Students are billed a materials fee. Enrollment restricted to MA/credential students. The Staff

232. Social Science: Theory and Curriculum. F

Required for the single subject social science credential student. Tracks both the implicit and explicit connections between theory and practice, illustrating that theory suggests best practice while practice informs theory-formation and testing. Enrollment restricted to MA/credential students. C. Cruz

233. Social Science Teaching for Secondary Classrooms. W

Prepares social science single subject credential candidates for student teaching in winter and spring. Course focuses on developing curricula and strategies in the content area. Through classroom placements, students observe and apply techniques to develop curriculum units that are used in student teaching. Enrollment restricted to MA/credential students. The Staff

235. Introduction to Educational Inquiry. F

Addresses foundational knowledge needed to understand and conduct educational inquiry and research. Topics include epistemology in the human sciences, philosophical foundations of modern research strategies, and general classes of research investigations in education. Enrollment restricted to graduate students. Enrollment limited to 15. P. Stoddart

236. Quantitative Methods in Educational Research. W

Promotes intermediate-level knowledge of quantitative research methods in educational settings. Students learn the foundations of quantitative data theory, general logic behind statistical inference, and specific methods of data analysis in educational contexts. Enrollment restricted to graduate students. Enrollment limited to 15. E. Mosqueda

237. Qualitative Research Methods. S

Graduate level introduction to qualitative methods, with special attention to ethnographic research on schooling. Moves from overview of different methods, through examination of selected studies, to discussion of issues in research design, data collection, analysis, and writing. Enrollment restricted to graduate students; priority is given to graduate students in education. Enrollment limited to 12. L. Bartlett

250. Teacher Thinking, Teacher Knowledge, and Teacher Identity. *

This doctoral seminar explores recent research on teacher thinking, teacher knowledge, and teacher identity to examine interrelationships among teachers' perspectives, preparation experience, biographies, work contexts, career shapes, professional practices, and effects on student achievement. Enrollment restricted to graduate students. Enrollment limited to 15. B. Olsen

251. Analysis of Activity and Interaction in Educational Settings. *

Analyzes topics, which vary systematically from year to year, including analysis of classroom interaction, video recording and transcription, coding and analysis of discourse data, and software programs for qualitative analysis. Prerequisite(s): course 237. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. The Staff

252. Hermeneutics of Education. *

Investigates philosophical hermeneutics to deeply interrogate education. Addresses such questions as: What is hermeneutics? How is education an hermeneutic enterprise? How does knowing hermeneutics deepen the ability to engage in education research? Enrollment restricted to graduate students. Enrollment limited to 12. B. Olsen

253. Research Design in Mathematics and Science Education. *

Examines multiple approaches to designing research studies in mathematics and science education. Introduces multiple types of research designs and principles used by education researchers examining mathematics/science learning and teaching. Enrollment restricted to graduate students. Enrollment limited to 15. J. Moschkovich

254. Critical and Alternative Paradigms in Education Research. *

Examines theoretical foundations of critical and alternative research paradigms commonly used in education, including critical ethnography, participatory research, counter-storytelling, and social-design experiments. Examines critiques of qualitative/quantitative research from feminist and critical theory; surveys how such critiques have informed the development of new paradigms in education research; and explores the benefits and limits of selected alternative paradigms. Enrollment restricted to graduate students. Enrollment limited to 15. C. Cruz

255. Intermediate Quantitative Methods. *

Focuses on the applied statistical modeling and analysis of educational data (large-scale data sets), not on the mathematical foundations of science. Students learn to address quantitative research questions using general linear model (GLM) statistical methods. GLM includes regression analysis, analysis of variance (ANOVA), and analysis of covariance (ANCOVA). Students learn statistics by doing statistics. Prerequisite(s): introductory statistics course (course 236 or equivalent). Enrollment restricted to graduate students. Enrollment limited to 15. E. Mosqueda

256. Advanced Qualitative Analysis in Education Research. S

Emphasizes the analysis of qualitative data in education research and introduces interpretive analytical approaches for its use with empirical data, the use of coding software for ethnographic analysis, and video recording and transcription. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. C. Cruz

260. The Teacher and The School: An Investigation of Related Practice, Reform, and Research. *

Explores empirical and theoretical interconnections between teachers and teaching on the one side, and schools as situated organizations on the other. The course examines these various interconnections in relation to contemporary educational research, practice, and policy reform. Enrollment restricted to graduate students. Enrollment limited to 12. B. Olsen

261. Thinking, Learning, and Teaching. W

Examines multiple theoretical perspectives on thinking, learning, and teaching; the development of the whole person in a variety of cultural contexts; the roles thinking, learning, and teaching play in that development; and how researchers' and educators' conceptions shape instruction. Enrollment restricted to graduate students. Enrollment limited to 15. J. Scott

262. Social and Cultural Context of Education. F

Application of anthropological and sociological theories to study of education. Examines social, cultural, and linguistic context of schooling with particular attention to role of race, class, culture, power, and language in influencing schooling outcomes. Enrollment restricted to graduate students. Enrollment limited to 15. M. Gibson

263. Foundations of Educational Reform. S

Provides students with multiple analytic perspectives from which to examine important educational issues by analyzing political, historical, and philosophical origins of educational reform in the U.S. and internationally. Enrollment restricted to graduate students. Enrollment limited to 15. R. Ogawa

264. Research on Teacher Development and Teacher Education. *

Addresses personal and professional development of teachers. Explores models of teacher education with specific attention to methods and processes by which teachers can be better prepared to work with culturally and linguistically diverse students. Enrollment restricted to graduate students. Enrollment limited to 15. P. Stoddart

265. Teacher as Educational Policy Maker. *

Focuses on the role teachers play in making/implementing educational policy. Addresses how this topic is implicated in enhancing the educational opportunities available to students who, historically, have been underserved by schools. Enrollment restricted to graduate students. Enrollment limited to 15. L. Pease-Alvarez

266. Program Evaluation and Action Research in Educational Reform. *

Overview of the purpose of and practice in program evaluations in a variety of contexts with a specific focus on educational settings. Students learn the techniques of program evaluation; the historical and theoretical context of program evaluations, including its relation to experimental research; and how action research can be used in conducting field-based evaluations. Students should be familiar with basic quantitative and qualitative methodologies. Enrollment restricted to graduate students. Enrollment limited to 15. K. Tellez

268. Schools, Communities, and Families. W

Examines the nexus of schools, communities, and families, and, in particular, how collaboration across institutional boundaries can facilitate school and community reform. Enrollment restricted to graduate students. Enrollment limited to 15. R. Glass

269A. First-Year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for first-year doctoral students. Students develop essential skills for success as scholars, discuss issues in educational research and practice, and are introduced to research by Education Department faculty. Enrollment restricted to education graduate students. Enrollment limited to 15. G. Bunch

269B. First-Year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for first-year doctoral students. Students develop essential skills for success as scholars, discuss issues in educational research and practice, and are introduced to research by Education Department faculty. Enrollment restricted to education graduate students. Enrollment limited to 15. G. Bunch

269C. First-Year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for first-year doctoral students. Students develop essential skills for success as scholars, discuss issues in educational research and practice, and are introduced to research by Education Department faculty. Enrollment restricted to education graduate students. Enrollment limited to 15. G. Bunch

270A. Second-Year Professional Development Seminar (2 credits). *

Three-quarter seminar supports professional development for second-year doctoral students. Activities include preparation of research and conference proposals, presentation of second-year project findings, and attendance at department colloquia. Enrollment restricted to second-year Ph.D. students. Enrollment limited to 12. J. Scott

270B. Second-Year Professional Development Seminar (2 credits). *

Three-quarter seminar supports professional development for second-year doctoral students. Activities include preparation of research and conference proposals, presentation of second-year project findings, and attendance at department colloquia. Enrollment restricted to second-year Ph.D. students. Enrollment limited to 12. J. Scott

270C. Second-Year Professional Development Seminar (2 credits). *

Three-quarter seminar supports professional development for second-year doctoral students. Activities include preparation of research and conference proposals, presentation of second-year project findings, and attendance at department colloquia. Enrollment restricted to second-year Ph.D. students. Enrollment limited to 12. J. Scott

271. Theoretical Perspectives on Learning and Using Literacy. S

Examines theoretical perspectives, educational issues, and scholarship related to use and

development of literacy among diverse populations, particularly those who have not fared well in U.S. schools. Enrollment restricted to graduate students. Enrollment limited to 12. J. Scott

272. Sociolinguistics in Education. *

Investigates discipline of sociolinguistics and explores actual ways in which sociolinguistics has become a useful lens for better understanding teaching, learning, and schooling. Conduct own sociolinguistic analyses of data collected for culminating project. Enrollment restricted to graduate students. Enrollment limited to 15. B. Olsen

273. Language Acquisition, Bilingualism, and Education. *

Foundations of first- and second-language acquisition and bilingualism with emphasis on implications for education in linguistically diverse settings. Topics include linguistic, cognitive, sociolinguistic, and sociocultural approaches to development of languages and the nature of individual and societal bilingualism. Enrollment restricted to graduate students. Enrollment limited to 15. G. Bunch

274. Language and Power in Education. W

Examines relationships between sociopolitical struggles and language/language practices. Students study ways in which Marxism, critical theory, and post structuralism have represented links between language and power, and investigate contemporary studies of language and power in education. Enrollment restricted to graduate students. Enrollment limited to 15. B. Olsen

276. Theory and Practice of Writing. *

Explores first and second language-writing theory, research, and practice, especially relating to language minority students and others considered academically under-prepared. Focuses on educational settings from pre-school settings including families and communities. Enrollment restricted to graduate students. Enrollment limited to 15. G. Bunch, L. Pease-Alvarez

277A. Second-year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for second-year doctoral students as they prepare their qualifying materials and begin dissertation work.

Prerequisite(s): courses 269 A-B-C. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

277B. Second-year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for second-year doctoral students as they prepare their qualifying materials and begin dissertation work.

Prerequisite(s): courses 269 A-B-C. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

277C. Second-year Doctoral Proseminar (2 credits). *

This three-quarter seminar supports professional development for second-year doctoral students as they prepare their qualifying materials and begin dissertation work.

Prerequisite(s): courses 269 A-B-C. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

278. Critical Exploration of Reading Theory and Practice. *

Doctoral seminar that examines historical and current research on reading processes and instructional practices. Intensive study of factors affecting the development of proficient, engaged, and reflective readers who can acquire new knowledge from text. Enrollment restricted to graduate students. Enrollment limited to 15. J. Scott

279A. Dissertation Supervision for Ed.D.. *

Supervision of Ed.D. candidate through third and fourth year of research analysis, writing, and editing of dissertation. Preparation for oral defense and assistance with bringing dissertation to standards of publication and conference presentation. Enrollment restricted to Ed.D. graduate students. Enrollment limited to 20. The Staff

279B. Dissertation Supervision for Ed.D.. *

Supervision of Ed.D. candidate through third and fourth year of research analysis, writing, and editing of dissertation. Preparation for oral defense and assistance with bringing dissertation to standards of publication and conference presentation. Enrollment restricted to Ed.D. graduate students. Enrollment limited to 20. The Staff

- 279C. Dissertation Supervision for Ed.D.. *
Supervision of Ed.D. candidate through third and fourth year of research analysis, writing, and editing of dissertation. Preparation for oral defense and assistance with bringing dissertation to standards of publication and conference presentation. Enrollment restricted to Ed.D. graduate students. Enrollment limited to 20. The Staff
280. Academic Language. S
Considers and critiques conceptualizations of the language used for academic pursuits, from the early years of schooling to higher education. Focuses on implications for research and practice related to the education of students in linguistically diverse schools and societies. Enrollment restricted to graduate students. Enrollment limited to 15. G. Bunch
281. Conceptual Change in Science and Mathematics. *
Examines approaches in cognitive science, mathematics education, and science education to documenting student conceptions in science and mathematics, defining conceptual change, and describing relationship between conceptual change and learning with understanding. Enrollment restricted to graduate students. Enrollment limited to 12. J. Moschkovich
282. Informal Learning in Sciences and Mathematics. *
Explores research on learning outside of school in multiple settings such as museums, after-school clubs, aquariums, workplaces, and homes. Readings draw from multiple fields and disciplines, including cognitive psychology, cognitive anthropology, cognitive science, education, museum education and evaluation, science, and mathematics education. Examine theoretical approaches to describing and understanding how people learn science and mathematics outside of school, empirical studies documenting learning in multiple non-school settings, and diversity issues in out-of-school settings. Enrollment restricted to graduate students. Enrollment limited to 15. D. Ash
283. Equity and Social Justice in Mathematics and Science Education. *
Examines the theory, research, policy and practice of social justice and equity in mathematics and science education in local, national, and international contexts. Emphasizes the promotion of equity and critical mathematics and science literacy in schools and communities. Enrollment restricted to graduate students. J. Shaw
284. Gender in Mathematics and Science Education. *
Explores basic aspects of gender in the fields of mathematics and science education. Discusses historical trends, current dilemmas, and how science and mathematics block or enable access for women. Enrollment restricted to graduate students. Enrollment limited to 15. D. Ash
285. Culture and Learning. *
Examines multiple approaches to the study of the relation between culture and learning. Readings include historical and contemporary perspectives from cognitive science, cognitive anthropology, cross-cultural psychology, cultural psychology, and socio-cultural theories as frameworks for the study of culture and learning. Enrollment restricted to graduate students. Enrollment limited to 15. J. Moschkovich
286. Special Topics in Math and Science Education. *
Focuses on particular issues of theoretical importance to research in mathematics and science education. Topics vary from year to year. Particular issues in cognition, learning, teaching, curriculum, and assessment in mathematics and science education may be covered. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. J. Moschkovich, D. Ash, J. Shaw
287. Issues in Educational Assessment. *
Familiarizes students with the basic concepts of educational assessment and explores issues related to the design and implementation of educational assessment as well as the application of educational assessment in educational research. Enrollment restricted to graduate students. Enrollment limited to 12. J. Shaw
288. Ethnographies of Education. *
Offers opportunity to critique a range of book-length ethnographic studies of education focusing on relationship between culture, learning, and schooling in the U.S. with comparative studies from other countries. Enrollment restricted to graduate students.

Enrollment limited to 12. The Staff

289. School Organization. *

Applies multiple perspectives drawn from organizational theory, highlighting important aspects of organization of schools, including their operational environment, instructional organization, and professional and bureaucratic dimensions. Enrollment restricted to graduate students. Enrollment limited to 12. R. Ogawa

290. CHAT and Educational Practice and Research. *

Introduction to cultural-historical activity theory (CHAT) based on work of Vygotsky, Bakhtin, and contemporary developments of their ideas. Explores the utility of CHAT as a framework for thinking about educational practice and research. Enrollment restricted to graduate students. Enrollment limited to 15. J. Moschkovich

291. Globalization and Transnationalism in Education. W

Examines educational access and advancement in several nations affected by globalization, national policies, and localized identity and opportunity structures. Attention to language and cultural expectations relevant to research in international contexts and how this knowledge provides reflection on the American condition. (Formerly "Comparative and International Education.") Enrollment restricted to graduate students. Enrollment limited to 15. J. Gordon

292. Ideology and Education. *

Philosophical study of the theory of ideology from Marx to the present and how ideologies (racism, sexism, classism, linguicism, abilityism) become embodied, reproduced, resisted, and transformed (and particularly the role of education therein). Enrollment restricted to graduate students. Enrollment limited to 22. R. Glass

293A. Research Apprenticeship (2 credits). F,W,S

Research apprenticeship under guidance of faculty member during first or second year of doctoral studies. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

293B. Research Apprenticeship. F,W,S

Research apprenticeship under guidance of faculty member during first or second year of doctoral studies. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

294. Second-Year Research Project. F,W,S

Doctoral students work with faculty advisors to plan, carry out, and write up small independent research project during second year of graduate studies. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

295. Critical Theories of Education. *

Investigates critical theories in education. Situates the themes against and within critical theory and philosophic foundations of Paulo Freire's theory of liberation education. Elaborates these themes within the discourses on critical race theory and education, and feminism and education. Enrollment restricted to graduate students. Enrollment limited to 15. R. Glass

296. Educational Policy and the Context of Teachers' Work. F

Focuses on both the conceptual and methodological developments in the study of policy and on the research relation to the policy context of teachers' work. Enrollment restricted to graduate students. Enrollment limited to 12. L. Bartlett

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

298. TA Apprenticeship (2 credits). F,W,S

Students work with a faculty member who is teaching an undergraduate or MA/Credential course. Students will not be responsible for final grades, narrative evaluations, or holding discussion section. The expected course time commitment is limited to 2-3 hours per week, plus class meeting time. Students gain perspectives and practices of teaching

undergraduate and graduate courses, working with the instructor on lesson planning, class instruction, and grading some student work. Course cannot be repeated for course credit. Enrollment restricted to graduate students. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Electrical Engineering

[2014-15 General Catalog](#)

Baskin School of Engineering

335 Baskin Engineering Building

(831) 459-2158

<http://www.soe.ucsc.edu>[Faculty | Program Statement](#)

Lower-Division Courses

80J. Renewable Energy Sources. S

Introduction to energy storage and conversion with special emphasis on renewable sources. Fundamental energy conversion limits based on physics and existing material properties. Various sources, such as solar, wind, hydropower, geothermal, and fuel cells described. Cost-benefit analysis of different alternative sources performed, and key roadblocks for large-scale implementation examined. Latest research on solar cells and applications of nanotechnology on energy conversion and storage introduced. Students cannot receive credit for this course and course 81J. (General Education Code(s): PE-E, T2-Natural Sciences.) M. Isaacson

80S. Sustainability Engineering and Practice. F

Topical introduction to principles and practices of sustainability engineering and ecological design with emphasis on implementation in society. Provides an understanding of basic scientific, engineering, and social principles in the design, deployment, and operation of resource-based human systems, and how they can be maintained for this and future generations. No specialized background in engineering, science, or social sciences is assumed. (General Education Code(s): SR, T7-Natural Sciences or Social Sciences.) K. Monsen

80T. Modern Electronic Technology and How It Works. W

Basic knowledge of electricity and "how things work," how technology evolves, its impact on society and history, and basic technical literacy for the non-specialist. Broad overview of professional aspects of engineering and introduction and overview of basic systems and components. Topics include electrical power, radio, television, radar, computers, robots, telecommunications, and the Internet. (General Education Code(s): SI, T7-Natural Sciences or Social Sciences, Q.) K. Pedrotti

81C. Designing a Sustainable Future. S

Introduces key technological solutions to environmental problems; discusses their underlying principles; and examines their societal dimensions. Topics include: conventional and renewable energy; emerging technologies for transportation, energy efficiency clean water; planetary engineering; and lean manufacturing. (Formerly Technological Innovation and Environmental Challenges.) (Also offered as College Eight 81C. Students cannot receive credit for both courses.) (General Education Code(s): SI, T-2 Natural Sciences.) The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

94. Group Tutorial. F,W,S

A means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

94F. Group Tutorial (2 credits). F,W,S

A means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit.

The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

101. Introduction to Electronic Circuits. F,W

Introduction to the physical basis and mathematical models of electrical components and circuits. Topics include circuit theorems (Thevenin and Norton Equivalents, Superposition), constant and sinusoidal inputs, natural and forced response of linear circuits. Introduction to circuit/network design, maximum power transfer, analog filters, and circuit analysis using Matlab. Topics in elementary electronics including amplifiers and feedback.

Prerequisite(s): Physics 5C/N or 6C/N, and Mathematics 24 or previous or concurrent enrollment in Applied Mathematics and Statistics 20 or 20A. Concurrent enrollment in course 101L is required. S. Shin, J. Kubby

101L. Introduction to Electronic Circuits Laboratory (2 credits). F,W

Illustrates topics covered in course 101. One two-hour laboratory session per week. Students are billed for a materials fee. Prerequisite(s): Physics 5C/N or 6C/N; and Mathematics 24 or previous or concurrent enrollment in Applied Mathematics and Statistics 20 or 20A. Concurrent enrollment in course 101 is required. S. Shin, J. Kubby

103. Signals and Systems. F,S

The course covers the following topics: characterization and analysis of continuous-time signals and linear systems, time domain analysis using convolution, frequency domain analysis using the Fourier series and the Fourier transform, the Laplace transform, transfer functions and block diagrams, continuous-time filters, sampling of continuous time signals, examples of applications to communications and control systems. Prerequisite(s): courses 101/L and Applied Mathematics and Statistics 20 or 20A. P. Milanfar, B. Friedlander

103L. Signals and Systems Laboratory (2 credits). F,S

Use and operation of spectrum analyzers; advanced signal analysis using oscilloscopes; measuring impulse response, step response, frequency response, and computer analysis of real signals. MATLAB programming is taught and used as a tool for signal analysis. Students are billed a materials fee. Prerequisite(s): course 101 and 101L, and Applied Mathematics and Statistics 20 or 20A. Concurrent enrollment in course 103 required. P. Milanfar, B. Friedlander

104. Bio-electronics and Bio-instrumentations. *

Focuses on the analysis, design, and measurement of components and systems of biomedical devices which interface biological systems with electronics mechanics, and optics. Topics include: abiotic/biotic interface; low-power analog/digital circuits and systems; signal integrity; energy harvesting; wireless techniques; regulatory/ethical compliance tailored for both invasive and non-invasive biomedical applications.

Prerequisite(s): course 103. Enrollment restricted to juniors, seniors, and graduate students. The Staff

115. Introduction to Micro-Electro-Mechanical-Systems (MEMS) Design.

Begins with overview of MEMS devices and processes that are used to fabricate them. The basic governing equations for MEMS devices in different energy domains (mechanical, electrical, optical, thermal, and fluidic) reviewed, and both analytical and finite element coupled-domain modeling is used to design MEMS devices. Students work in teams to design, lay out, and fabricate MEMS devices and test structures using a standard multi-user

<p>Management</p> <ul style="list-style-type: none"> ■ UCDC Program ■ Writing Program ■ Theater Arts ■ Yiddish <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>process available through a foundry service. A presentation and term paper describing the design and layout will be required. Prerequisite(s): courses 101/L, 135/L, 145/L, Mathematics 19A and 19B, Mathematics 23A and 23B, and Mathematics 24 or Applied Mathematics and Statistics 20 or 20A, Physics 5A, 5B, 5C, and 5D. Enrollment limited to 15. The Staff</p> <p>122A. Collaborative Sustainability Project Design. F,W,S</p> <p>This course is the first quarter of a three quarter series of courses that together comprise the IDEASS Program (Impact Designs: Engineering and Sustainability through Student Service), which provides students with opportunities to plan, implement, and evaluate interdisciplinary sustainable design projects in the built environment for the Monterey Bay Region. In fall quarter students are introduced to project topics and background information. In collaboration with an outside mentor project teams design, revise, and complete a project plan including project goals and deliverables, timeline of key activities and major milestones, stakeholder map, evaluation plan, and budget (as applicable). Students apply online; selected applicants complete in-person interviews. (Formerly course 122.) Enrollment limited to 65. May be repeated for credit. M. Isaacson</p> <p>122B. Collaborative Sustainability Project Implementation. W</p> <p>The second of a three-quarter sequence that together comprise the IDEASS Program (Impact Designs: Engineering and Sustainability through Student Service) which provides opportunities for students to plan, implement, and evaluate interdisciplinary sustainable-design projects in the built environment for the Monterey Bay Region. In winter quarter, project teams work collaboratively to implement the project plans approved during the fall quarter. Students participate in a weekly seminary series that includes guest lectures and field trips as well as workshops in project management, public speaking, writing skills, and other professional development. Prerequisite(s): course 122A. Students apply online; selected applicants complete in-person interviews. Enrollment is restricted to juniors and seniors. M. Isaacson</p> <p>122C. Collaborative Sustainability Project Implementation. S</p> <p>The third of a three-quarter sequence that together comprise the IDEASS Program (Impact Designs: Engineering and Sustainability through Student Service) which provides opportunities for students to plan, implement, and evaluate interdisciplinary sustainable-design projects in the built environment for the Monterey Bay Region. In spring quarter, project teams work collaboratively to continue implementation of project plans approved during the fall quarter, then evaluate projects impacts. Students participate in a weekly seminary series that includes guest lectures and field trips as well as workshops in project management, public speaking, writing skills, and other professional development. Students also work in the community on educational public outreach regarding project impacts. Prerequisite(s): course 122A. Students apply online; selected applicants complete in-person interviews. Enrollment is restricted to juniors and seniors. M. Isaacson</p> <p>123A. Engineering Design Project I. *</p> <p>First of a two-course sequence that is the culmination of the engineering program. Students apply knowledge and skills gained in elective track to complete a major design project. Students complete research, specification, planning, and procurement for a substantial project. Includes technical discussions, design reviews, and formal presentations; engineering design cycle, engineering teams, and professional practices. Formal technical specification of the approved project is presented to faculty. Prerequisite(s): Electrical Engineering 171 and Computer Engineering 100; previous or concurrent enrollment in Computer Engineering 185 and in at least one of the following: Electrical Engineering 157, Computer Engineering 121 or Computer Engineering 118; permission of department and instructor. Students are billed a materials fee. (General Education Code(s): PR-E.) The Staff</p> <p>123B. Engineering Design Project II (7 credits). *</p> <p>Second of two-course sequence in engineering system design. Students fully implement and test system designed and specified in course 123A. Formal written report, oral presentation, and demonstration of successful project to review panel of engineering faculty required. Students are billed a materials fee. Prerequisite(s): course 123A. The Staff</p> <p>129A. Capstone Project I (2 credits). F</p> <p>First of a three-course sequence in which students apply knowledge and skills gained in</p>
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elective track to complete a major design project. In this first course, students complete the specification and planning for a substantial project. Topics covered: engineering design cycle, engineering teams, and professional practices. Prerequisite(s): course 171; and Computer Engineering 100; and Computer Engineering 185; and previous or concurrent enrollment in course 157 or Computer Engineering 118 or Computer Engineering 121. Enrollment restricted to seniors. Enrollment by permission of instructor. S. Petersen

129B. Capstone Project II. W

Second of a three-course sequence in which students apply knowledge and skills gained in elective track to complete a major design project. In this second course, students complete the training, research, and procurement for a substantial project and a preliminary implementation. Students are billed a materials fee. Prerequisite(s): courses 129A and 171; and Computer Engineering 100; and Computer Engineering 185; and previous or concurrent enrollment in course 157 or Computer Engineering 118 or Computer Engineering 121. Enrollment restricted to seniors. Enrollment by permission of instructor. (General Education Code(s): PR-E.) S. Petersen, The Staff

129C. Captone Project III. S

Third of a three-course sequence in which students apply knowledge and skills gained in this elective track to complete a major design project. In this third course, students work in teams to complete the project specified and advance on the results of the work in the first two courses. A formal written report, oral presentation, and demonstration of the successful project to a review panel of engineering faculty is required. Students are billed a materials fee. Prerequisite(s): courses 129B and 171; and Computer Engineering 100; and Computer Engineering 185; and previous or concurrent enrollment in course 157 or Computer Engineering 118 or Computer Engineering 121. Enrollment restricted to seniors. Enrollment by permission of instructor. J. Vesecky, (F) The Staff

130. Introduction to Optoelectronics and Photonics. F

Introduction to optics, photonics and optoelectronics, fiber optic devices and communication systems: Topics include: ray optics, electromagnetic optics, resonator optics, interaction between photons and atoms, dielectric waveguides and fibers, semiconductor light sources and detectors, modulators, amplifiers, switches, and optical fiber communication systems. Taught in conjunction with course 230. Students cannot receive credit for this course and course 230. Prerequisite(s): Physics 5B and 5C, or 6B and 6C; concurrent enrollment in course 130L. A. Yanik

130L. Introduction to Optoelectronics Laboratory (1 credit). F

Includes a series of projects to provide hands-on experience needed for basic concepts and laboratory techniques of optical fiber technology. Students are billed a materials fee. Prerequisite(s): Physics 5L-M-N, or 6L-M-N; concurrent enrollment in course 130. Enrollment limited to 30. A. Yanik

135. Electromagnetic Fields and Waves. W

Vector analysis. Electrostatic fields. Magnetostatic fields. Time-varying fields and Maxwell's equations. Plane waves. Prerequisite(s): course 101/L; Mathematics 23B; and Mathematics 24 or Applied Mathematics and Statistics 20 or 20A. Students must concurrently enroll in course 135. A. Yanik

135L. Electromagnetic Fields and Waves Laboratory (2 credits). W

Laboratory sequence illustrating topics in course 135. One two-hour laboratory session per week. Students are billed a materials fee. Prerequisite(s): course 101/L; Mathematics 23B; and Mathematics 24 or Applied Mathematics and Statistics 20 or 20A. Students must concurrently enroll in course 135. A. Yanik

136. Engineering Electromagnetics. S

Course will cover electromagnetic wave propagation, transmission lines, waveguides, and antennas. Prerequisite(s): course 135/L. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors or permission of instructor. The Staff

145. Properties of Materials. F

The fundamental electrical, optical, and magnetic properties of materials, with emphasis on metals and semiconductors: chemical bonds, crystal structures, elementary quantum mechanics, energy bands. Electrical and thermal conduction. Optical and magnetic properties. Prerequisite(s): Physics 5A/L, 5B/M, and 5C/N or 6A/L, 6B/M, and 6C/N.

Students must also concurrently enroll in course 145L. N. Kobayashi

145L. Properties of Materials Laboratory (2 credits). F

Laboratory sequence illustrating topics covered in course 145. One two-hour laboratory per week. Students are billed a materials fee. Prerequisite(s): Physics 5A/L, 5B/M, and 5C/N or 6A/L, 6B/M, and 6C/N. Students must also concurrently enroll in course 145. N. Kobayashi

151. Communications Systems. W

An introduction to communication systems. Analysis and design of communication systems based on radio, transmission lines, and fiber optics. Topics include fundamentals of analog and digital signal transmission in the context of baseband communications, including concepts such as modulation and demodulation techniques, multiplexing and multiple access, channel loss, distortion, bandwidth, signal-to-noise ratios and error control. Digital communication concepts include an introduction to sampling and quantization, transmission coding and error control. Prerequisite(s): courses 103, 101/L, and Computer Engineering 107 or probability theory and random variables background. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors or permission of instructor. H. Sadjadpour

152. Introduction to Wireless Communications. S

Introduction to the principles of wireless communications systems. Wireless propagation channels and their impact on digital communications. Modulation techniques for wireless systems and their performance. Multi-antenna systems and diversity. Multicarrier and spread spectrum. Multi-access methods: FDMA, TDMA, CDMA. The structure of cellular systems. Students cannot receive credit for this course and course 252. Prerequisite(s): Computer Engineering 107 and course 151, or by consent of instructor. Enrollment restricted to juniors and seniors. B. Friedlander

153. Digital Signal Processing. F

Introduction to the principles of signal processing, including discrete-time signals and systems, the z-transform, sampling of continuous-time signals, transform analysis of linear time-invariant systems, structures for discrete-time systems, the discrete Fourier transform, computation of the discrete Fourier transform, and filter design techniques. Taught in conjunction with Electrical Engineering 250. Students cannot receive credit for this course and Electrical Engineering 250. (Also offered as Computer Engineering 153. Students cannot receive credit for both courses.) Prerequisite(s): course 103. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors or permission of instructor. A. Fletcher

154. Feedback Control Systems. F

Analysis and design of continuous linear feedback control systems. Essential principles and advantages of feedback. Design by root locus, frequency response, and state space methods and comparisons of these techniques. Applications. (Also offered as Computer Engineering 141. Students cannot receive credit for both courses.) Prerequisite(s): course 103. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors, or by permission of instructor. Enrollment limited to 30. D. Milutinovic

157. RF Hardware Design. W

Engineering design cycle for wireless and RF systems: design, practical hardware implementation, and prototype. Prerequisite(s): courses 101/L, 103, and 171, and Computer Engineering 174; or consent of instructor. Concurrent enrollment in course 157L is required. Enrollment limited to 30. K. Pedrotti, S. Petersen

157L. RF Hardware Design Laboratory (2 credits). W

Laboratory to accompany course 157, emphasizing hardware-design practice and principles applies to RF apparatus. Students design and implement a substantial final project during the last half of the course. Students are billed a materials fee. Prerequisite(s): courses 101/L, 103, 171, and Computer Engineering 174; or consent of instructor. Concurrent enrollment in course 157 is required. Enrollment limited to 30. S. Petersen

171. Analog Electronics. S

Introduction to (semiconductor) electronic devices. Conduction of electric currents in semiconductors, the semiconductor p-n junction, the transistor. Analysis and synthesis of linear and nonlinear electronic circuits containing diodes and transistors. Biasing, small

signal models, frequency response, and feedback. Operational amplifiers and integrated circuits. Prerequisite(s): course 101/L; previous or concurrent enrollment in course 171L required. K. Pedrotti

171L. Analog Electronics Laboratory (2 credits). S

Laboratory sequence illustrating topics covered in course 171. One two-hour laboratory session per week. Students are billed a materials fee. Prerequisite(s): courses 101/L; previous or concurrent enrollment in course 171 required. K. Pedrotti

172. Advanced Analog Circuits. *

Analog circuit design covering the basic amplifier configurations, current mirrors, differential amplifiers, frequency response, feedback amplifiers, noise, bandgap references, one- and two-stage operational amplifier design, feedback amplifier stability, switched capacitor circuits and optionally the fundamentals of digital-to-analog and analog-to-digital converters. Emphasis throughout will be on the development of approximate and intuitive methods for understanding and designing circuits. Cannot receive credit for this course and course 221. Prerequisite(s): course 171. The Staff

173. High-Speed Digital Design. S

Studies of analog circuit principles relevant to high-speed digital design: signal propagation, crosstalk, and electromagnetic interference. Topics include electrical characteristics of digital circuits, interfacing different logic families, measurement techniques, transmission lines, ground planes and grounding, terminations, power systems, connectors/ribbon cables, clock distribution, shielding, electromagnetic compatibility and noise suppression, and bus architectures. (Formerly Computer Engineering 173.) Prerequisite(s): courses 101/L and 174. Previous or concurrent enrollment in course 173L required. Course 171 and Computer Engineering 121 recommended. Enrollment limited to 30. S. Petersen

173L. High-Speed Digital Design Laboratory (2 credits). S

Laboratory sequence illustrating topics covered in course 173. One two-hour laboratory session per week. Students are billed a materials fee. (Formerly Computer Engineering 173L.) Prerequisite(s): courses 101/L and 174. Previous or concurrent enrollment in course 173 required. Course 171 and Computer Engineering 121 recommended. Enrollment limited to 30. S. Petersen

174. Introduction to EDA Tools for PCB Design (3 credits). F

Focus on EDA tools for design of printed-circuit boards. Elements of design flow covered: schematic capture and simulation to final PCB layout. Final project is required. Students are billed a materials fee. (Formerly Computer Engineering 174.) Prerequisite(s): course 101/L or consent of instructor. S. Petersen

175. Energy Generation and Control. S

Introduces electrical energy generation, sensing, and control, emphasizing the emerging smart grid. Topics include 3-phase AC power systems, voltage and transient stability, fault analysis, grid protection, power-flow analysis, economic dispatch, and high voltage DC distribution (HVDC). Prerequisite(s): course 101. Concurrent enrollment in course 175L required. J. Vesecsky

175L. Energy Generation and Control Laboratory (2 credits). S

Computer analysis and simulation of energy generation, components, power-flow analysis, systems, and control covering topics from course 195. Weekly computer simulations reinforce the concepts introduced in course 175. Students are billed a materials fee. Prerequisite(s): course 101. Concurrent enrollment in course 175 required. J. Vesecsky

176. Energy Conservation and Control. F

AC/DC electric-machine drives for speed/position control. Integrated discussion of electric machines, power electronics, and control systems. Computer simulations. Applications in electric transportation, hybrid-car technology, robotics, process control, and energy conservation. Prerequisite(s): courses 103 and 171. Concurrent enrollment in course 176L is required. S. Petersen

176L. Energy Conversion and Control Laboratory (2 credits). F

Simulink-based simulations of electric machines/drives in applications such as energy conservation and motion control in robotics and electric vehicles. Students are billed a

materials fee. Prerequisite(s): courses 103 and 171. Concurrent enrollment in course 176 is required. S. Petersen

177. Power Electronics. W

Switch-mode power converter design and analysis. Non-switching power supplies.

Electronic power-factor correction. Soft switching. Power-semiconductor devices. Use in energy conservation, renewable energy, lighting, and power transmission. Prerequisite(s): course 103. Concurrent enrollment in course 177L is required. The Staff

177L. Power Electronics Laboratory (2 credits). W

Buck, boost, buck-boost, flyback, and forward converter design and control. Students are billed a materials fee. Prerequisite(s): course 103. Concurrent enrollment in course 177 is required. The Staff

178. Device Electronics. *

This course reviews the fundamental principles, device's materials, and design and introduces the operation of several semiconductor devices. Topics include the motion of charge carriers in solids, equilibrium statistics, the electronic structure of solids, doping, the pn junction, the junction transistor, the Schottky diode, the field-effect transistor, the light-emitting diode, and the photodiode. Prerequisite(s): courses 145/L and 171/L. Enrollment restricted to School of Engineering and Division of Physical and Biological Sciences majors or permission of instructor. The Staff

180J. Advanced Renewable Energy Sources. S

Provides a comprehensive overview of renewable energy sources. Fundamental energy-conversion limits based on physics and existing material properties discussed. Various sources and devices, such as solar, wind, hydropower, geothermal, and fuel cells described. Solar- and wind-site assessment, as well as biofuel energy balance, also discussed. Key scientific and economic roadblocks for large-scale implementation examined. Finally, the latest research on application of nanotechnology to energy conversion and storage introduced. Taught in conjunction with course 80J. Prerequisite(s): Mathematics 3 or Applied Mathematics and Statistics 3, 5 or 7. Enrollment limited to 30. (General Education Code(s): PE-E.) M. Isaacson

183. Special Topics in Electrical Engineering. *

Topics vary with instructor. Sample topics include smart grids, bioelectronics, antennas, etc. Enrollment by instructor permission. Approval of undergraduate adviser required for credit as an upper-division elective. May be repeated for credit. The Staff

193. Field Study. F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a faculty member of the electrical engineering program and a willing sponsor at the field site and using resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives by submitting a written and oral presentation. May not normally be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study with specific academic objectives carried out under the direction of a faculty member of the electrical engineering program and a willing sponsor at the field site and using resources not normally available on campus. Credit is based on the presentation of evidence of achieving the objectives by submitting a written and oral presentation. May not normally be repeated for credit. The Staff

195. Senior Thesis Research. F,W,S

Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. If using this course to replace the capstone design requirement (courses 123A and 123B), students must take course 157 or Computer Engineering 118 to fulfill the ABET team design experience. May be repeated for credit. The Staff

195F. Senior Thesis Research (2 credits). F,W,S

Prerequisite(s): petition on file with sponsoring agency. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Individual Study or Research. F,W,S

Provides for department-sponsored individual study program off campus, for which faculty supervision is not in person, but by correspondence. Students submit petition to

	<p>sponsoring agency. May be repeated for credit. The Staff</p> <p>198F. Independent Field Study (2 credits). F,W,S Provides for department-sponsored individual study program off campus for which faculty supervision is not in person, but by correspondence. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
	<p>199. Tutorial. F,W,S Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
	<p>199F. Tutorial (2 credits). F,W,S Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
	<h2>Graduate Courses</h2>
	<p>200. Research and Teaching in Electrical Engineering (3 credits). * Basic teaching techniques for TAs: responsibilities and rights, resource materials, computer security, leading discussion or lab sessions, presentations techniques, maintaining class records, electronic handling of homework, and grading. Examines research and professional training: use of library and online databases, technical typesetting, writing journal and conference papers, publishing, giving talks, and ethical issues. Enrollment restricted to graduate students. The Staff</p>
	<p>211. Introduction to Nanotechnology. * Introduction to underlying principles of nanoscience and nanotechnology. Intended for multidisciplinary audience with a variety of backgrounds. Introduces scientific principles and laws relevant on the nanoscale. Discusses applications in engineering, physics, chemistry, and biology. Prerequisite(s): course 145 or consent of instructor. Enrollment limited to 35. The Staff</p>
	<p>212. Introduction to BioMEMS. S Oriented to general engineering and science students. Topics included are: 1) microfabrication of silicon, glass, and polymer materials; 2) microfluidics and electrokinetics; 3) sensors, actuators, and drug-delivery systems; 4) micro total-analysis systems and lab-on-a-chip devices; 5) detection and measuring systems; 6) genomics, proteomics, DNA, and protein microarrays; 7) emerging applications in medicine, research, and homeland security; 8) packaging, power systems, data communication, and RF safety; and 9) biocompatibility and standards. Recommended for advanced undergraduates and graduate students in bioengineering, electrical engineering, chemistry, and health-related fields including biochemistry, molecular and cellular biology, physiology, and genetics. Enrollment restricted to graduate students, or by permission of the instructor. J. Kubby</p>
	<p>213. Nanocharacterization of Materials. W Covers the many characterization techniques used to characterize materials from volumes less than one cubic micrometer, including the basic physics of each method, the methodology used to get quantitative results, and the advantages and limitations of each technique. Enrollment restricted to graduate students, or to undergraduates majoring in engineering or science by permission of instructor. M. Isaacson</p>
	<p>215. Micro-Electro-Mechanical Systems (MEMS) Design. * Introduction to MEMS technology: covers basic microfabrication technologies, the governing physics for MEMS devices in different energy domains (mechanical, electrical, optical, thermal, and fluidic). Fabrication and design of MEMS devices illustrated using examples of existing research prototypes and commercial products. Students design, lay out, and fabricate an optical MEMS deformable mirror device for applications in adaptive optics. Students are billed a materials fee. Prerequisite(s): courses 135, 145, and 211; and Physics 5A, 5B, and 5C. Enrollment restricted to seniors and graduate students. May be repeated for credit. The Staff</p>
	<p>216. Nanomaterials and Nanometer-Scale Devices. S Materials controlled at nanometer-scale will revolutionize existing technologies. Course offers opportunities of learning materials that exhibit peculiar physical characteristics at the nanometer scales. Course also includes discussions of unique device architecture based</p>

on materials crafted at the nanometer scale. N. Kobayashi

218. Fundamentals of Nanoelectronics. S

Covers microscopic theory of electron transport in nanoelectronic devices and transistors. Topics include: ballistic transport; quantum conductance, NEGF-Landauer formalisms; molecular conductors; graphene and carbon nanotubes, quantum resonant tunneling devices; nanotransistors; and spintronics. Prerequisite(s): course 211 or 216. Enrollment restricted to graduate students. Students with background in basic matrix algebra and MATLAB programming may enroll with permission of instructor. A. Yanik

221. Advanced Analog Integrated Circuits. *

Analog integrated circuit design with emphasis on fundamentals of designing linear circuits using CMOS. Covers MOS devices and device modeling, current mirrors, op-amp design, op-amp compensation, comparators, multipliers, voltage references, sample-and-holds, noise, and an introduction to more complicated systems using these building blocks, such as phase locked loops and analog-to-digital converters. If time permits, integrated circuit layout issues and device/circuit fabrication. Students cannot receive credit for this course and course 172. Prerequisite(s): course 171 or equivalent; course 178 or equivalent recommended. Enrollment limited to 20. The Staff

222. High-Speed Low-Power Integrated Circuit Design. *

Digital integrated circuit design covered with an emphasis on high-speed and low-power applications. Covers signaling techniques and circuits including transmitters and receivers, with emphasis on on-chip interconnect, timing fundamentals and timing circuits.

Theoretical fundamentals of phase locked loops and design issues of implementation addressed. Course has a project design component. Interview to assess technical skills of student. Enrollment restricted to electrical engineering and computer engineering graduate students. Enrollment limited to 20. May be repeated for credit. The Staff

223. Advanced Solid-State Devices. *

Solid-state devices advance rapidly by employing new materials, new architecture, and new functional principles. Class offers opportunities to learn the latest advancements in solid-state devices (e.g., electronic, optoelectronic, photonic devices, and smart sensors) viewed from various scientific, technological, and engineering aspects, such as energy conversion and computation. The Staff

224. Physical Design of Micro- and Opto-Electronic Packages. *

Micro- and opto-electronic packaging and materials; mechanical properties and behavior, thermal stress in dissimilar materials, and predictive modeling. Design for reliability, dynamic response to shocks and vibrations; reliability evaluations and testing; plastic packages of IC devices; photonics packages, fiber optics structures, and new frontiers. Enrollment restricted to graduate students. The Staff

225. Basics of Electronics Reliability. *

Basic concepts of reliability engineering taught in application to microelectronic and photonic materials, assemblies, and packages and systems. Emphasis on the physics and mechanics of failure physical design for reliability predictive modeling and accelerated testing, with numerous practical examples and illustrations. Prerequisite(s): basic calculus; electronic and photonic devices and systems. Enrollment restricted to graduate students. The Staff

226. CMOS Radio Frequency Integrated Circuit Design. *

Covers narrowband and high-frequency techniques, noise, distortion, nonlinearities, low-noise amplifiers, power amplifiers, mixers, receivers, and transmitters for wireless communications. Topics are presented in the context of integrated designs in CMOS, but topics are fundamental and widely applicable. Prerequisite(s): course 172 or 221 or permission of instructor. The Staff

227. Fundamentals of Semiconductor Physics. F

Semiconductor physics is examined for advanced new materials and devices. Discusses how familiar concepts are extended to new electronics. Intended for students interested in electrical engineering, physics, and materials science applications. Good familiarity with basic electromagnetism and quantum physics is assumed. Enrollment restricted to graduate students. T. Yamada

230. Optical Fiber Communication. F

Components and system design of optical fiber communication. Topics include step-index fibers, graded-index fibers, fiber modes, single-mode fibers, multimode fibers, dispersion, loss mechanics, fiber fabrication, light-emission processes in semiconductors, light-emitting diodes, laser diodes, modulation response, source-fiber coupling, photodetectors, receivers, receiver noise and sensitivity, system design, power budget and rise-time budget, fiber-optic networks (FDDI, SONET, etc), wavelength division multiplexing (WDM). Students cannot receive credit for this course and course 130. Enrollment restricted to graduate students. May be repeated for credit. A. Yanik

231. Optical Electronics. F

Introduction to phenomena, devices, and applications of optoelectronics. Main emphasis is on optical properties of semiconductors and semiconductor lasers. Prerequisite(s): course 145/L. May be repeated for credit. H. Schmidt

232. Quantum Electronics. S

Covers basic theory of interaction of electromagnetic radiation with resonant atomic transitions and density matrix treatment; and applications including Rabi oscillations, slow light; nonlinear optics; coherent radiation, and noise in photodetectors and lasers. Prerequisite(s): course 231 or equivalent. Z. Bian

233. Fiber Optics and Integrated Optics. *

Concepts and analysis of optical wave propagation in optical fibers and waveguides. Topics include geometrical optics description and electromagnetic theory of slab waveguides; modes, dispersion, and birefringence in optical fibers; mode coupling and gratings in fibers; wavelength-division multiplexing; nonlinear optics in fibers and solitons; semiconductor optical amplifiers and Er doped fiber amplifiers. Prerequisite(s): courses 135 and 145. The Staff

234. Liquid Crystal Displays. *

Introduction to principle of operation, components and systems of liquid crystal displays (LCDs). Topics include basic LCD components, properties of liquid crystals, polarization of optical waves, optical wave propagation in anisotropic media, Jones matrix method, various display systems, active matrix addressing, and color LCDs. Prerequisite(s): course 135 and 136. Enrollment restricted to seniors and graduate students. The Staff

235. Optical Information Storage and Processing. *

Introduction to applications of optical technologies in data storage and information processing. Topics include basic principles of Fourier optics; electro-optic, acousto-optic, and magneto-optic effects and devices; planar and volume holography; optical data storage systems; and optical information processing, interconnecting, and switching systems. Enrollment restricted to graduate students, or undergraduates having completed Physics 5B and 5C and course 103. The Staff

236. Integrated Biophotonics. W

Covers use of integrated optics for study of biological material; fluorescence spectroscopy, single molecule detection, optical tweezers, layered dielectric media, hollow-core waveguides, photonic crystals, optofluidics, biophotonic systems, and applications. Prerequisite(s): course 233 or equivalent. Enrollment restricted to graduate students. Enrollment limited to 20. H. Schmidt

241. Introduction to Feedback Control Systems. F

Graduate-level introduction to control of continuous linear systems using classical feedback techniques. Design of feedback controllers for command-following error, disturbance rejection, stability, and dynamic response specifications. Root locus and frequency response design techniques. Extensive use of Matlab for computer-aided controller design. Course has concurrent lectures with Electrical Engineering 154. (Also offered as Computer Engineering 241. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. D. Milutinovic

250. Digital Signal Processing. F

In-depth study of signal processing techniques, including discrete-time signals and systems, the z-transform, sampling of continuous-time signals, transform analysis of linear time-invariant systems, structures for discrete-time systems, the discrete Fourier transform, computation of the discrete Fourier transform, filter design techniques. Students

cannot receive credit for this course and course 153. A. Fletcher

251. Principles of Digital Communications. W

A core course on digital communications theory. Provides an introduction to digital communication, including source coding, characterization of communication signals and systems, modulation and demodulation for the additive Gaussian channel, digital signaling, and over bandwidth constrained linear filter channels and over fading multipath channels.

Prerequisite(s): course 151 and 153 (or Computer Engineering 153) and Computer Engineering 107. B. Friedlander

252. Wireless Communications. S

In-depth study of the physical layer of wireless communications. Wireless propagation channels and their impact on digital communications. Modulation techniques for wireless systems and their performance. Multi-antenna systems and diversity. Multicarrier and spread spectrum. Multi-access methods: FDMA, TDMA, CDMA. The structure of cellular systems. Students cannot receive credit for this course and course 152. Prerequisite(s): course 251. B. Friedlander

253. Introduction to Information Theory. F

An introduction to information theory including topics such as entropy, relative entropy, mutual information, asymptotic equipartition property, channel capacity, differential entropy, rate distortion theory, and universal source coding. (Also offered as Computer Science 250. Students cannot receive credit for both courses.) Prerequisite(s): Computer Engineering 107, or Applied Mathematics and Statistics 131 or equivalent course, or permission of instructor. H. Sadjadpour

254. Multi-User Information Theory. *

Topics include basic information theory, multiple-access channel, broadcast channel, interference channel, relay channel, capacity with feedback, capacity of networks, and channels with state and current research. Prerequisite(s): course 253. Enrollment restricted to graduate students. The Staff

255. Multiple-Antenna Wireless Communications. *

Basic theory of multiple-antenna wireless systems. Introduction to space-time propagation models, capacity of multiple-input multiple-output (MIMO) channels, space-time coding, transmitter CSI, and multiuser space-time systems. Includes discussion of multiple antennas in emerging systems and standards. Prerequisite(s): course 252 and Computer Engineering 107, or Applied Mathematics and Statistics 131, or equivalent. The Staff

256. Introduction to Radar Systems and SAR. *

Fundamentals of radar systems and radar-signaling processing, including SAR. Emphasizes real-world applications. MATLAB emphasizes algorithm development and performance analysis. Basic EM theory and a first course in signal processing are recommended.

Enrollment limited to 20. The Staff

261. Error Control Coding. S

Covers the following topics: introduction to algebra; linear block code; cyclic codes; BCH code; RS codes; spectral domain study of codes; CRC; and product codes. H. Sadjadpour

262. Statistical Signal Processing. W

Covers fundamental approaches to designing optimal estimators and detectors of deterministic and random parameters and processes in noise, and includes analysis of their performance. Binary hypothesis testing: the Neyman-Pearson Theorem. Receiver operating characteristics. Deterministic versus random signals. Detection with unknown parameters. Optimal estimation of the unknown parameters: least square, maximum likelihood, Bayesian estimation. Will review the fundamental mathematical and statistical techniques employed. Many applications of the techniques are presented throughout the course. Note: While a review of probability and statistics is provided, this is not a basic course on this material. (Formerly Statistical Signal Processing I.) Prerequisite(s): course 103 and Computer Engineering 107, or permission of instructor. A. Fletcher

263. Advanced Topics in Coding Theory.

Covers convolutional codes and its principles, maximum likelihood decoding and Viterbi decoding, performance evaluation of convolutional codes, trellis coded modulation (TCM), rotationally invariant convolutional codes, turbo codes, turbo decoding principles,

performance evaluation of turbo codes, interleaver design for turbo codes, topics on turbo codes, space-time codes, and LDPC. Prerequisite(s): course 261. Enrollment restricted to electrical engineering, computer engineering, and computer science graduate students. Enrollment limited to 10. H. Sadjadpour

264. Image Processing and Reconstruction. W

Fundamental concepts in digital image processing and reconstruction. Continuous and discrete images; image acquisition, sampling. Linear transformations of images, convolution and superposition. Image enhancement and restoration, spatial and spectral filtering. Temporal image processing: change detection, image registration, motion estimation. Image reconstruction from incomplete data. Applications. Students that have completed Computer Engineering 261 may not take this course for credit. Prerequisite(s): course 153 or permission of instructor. P. Milanfar

265. Introduction to Inverse Problems (3 credits). *

Fundamental approaches and techniques in solving inverse problems in engineering and applied sciences, particularly in imaging. Initial emphasis on fundamental mathematical, numerical, and statistical formulations and known solution methods. Sampling of applications presented from diverse set of areas (astronomical, medical and optical imaging, and geophysical exploration). Enrollment restricted to graduate students. The Staff

270. Neural Implant Engineering. *

Advanced studies of the basic neuroscience–engineering design requirements and technological issues associated with implantable neural prostheses, with particular emphasis on retinal and cortical function. Course is team-taught via remote web cast. A basic understanding of physics, circuit theory, and electronics is required. Enrollment restricted to graduate students; juniors and seniors may enroll by permission of instructor. The Staff

280B. Seminar on Integrated Bioelectronics (2 credits). *

Weekly seminar covering current research in integrated bioelectronics. May be repeated for credit. The Staff

280I. Seminar on Microscopy and Nanotechnology (1 credit). *

Weekly seminar series covering research topics and experimental research in microscopy and nanotechnology. Current research and literature are discussed. Students lead discussion and participate in all meetings. Enrollment restricted to graduate students. Enrollment by permission of instructor. Enrollment limited to 10. May be repeated for credit. The Staff

280M. Seminar on Micro-Electro-Mechanical Systems (MEMS) (2 credits). F,W,S

Weekly seminar series covering topics of current research interest in Micro-Electro-Mechanical Systems (MEMS) design, fabrication and applications. Current research work and literature in these areas are discussed. Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. May be repeated for credit. J. Kubby

280O. Seminar on Applied Optics (2 credits). F,W,S

Weekly seminar series covering topics of current research in applied optics, including integrated, quantum, nonlinear, and nano-optics. Current research work and literature in these areas are discussed. Enrollment by permission of instructor. May be repeated for credit. H. Schmidt

280Q. Seminar on Quantum Electronics and Nanoelectronics (2 credits). *

Weekly series covers current research in quantum electronics including electron and photon transport in nanostructures; nanoscale heat transport; optoelectronic integrated circuits; nanoscale devices for energy conversion; micro-refrigeration; thermal and acoustic imaging of nanostructures. Current research work and recent literature are discussed. Enrollment restricted to graduate students; undergraduates may enroll by permission of instructor. May be repeated for credit. The Staff

281. Guest Seminar Series (1 credit). *

Distinguished speakers from industry, universities, and government discuss current developments in electrical engineering and related fields. Emphasis on research questions

that may lead to collaborative work with faculty and graduate students. Enrollment restricted to graduate students. May be repeated for credit. The Staff

283. Special Topics in Electrical Engineering (3 credits). W

Graduate seminar on a research topic in electrical engineering that varies with the particular instructor. Topics may include, but are not limited to, electromagnetics, antennas, electronics biotechnology, nanotechnology, signal processing, communications, VLSI, MEMS, and radio frequency. Enrollment restricted to graduate students and consent of instructor. Enrollment limited to 25. May be repeated for credit. F. Dowla

290. EE Graduate Seminar (1 credit). *

Research seminar at the graduate level regarding technical areas of electrical engineering activity that are of interest to the research and/or commercial communities. Enrollment restricted to computer engineering, electrical engineering, or physics graduate students, or by permission of instructor. Enrollment limited to 30. May be repeated for credit. The Staff

291. Tomorrow's Professor: Preparing for an Academic Career in Science and Engineering (3 credits). *

The aim of this course is two-fold: (1) inform, motivate, and prepare graduate students for a possible career in academia; (2) expose both undergraduate and graduate students to the academic enterprise, possible career options for those who pursue advanced degrees in engineering and science. The Staff

293. Advanced Topics in Electrical Engineering. F,S

Graduate seminar course on a research topic in electrical engineering that varies with the particular instructor. Typical topics include, but are not limited to, electromagnetics, antennas, electronics biotechnology, nanotechnology, signal processing, communications, VLSI, and MEMS. Prerequisite(s): Consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 25. May be repeated for credit. A. Fletcher, M. Oye

296. Master Project. F,W,S

Master project conducted under faculty supervision. Prerequisite(s): Petition on file with sponsor faculty. The Staff

297. Independent Study or Research. F,W,S

Independent study or research under faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Thesis research conducted under faculty supervision. Students submit petition to sponsoring agency. The Staff

* Not offered in 2014-15

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Lower-Division Courses

15. Natural History of the UCSC Campus (2 credits). *

Introduces students to the range of natural species and communities occurring on the UCSC campus. All class time is spent outside, and each week a different area of campus is visited. Course 24 is recommended. The Staff

17. Curation of Natural History Collections (2 credits). W

Introduction and training in the skills needed to create, manage, and exhibit natural history collections, including plants, insects, fungi, birds, mammals, reptiles, and amphibians. Enrollment limited to 12. C. Lay

23. The Physical and Chemical Environment. S

Provides an overview of the physical and chemical environment of planet Earth.

Fundamental chemistry and physics is introduced in the process of learning about Earth in a holistic way. The influence of human societies on the global environment is one focus of discussion. Earth's many "spheres" are explored first: the lithosphere; the atmosphere; the hydrosphere, and the ecosphere. Then global cycles of carbon, nitrogen, and several other elements are studied in the context of basic sciences and societal issues. (General Education Code(s): IN.) W. Cheng

24. General Ecology. F

Covers principles of ecology including limits to species abundances, evolutionary ecology, population dynamics, community interactions and patterns, and ecosystem patterns and dynamics. Prerequisite(s): Applied Mathematics and Statistics 2 or 3 or 6, or Mathematics 3 or higher; or mathematics placement examination (MPE) score of 300 or higher; or AP Calculus AB exam score of 3 or higher; course 23 recommended as prerequisite to this course. (General Education Code(s): SI, IN.) The Staff

25. Environmental Policy and Economics. W

Introduces basic concepts from policy studies and economics that help explain environmental challenges. Provides an overview of how government, non-governmental organizations, and the private sector are dealing with major environmental challenges. (General Education Code(s): PE-E, IS.) A. Millard-Ball

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies >
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

65. Introduction to Fresh Water: Processes and Policy. *

Introduction to freshwater resources from multiple scientific and policy perspectives. After a review of basic concepts, water issues affecting cities, farms, open space, and multiple-use landscapes are studied. Students cannot receive credit for this course if they have previously received credit for course 165. (General Education Code(s): PE-E.) B. Haddad

80A. The Future of Rain Forests. *

A broad overview of both ecological and social aspects related to tropical rain forests drawing on case studies worldwide. Topics include the biology and distribution of rain forests, causes and effects of their destruction, and management options to facilitate their conservation. (General Education Code(s): PE-E, T7-Natural Sciences or Social Sciences.) (S) The Staff

80B. The Ecological Forecast for Global Warming. F

A broad overview of the impacts of human activities on the global climate system. Topics include how climate affects the distribution of ecosystems, the influence of global climate change on biodiversity, ecosystem function, and consequences for the human enterprise. (General Education Code(s): PE-E, T7-Natural Sciences or Social Sciences.) M. Loik

83. Environmental Studies Internship. F,W,S

A supervised off-campus learning experience related to environmental problem solving. Focuses on initial experiences in applied work and specific skill development. Students may be placed individually or with a team in government agencies, private organizations, citizen action groups. May be repeated for credit. (General Education Code(s): PR-S.) The Staff

91F. Community and Agroecology (2 credits). *

Interdisciplinary two-credit seminar designed to introduce students to concepts of community and agroecology in the context of sustainability. Course can serve as a gateway to or as a continuing basis for participation in PICA (Program in Community and Agroecology). Specific topics and readings change each quarter. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Directed reading, supervised research, and organized projects relating to environmental problems. May be repeated for credit with consent of the chairperson of Environmental Studies Department. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Provides for department-sponsored directed reading, supervised research, or organized project for lower-division students under the direct supervision of a faculty sponsor. May not be counted toward major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100. Ecology and Society. W,S

Introduction to environmental issues in an interdisciplinary matrix. Focuses on three issues at the intersection of ecological questions and social institutions: agroecology and sustainable agriculture; population growth, economic growth, and environmental degradation; and biodiversity conservation and land management. Reviews the important roles of disciplinary abstraction and of the application of that knowledge to context-dependent explanations of environmental problems. Prerequisite(s): course 23 or CHEM 1A; course 24 or BIOE 20C; course 25; and AMS 7/L or ECON 113; and one from: ANTH 2, SOCY 1,10,15, PHIL 21,22,24,28, or 80G. Concurrent enrollment in 100L is required. S. Philpott, Z. Tzankova

100L. Ecology and Society Writing Laboratory (2 credits). W,S

Required writing lab accompanying course 100. Students are introduced to writing in different styles and for different audiences typical of the ecosystem-society interface. Course 100 writing assignments are developed, written, and revised in conjunction with the lab. W credit is granted only upon successful completion of course 100. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements. Concurrent enrollment in 100 is required. (General Education Code(s): PR-E.) S. Philpott, Z. Tzankova

<p>Management</p> <ul style="list-style-type: none"> ■ UCDC Program ■ Writing Program ■ Theater Arts ■ Yiddish <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>104A. Introduction to Environmental Field Methods. * A course in the process of field research and monitoring, with emphasis on use of the scientific method; experimental design, data handling, statistical analysis and presentation; and basic field methodologies. Application of basic field skills, including habitat description; methods for sampling plants, animals, soils, water, and microclimate; and observational and manipulative techniques to address ecological, conservation, and management questions. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; concurrent enrollment in course 104L and previous or concurrent enrollment in courses 100/L required, or by permission of instructor. (General Education Code(s): W.) E. Zavaleta</p> <p>104L. Field Methods Laboratory (2 credits). * Students directly observe elements of natural history and ecological process; design and implement field studies based on lectures; deploy the methods discussed in lectures; and collect data to analyze, interpret, and report in written and oral forms. Concurrent enrollment in course 104A is required. E. Zavaleta</p> <p>106A. Natural History of Birds. * The evolution, taxonomy, physiology, behavior, ecology, and management of birds. Lecture, discussion, field format. Birds observed in habitats including bay, marsh, meadow, and forest. Evaluations based on a field journal and examinations. Students are billed a materials fee. Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L, or by permission of instructor. Course 105 or Biology 138 are recommended. Enrollment limited to 25. The Staff</p> <p>107A. Natural History Field Quarter. S A 15-unit field course that uses California wild lands to develop skills of natural history observation and interpretation. Students gain the ability to identify plants, animals, vegetation types, and landscapes, as well as address the complex issues of preservation and management of these resources. Enrollment by interview. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L; concurrent enrollment in courses 107B and 107C required. Students are billed a materials fee. The Staff</p> <p>107B. Natural History Field Quarter. S A 15-unit field course that uses California wild lands to develop skills of natural history observation and interpretation. Students gain the ability to identify plants, animals, vegetation types, and landscapes, as well as address the complex issues of preservation and management of these resources. Enrollment by interview. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L; concurrent enrollment in courses 107A and 107C required. The Staff</p> <p>107C. Natural History Field Quarter. S A 15-unit field course that uses California wild lands to develop skills of natural history observation and interpretation. Students gain the ability to identify plants, animals, vegetation types, and landscapes, as well as address the complex issues of preservation and management of these resources. Enrollment by interview. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L; concurrent enrollment in courses 107A and 107B required. The Staff</p> <p>108. General Entomology. * Introduction to entomology including anatomy, physiology, systematics, evolution, behavior, and reproduction of the world's most diverse group of organisms. These topics are illustrated in several contexts, from the importance of insects as disease vectors to the historical and contemporary uses of insects by humans. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. Offered in alternate academic years. D. Letourneau</p> <p>108L. General Entomology Laboratory (3 credits). * Laboratory sections are devoted to the identification of insects. Individual collections representing 15 orders, sight identification of 60 families, and use of taxonomic keys for positive designations required. Concurrent enrollment in course 108 is required. Offered in alternate academic years. D. Letourneau</p> <p>109A. Ecology and Conservation in Practice Supercourse: Ecological Field Methods. * An intensive, on-site learning experience in terrestrial field ecology and conservation,</p>
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using the University of California Natural Reserves. Students study advance concepts in ecology, conservation, and field methods for four weeks, then experience total immersion in field research at the UC Natural Reserves. Lectures, field experiments, and computer exercises familiarize students with research methods, study design, statistical approaches, and analytical tools for ecological research. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151B-C-D or ENVS 109B-C-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Biology:Ecology & Evolutionary 151A. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

109B. Ecology and Conservation in Practice Supercourse: Ecological Field Methods Laboratory. *

Field-oriented course in ecological research. Combines overview of methodologies and approaches to field research with practical field studies. Students complete field projects in ecology and also learn the natural history of the flora and fauna of California. Students are billed a materials fee. Enrollment by application. Prerequisite(s): Entry Level Writing and Composition requirements; BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-C-D or ENVS 109A-C-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Biology:Ecology & Evolutionary 151B. Students cannot receive credit for both courses.) (General Education Code(s): W.) D. Croll, E. Zavaleta

109C. Ecology and Conservation in Practice Supercourse: Functions and Processes of Terrestrial Ecosystems. *

From lectures and discussion of terrestrial community and ecosystem ecology, students work individually or in small groups to present an idea for a project, review relevant literature, develop a research question/hypothesis, design and perform an experiment, collect and analyze data, and write a report. The instructor evaluates the feasibility of each student's project before it begins. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-B-D or ENVS 109A-B-D is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Biology:Ecology & Evolutionary 151C. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

109D. Ecology and Conservation in Practice Supercourse: Conservation in Practice. *

Focuses on current issues in environmental and conservation biology and the emerging field methods used to address them. From field-oriented lectures about current issues in environmental and conservation biology, students pursue research project as individuals and small groups to develop hands-on experience with field skills in conservation research and resource management. Enrollment by application. Prerequisite(s): BIOL 20A, BIOE 20B, BIOE 20C or ENVS 23, 24, 100; and AMS 7 and 7L. Concurrent enrollment in BIOE 151A-B-C or ENVS 109A-B-C is required. Satisfies the senior exit requirement for biological sciences majors and satisfies the senior exit requirement for environmental studies majors by prior approval. Students cannot receive credit for this course and BIOE 150, 150L, ENVS 104A or 196A. (Also offered as Biology:Ecology & Evolutionary 151D. Students cannot receive credit for both courses.) D. Croll, E. Zavaleta

110. Institutions, the Environment, and Economic Systems. S

Debate about environmental policy is often couched in economic terms. Environmental issues have become questions of political economy, as they influence international and domestic policy and reflect on the functioning of the market system. Examines the assumptions and implications of alternative approaches to political economy, as these pertain to questions of environmental policy and political institutions. Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L, or by permission of instructor. (S) M. Fitzsimmons

115A. Geographic Information Systems and Environmental Applications. F

Introduction to geographic information systems (GIS) as the technology of processing

spatial data, including input, storage and retrieval; manipulation and analysis; reporting and interpretation. Emphasizes GIS as a decision support system for environmental and social problem solving, using basic model building, experimental design, and database management. Students cannot receive credit for this course and course 215A.

Prerequisite(s): Previous or concurrent enrollment in course 115L, 100/L, or permission of instructor. Course in computer science, Earth science, math, or geography recommended.

The Staff

115L. Exercises in Geographic Information Systems (2 credits). F

Exercises in Geographic Information Systems and Remote Sensing that demonstrate the development of digital geographic data. Students gain hands-on experience with developing datasets, using imagery to create GIS layers, performing spatial analysis, and utilizing GPS technology. Emphasis placed on environmental applications. Students cannot receive credit for this course and course 215L. Students are billed a materials fee.

Concurrent enrollment in course 115A is required. The Staff

120. Conservation Biology. S

Introduces biological and anthropogenic influences on the diversity and scarcity of organisms. Explores the mathematical models and research tools that provide the foundation for many conservation and management decisions regarding endangered and/or declining species. Topics explored in the context of various examples of conservation decision-making in the real world. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

122. Tropical Ecology and Conservation. *

An introduction to the ecological processes, principles, and players of tropical ecosystems, and to conservation issues facing tropical American forests. We will look at how tropical ecosystems work, roles of humans in shaping them, and current conservation opportunities and dilemmas. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L is required, or by permission of instructor. G. Gilbert

123. Animal Ecology and Conservation. *

Advanced course in animal ecology and conservation focusing on the ecology, behavior, biogeography, and evolution of vertebrates. Prerequisite(s): course 120. Previous or concurrent enrollment in courses 100 and 100L required; or by permission of instructor. C. Wilmers

125. Ecosystems of California. *

A survey of the diversity, structure, and functioning of California's ecosystems through time and the ways they have influenced and responded to human activities and stewardship. Topics include: ecosystem drivers such as climate, soils, and land-use history; human and ecological prehistory; comparative marine, freshwater, and terrestrial ecosystem dynamics; and managed ecosystems such as range, fisheries, and agriculture. Prerequisite(s): previous or concurrent enrollment in courses 100/100L. (General Education Code(s): PE-E.) E. Zavaleta

129. Integrated Pest Management. F

Provides an extensive coverage of applied ecology, pest control technology, and the social, political, and economic factors regulating the ideologies and practice of pest management. Topics include agroecosystem design and population regulation of insects, weeds, vertebrates, and pathogens; field monitoring, chemical and biological control; economic thresholds, decision-making processes, and the role of agribusiness. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. D. Letourneau

129L. Integrated Pest Management Laboratory (2 credits). *

Field trips and field exercises that demonstrate the practice of integrated pest management techniques. Individual and group projects provide hands-on experience with field sampling techniques, pest identification, recognition of biological control agents, experimental design, interview techniques, data interpretation and field report writing. Prerequisite(s): concurrent enrollment in course 129. The Staff

130A. Agroecology and Sustainable Agriculture. F

Ecological concepts and principles are applied to the design and management of sustainable agroecosystems. Alternatives for agriculture are discussed in terms of

ecosystem structure and function. A weekly three-hour lab is required. Prerequisite(s): Concurrent enrollment in course 130L and previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. C. Shennan

130B. Principles of Sustainable Agriculture. W

Agricultural sustainability is examined as a complex set of interactions between ecological, social, and economic components of an agroecosystem. Case studies are drawn from issues facing current U.S. agriculture and a basis for formulating policy for change that ensures sustainability is developed. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. M. Fitzsimmons

130L. Agroecology and Sustainable Agriculture Laboratory (2 credits). F

Laboratory and field exercises to train in the analysis of ecological processes in agricultural systems, with a focus on the quantification of ecological sustainability. Experimental design, analysis, and data interpretation are emphasized. Students are billed a materials fee. Concurrent enrollment in course 130A is required. C. Shennan

131. Insect Ecology. S

Advanced course in ecology featuring insect-plant interactions such as herbivory, pollination, and the effects of plants on insect population dynamics. Lectures emphasize current controversies in ecological theory and relate theory to application. Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. Offered in alternate academic years. S. Philpott

133. Agroecology Practicum. F,W,S

Lectures and demonstrations are combined with field applications to give students direct experience and knowledge of sustainable agriculture and horticulture practices and principles. UCSC Farm and Garden are the living laboratories for testing agroecological principles. Emphasis is placed on small-farm systems. May be applied to major only once. Students are billed a materials fee. Prerequisite(s): courses 130A and 130L and previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. May be repeated for credit. The Staff

138. Field Ethnobotany. *

Lectures, laboratory, and fieldwork examine field botany from a human ecology perspective. Students have the opportunity to learn the skills of field botany and plant identification through the study of plants that are of major significance for human cultures. The emphasis of field skills is on applications to sustainable management of natural resources. Prerequisite(s): courses 130A and 130L, or by permission of instructor. Concurrent enrollment in course 138L required. Offered in alternate academic years. The Staff

138L. Ethnobotany Laboratory (2 credits). *

Laboratory and field studies allow students to learn the taxonomy of important useful plant families, carry out field studies on local plant use and management practices, and investigate in detail home garden agroecosystems and model systems. Prerequisite(s): concurrent enrollment in course 138 required. The Staff

140. National Environmental Policy. W

An overview of all major federal environmental policy domains. Analyzes political, social, economic, and other forces influencing federal (and some state) public policy responses to land use, natural resources, pollution, and conservation dilemmas. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. D. Press

140L. National Environmental Policy Field Studies Laboratory (2 credits). *

Students travel to waste-management facilities and environmental agencies around the San Francisco and Monterey Bay regions. Laboratory assignments include: facility profiles and policy-options memos related to each facility. Enrollment restricted to environmental studies majors, and environmental studies/economics, environmental studies/biology, or environmental studies/Earth sciences combined majors. Concurrent enrollment in course 140 is required. Enrollment limited to 24. D. Press

141. Ecological Economics. F

Application of economic analysis to natural resource policy and management. Topics

include welfare economics, property rights and externalities, natural resource valuation, exhaustible and renewable resources, and sustainable development. Prerequisite(s): Economics 1 is strongly recommended as preparation. Previous or concurrent enrollment in courses 100 and 100L is required, or by permission of instructor. A. Millard-Ball

142. Energy Politics and Policy. W

Explores the social and environmental dimensions of energy production and consumption. Provides an overview of the tools to evaluate a new clean-energy economy and its wider political and economic implications. Students study assessment tools, such as risk assessment, material energy balances, and life-cycle assessment. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

142L. Energy Politics and Policy Laboratory (2 credits). *

Trains students in the concepts and skills required to make decisions about energy production. Concurrent enrollment in course 142 required. Enrollment limited to 24. The Staff

143. Sustainable Development: Economy, Policy, and Environment. W

Considers whether and how global poverty can be alleviated without irreparably damaging the environment. Examines interactions among population, economic growth, poverty, global consumption ethos, property rights systems, global economy, state capacity, and environmental damage. Scrutinizes impact of various developmental strategies adopted during the past 50 years on poverty, governance, and the environment. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. J. Bury

145. Green Building Design. S

Promotes an ecological approach to design with an understanding of the environmental opportunities and constraints at play on the site and situation; works with the environment to maximize human comfort and energy efficiency. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

146. Water Quality: Policy, Regulation, and Management. *

Building on prior preparation, the course provides an in-depth examination of American water-quality policy, regulation and management. In addition to a detailed understanding of pollutant-discharge permitting, students learn about nonpoint source water pollution and its regulatory remedies. Prerequisite(s): course 100/L, and 140 or 149 or 150 or 165. (General Education Code(s): PE-E.) D. Press

147. Environmental Inequality/Environmental Justice. S

Reviews research on race, class, and differential exposure to environmental hazards. Shows how environmental inequality has, from the start, been an essential feature of modernity. Situates the environmental-justice movement in the history of American environmentalism. Students cannot receive credit for this course and Sociology 185. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. (General Education Code(s): ER.) The Staff

149. Environmental Law and Policy. S

Surveys a wide range of topics in environmental law, including state and federal jurisdiction, administrative law, separation of powers, state and local land use regulation, public land and resource management, pollution control, and private rights and remedies. Students read a large number of judicial cases and other legal documents. (Also offered as Legal Studies 149. Students cannot receive credit for both courses.) Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. T. Duane

150. Coastal and Marine Policy. *

Introduces and analyzes the history, design, implementation, and effectiveness of key legal and institutional frameworks that govern the use and stewardship of coastal and marine areas and resources. Primary focus is on the U.S., although attention is also devoted to international laws and institutions targeting major transboundary issues like marine pollution and management of migratory fish stocks. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. Z. Tzankova

151. Environmental Assessment. S

Introduction to California land use planning law and practice, and the theory, practice, and public policy aspects of environmental assessment, using the California Environmental Quality Act (CEQA) as a model. The National Environmental Policy Act (NEPA) and other environmental and planning legislation also considered. Covers elements of State law and regulations, environmental impact assessment requirements, and practical procedures for preparing and evaluating CEQA documents, with case studies that exemplify legal, regulatory and public policy and practice aspects of the assessment process.

Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

154. Amazonian Cultures and Conservation. *

Overview of human societies in the Amazon from both a historical and contemporary perspective. Topics include indigenous resource management, deforestation, conservation politics, culture, and economic change. Students cannot receive credit for this course and Latin American and Latino Studies 167. (Formerly Latin American and Latino Studies 167, Amazonian Societies and the Environment) Prerequisite(s): previous or concurrent enrollment in course 100 and 100L, or permission of instructor. (General Education Code(s): CC, E.) The Staff

156. Environmental Action through Writing. *

Guided practice in writing skills useful to environmental activists. Assignments emphasize thinking quickly, revising adeptly, researching resourcefully, and tempering powerful passions with careful arguments. Toward the development of effective individual voices, students read each other's drafts as well as the published work of established writers. Enrollment priority will be given to students who have not taken course 157.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. (General Education Code(s): W.) The Staff

157. Writing in the Natural Sciences. *

Guided practice in writing effectively about science and natural history for a variety of audiences. Assignments emphasize reporting first-hand observations, explaining processes and phenomena, understanding scientific papers, and writing about scientific and technical subjects for a general audience. Enrollment priority will be given to students who have not taken course 156. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and previous or concurrent enrollment in courses 100/L required, or by permission of instructor. (General Education Code(s): W.) The Staff

158. Political Ecology and Social Change. F

The object is to provide a rigorous grounding in the method of political ecology and to demonstrate how this approach has been used in environmental analysis and problem solving by environmental social movements. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L is required, or by permission of instructor. J. Bury

159. Nature Literature. *

Introduction to 19th- and 20th-century American writers who have influenced our understanding of humans' place in the natural world. Readings include original works as well as biographical and critical texts. Discussions, field trips, and writing assignments emphasize active learning. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

160. Restoration Ecology. W

A multidisciplinary overview of restoring degraded ecosystems. Among the topics addressed are linkages between ecological principles and restoration, planning and implementing restoration projects, evaluating restoration success, and case studies of restoration of specific ecosystem types. Participation in one work day is required.

Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L is required, or by permission of instructor. K. Holl

161A. Soils and Plant Nutrition. W

Provides fundamentals of soils and plant nutrition. The physical, biological, and chemical components of soils are investigated in relation to their ecological functions, fertility to plants, and sustainable management. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. W. Cheng

- 161L. Soils and Plant Nutrition Laboratory (2 credits). W
Practice analytical techniques for evaluation of physical, chemical, and biological properties of soils. Grow plants to observe some typical symptoms of plant nutrient deficiencies. Students are billed a materials fee. Prerequisite(s): Concurrent enrollment in course 161A is required. W. Cheng
162. Plant Physiological Ecology. S
Introduces the theory of plant interactions with the physical environment. Emphasizes influence of abiotic stresses on the recruitment, survival, growth, productivity, and reproduction of plants. Prior course work in ecology and/or plant physiology is recommended. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. M. Loik
- 162L. Plant Physiological Ecology Laboratory (2 credits). S
Introduces techniques for the study of plant interactions with the physical environment. Examines the role of stress on energy budgets, water relations, photosynthesis, and reproductive allocation. Emphasizes experimental design, field techniques, and instrumentation during field trips to local chaparral and grassland ecosystems. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. M. Loik
163. Plant Disease Ecology. S
Introduction to ecological roles of plant diseases, including their importance in regulating plant population dynamics, community diversity, and system function in natural ecosystems; considerations of plant diseases in conservation ecology; and ecological approaches to managing diseases in agroecosystems. Students cannot receive credit for this course and course 263. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. G. Gilbert
- 163L. Plant Disease Ecology Lab (2 credits). S
Introduction to techniques for studying plant diseases, including detection, isolation, cultivation, and identification of important groups of plant pathogens, completing Koch's postulates; diseases assessment techniques; experimental manipulation of plant-pathogen systems; and basic epidemiological tools. One field trip required. Prerequisite(s): concurrent enrollment in course 163 required. G. Gilbert
165. Freshwater Issues and Policy. *
Concepts, vocabulary, and skills necessary to the analysis of freshwater issues are introduced from hydrology, ecology, law, economics, engineering, and other disciplines. The skills are then applied to case studies involving local, state, and international freshwater conflicts and crises. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L is required, or by permission of instructor. The Staff
166. Agroecosystem Analysis and Watershed Management. S
Explores a range of approaches to examine agroecosystem function, watershed management, and concepts of sustainability. Uses a combination of lecture, demonstration, field work, and field trips to illustrate approaches to analysis of managed ecosystems behavior and the integration of biophysical and socio-political knowledge to aid in watershed management. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor; and course 130A or 130B or 129 or 133 or 160 or 167. C. Shennan
167. Freshwater and Wetland Ecology. F
Field and lecture course teaches the physical and biological patterns and processes in freshwater and wetland systems, primarily focusing on Central Coast systems from headwaters to coastal marshes. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff
- 167L. Freshwater and Wetland Ecology Lab (2 credits). F
Provides basic skills to assess chemical, biological, and physical characteristics of freshwater creeks, rivers, and wetlands. These skills are needed in environmental consulting, municipal agencies engaging in water management or impacts on water, and regulatory agencies. Relies on methods in geomorphology, biogeochemistry, hydrology, and field biology. Students are billed a materials fee. Concurrent enrollment in course 167

is required. The Staff

168. Biogeochemistry and the Global Environment. W

Studies biogeochemical cycles and related environmental issues such as global environmental change, eutrophication, ecosystem degradation, and agricultural sustainability. Discusses transformation and movement of major nutrient elements in context of watershed ecology and societal implications. Students cannot receive credit for this course and course 268. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. W. Cheng

169. Climate Change Ecology. *

Advanced topics in atmospheric science and ecological theory. Topics include impacts on biodiversity, carbon sequestration, sustainable agriculture, and innovative solutions. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. Enrollment limited to 40. The Staff

172. Environmental Risks and Public Policy. F

Introduces students to the dilemmas in public policy relating to the management of environmental risks, and discusses their underlying philosophical underpinnings. Explores emergent alternatives, such as the precautionary principle and alternatives assessment, and examines the relationship between experts and the lay public in public controversies. (Formerly Science, Policy, and the Environment.) Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. (General Education Code(s): W.) S. Rajan

173. An Introduction to World Environmental History. W

Introduces students to some of the central issues in world environmental history such as: human attitudes toward the natural environment; the role of human societies, their institutions and technologies in changing the face of the earth; and the historical impact of environmental and developmental policies on race, class, and gender differences in a variety of human communities across the world. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. S. Rajan

175. Biotechnology: Social and Environmental Dimensions. *

Surveys the rapid development of genetic engineering science and biotechnology-based industries and examines the economic, health, environmental, legal, and social justice dimensions of new biotechnology applications: genetic screening, cloning, transgenic animals and crops, genetically engineered food, and biodiversity prospecting. Readings, lectures, World Wide Web site reviews, student presentations, and papers will address controversial choices faced now by scientists, farmers, doctors, consumers, public officials, and global governance agencies. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

176. Vulnerability, Complex Systems, and Disasters. W

Introduces students to the research on the relationship between vulnerability and disasters, and on complex systems including hazardous technologies. Explores perspectives on disasters in the literature on political ecology. Also examines relevant work of organizational sociology, and related fields including normal accident and high reliability organizational theories. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L or by permission of the instructor. (General Education Code(s): PE-T.) S. Rajan

177. Teaching Environmental Education. S

Designed for environmental studies majors interested in teaching environmental education in the K-12 school system. Students investigate incorporation of environmental education in the classroom; design an environmental education school project; and are placed in a school where they observe environmental education in practice. Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L required, or by permission of instructor. The Staff

179. Environmental Interpretation. F

A field course in theory and practice of environmental interpretation in parks, museums, and school programs with special attention to local natural history and children. Students will work to define their own interpretive philosophy, skills, and style. Background in natural history and/or experience working with children recommended. Prerequisite(s): Previous or concurrent enrollment in courses 100 and 100L required, or by permission of

instructor. The Staff

183. Environmental Studies Internship. F,W,S

A supervised off-campus learning experience related to environmental problem solving. Students may work with government agencies, private organizations, citizen action groups, or in specialized apprenticeships on an individual or team basis. A significant, independently researched project is required. Internship intended for environmental studies majors. Prerequisite(s): previous or concurrent enrollment in courses 100 and 100L and by permission of instructor. Students submit petition to course sponsoring agency.

May be repeated for credit. The Staff

183A. Senior Internship. F,W,S

First quarter of two-quarter senior internship exit requirement. Supervised off-campus learning experience related to environmental problem-solving. Students may work with government agencies, private organizations, citizen action groups, or in specialized apprenticeships on an individual or team basis. Students submit petition to course-sponsoring agency. Enrollment restricted to environmental studies majors and the combined majors with Earth science, biology, and economics. Enrollment by permission of instructor. The Staff

183B. Senior Internship. F,W,S

This course combines fieldwork at an off-campus agency and a comprehensive analytical paper produced for the agency. Equivalent to a thesis in terms of the depth and quality of the work expected. Prerequisite(s): course 183A. Students submit petition to course-sponsoring agency. Enrollment restricted to environmental studies majors and the combined majors with Earth sciences, biology, and economics. The Staff

184. Environmental Studies Internship (2 credits). F,W,S

Supervised learning experience related to environmental problem solving. Students may work with government agencies, private organizations, citizen action groups, or in specialized apprenticeships on an individual or team basis. This 2-credit internship puts students in the field and offers them the experience of practicing environmental problem solving. This internship experience focuses on specific skill development. May be repeated for credit. (General Education Code(s): PR-S.) The Staff

189. Environmental Studies Research Seminar (1 credit). F,W,S

Research seminars presented weekly throughout the year by environmental studies faculty, visiting scholars, and graduate students. Students discuss content and methodology of research presented following each seminar. Students write critiques of some seminars. Z. Tzankova

190. Capstone Course: Environmental Problem Solving. W

A synthetic course that draws on the knowledge and skills students bring from other courses in the major. Focuses on written and oral individual and group projects in which students must take the initiative. Emphasizes developing skills critical for students in their future careers. Prerequisite(s): course 100; Entry Level Writing and Composition requirements. Enrollment restricted to senior environmental studies majors and the combined majors with Earth sciences, biology, and economics. D. Letourneau

191F. Community and Agroecology Seminar (2 credits). *

Interdisciplinary two-credit seminar designed for upper-division students who want to become involved in PICA (Program in Community and Agroecology) and to explore concepts of community and agroecology as they relate to sustainability. Also emphasizes development of leadership skills. Specific topics and readings change each quarter. Prerequisite(s): course 91F, 130A, 130B, 133, or equivalent experience. Enrollment limited to 25. May be repeated for credit. The Staff

192. Directed Student Teaching. F,W,S

Teaching a lower-division seminar. (See course 42.) Prerequisite(s): upper-division standing; permission of environmental studies faculty member and chairperson of department. The Staff

194. Teaching Environmental Studies. F,W,S

This provides an opportunity to participate in the preparation and teaching of introductory environmental studies courses. Students will have significant responsibility in leading

discussion sections. Students submit petition to sponsoring agency. The Staff

195A. Senior Research. F,W,S

An individually supervised course, with emphasis on independent research that either results in a thesis or project or is done in conjunction with a senior internship. In order to receive credit, students must turn in an electronic copy of the final write-up. Satisfies the senior comprehensive requirement. Students submit petition to sponsoring agency.

Prerequisite(s): Entry Level Writing and Composition requirements. The Staff

195B. Senior Thesis Group. *

Students involved in group or individual research that results in a senior thesis or project or done in conjunction with an internship meet regularly with their faculty sponsor to discuss the progress of their work, to receive academic and technical guidance, and to critique one another's written work. To receive credit the student must submit two bound copies of the completed research and write-up. Satisfies the senior comprehensive requirement.

Students must discuss details with faculty sponsor. Students submit petition to sponsoring agency. Prerequisite(s):Entry Level Writing and Composition requirements. J. Bury, K. Holl

196. Senior Seminar. F,W,S

Readings and discussions of primary literature on a current environmental studies topic. Field or literature-based research projects (individual or group) writing multiple drafts resulting in a final paper. Topics vary yearly; consult current course listings. Enrollment by application with selection based on appropriate background and academic performance and by consent of instructor. Satisfies senior comprehensive requirement. Enrollment restricted to senior environmental studies majors; senior environmental studies/biology combined majors; senior environmental studies / Earth sciences combined majors; and senior environmental studies /economics combined majors. Prerequisite(s): Entry Level Writing and Composition requirements. The Staff

199. Tutorial. F,W,S

Advanced directed reading, supervised research, and organized projects relating to environmental problems. May be repeated for credit with consent of the chair of environmental studies. Students submit petition to sponsoring agency. Prerequisite(s): prior or concurrent enrollment in courses 100 and 100L. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Provides for department-sponsored directed reading, supervised research, or organized project under the direct supervision of a faculty sponsor. May not be counted toward major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

201A. Keywords and Concepts: Geography and Ecology. F

Exploration of keywords and concepts that underlie interdisciplinary work in environmental studies through lectures, directed readings, and discussion. Modules include resonant concepts in ecology and society; ecology and evolution; environment and development; the global environment and society; agroecology and conservation biology. (Formerly Keywords and Concepts.) Enrollment restricted to graduate students. G. Gilbert, A. Szasz

201B. Keywords and Concepts: Biogeochemistry and Environmental Policy. W

Exploration of the keywords and concepts that underlie interdisciplinary work in environmental studies through lectures, directed readings, and discussion. Modules include resonant concepts in economics and public policy, biogeochemistry, and global change. (Formerly Keywords and Concepts.) Enrollment restricted to graduate students. Z. Tzankova, C. Shennan

201M. Developing Research Proposals (2 credits). F

Offers graduate students the opportunity to become familiar with the research expertise of the faculty in the Environmental Studies department. Enrollment restricted to graduate students. M. Loik

201N. Interdisciplinary Research Design in Environmental Studies. S

Provides students with opportunities to learn research protocols, practices, and methods used in environmental studies. Combination of lectures, reading, practical exercises, and

short projects used to explore how these methods can best be incorporated into interdisciplinary research designs. Enrollment restricted to graduate students. D. Letourneau

210. Political Ecological Thought and Environment. *

Provides an introduction to social scientific analyses of the relationships between capitalistic development and the environment in the late 20th century. It has a dual purpose: First, to develop a contemporary historical understanding and sensibility of how economic change, new institutional configurations, and world scale processes are shaping interactions with the environment. Second, to examine some recent political social theoretical perspectives on nature–society relations and radical environmental and social movements. Enrollment restricted to graduate students in environmental studies. J. Bury

215A. Geographic Information Systems and Environmental Applications. F

Introduction to geographic information systems (GIS) as the technology of processing spatial data, including input, storage and retrieval; manipulation and analysis; reporting and interpretation. Emphasizes GIS as a decision support system for environmental and social problem solving, using basic model building, experimental design, and database management. Students cannot receive credit for this course and course 115A. Concurrent enrollment in course 215L is required. Enrollment restricted to environmental studies graduates students. The Staff

215L. Exercises in Geographic Information Systems (2 credits). F

Exercises in Geographic Information Systems and Remote Sensing that demonstrate the development of digital geographic data. Students gain hands-on experience with developing datasets, using imagery to create GIS layers, performing spatial analysis, and utilizing GPS technology. Emphasis placed on environmental applications. Students cannot receive credit for this course and course 115L. Students are billed a materials fee. Concurrent enrollment in course 215A is required. Enrollment restricted to environmental studies graduate students. The Staff

220. Conservation Biology. F

The principles of conservation biology, including a review of the core disciplines of demography, population genetics, island biogeography, and community ecology and discussion of area and edge effects, population viability, and ecosystem issues related to the maintenance of biological diversity, especially in fragmented landscapes. Enrollment restricted to environmental studies graduate students. K. Holl

230. Agroecology and Sustainable Agriculture. *

The application of ecological concepts and principles to the design and management of agricultural systems. The long-term goal of sustainable agroecosystems is examined in economic, social, and ecological contexts. Enrollment restricted to environmental studies graduate students. C. Shennan

235. Social Theories of Nature. *

Intensive reading and discussion seminar on the treatment of nature in social theory. Focuses on major recent works which examine nature in social theory, in themselves, and in the context of the intellectual history of development of disciplinary discourses about nature. Students write critical reviews of assigned books and a research paper situating a particular book within its intellectual tradition. Prerequisite(s): interview with instructor to determine preparedness. May be repeated for credit. M. Fitzsimmons

240. Public Policy and Conservation. S

Introduction to political and economic approaches to policy analysis, with particular reference to natural resource scarcity, property rights, and environmental conservation. Case studies apply economic and policy process concepts to the management of public lands, biodiversity, and renewable resources. Enrollment restricted to environmental studies graduate students. T. Duane

247. Regional Approaches to Environmental Policy. *

A research seminar combining theoretical issues in democratic theory, political economy, and planning with emerging concepts of bioregionalism. The focus is on institutional, scientific, and political innovations in managing the environment. Students evaluate current and historical proposals to regionalize environmental policy in the U.S. Enrollment restricted to environmental studies graduate students. The Staff

263. Plant Disease Ecology. *

Introduction to ecological roles of plant diseases, including their importance in regulating plant populations dynamics, community diversity and system function in natural ecosystems, considerations of plant diseases in conservation ecology, and ecological approaches to managing diseases in agroecosystems. Students cannot receive credit for this course and course 163. Prerequisite(s): one ecology course. Enrollment restricted to graduate students. G. Gilbert

268. Biogeochemistry and the Global Environment. *

Studies biogeochemical cycles and related environmental issues such as global environmental change, eutrophication, ecosystem degradation, and agricultural sustainability. Discusses transformation and movement of major nutrient elements in context of watershed ecology and societal implications. Students cannot receive credit for this course and course 168. Enrollment restricted to environmental studies graduate students. W. Cheng

271. Valuing the Environment. *

Intensive seminar examining the normative underpinnings of environmental values. Draws on tools from analytical, ethical, and political philosophy to develop normative arguments concerning environmental inequality and justice, environmental preservation, and risk evaluation. Involves team projects in which students develop cases on controversial contemporary issues such as biotechnology. Prerequisite(s): interview only. Enrollment restricted to graduate students. May be repeated for credit. S. Rajan

280. Advanced Topics in Environmental Studies. W,S

Intensive research seminar, including reading and critique of primary research literature and research in progress. Topics vary and are announced in advance; students should consult with faculty prior to enrolling. Enrollment by permission of instructor. Enrollment restricted to graduate students. May be repeated for credit. The Staff

283. Environmental Studies Internship. F,W,S

Graduate level internship focuses on integrating interdisciplinary academic theory with practical, specialized experience in a professional setting. Course intended for environmental studies graduate students; students must complete paperwork and meet with coordinator prior to first day of instruction. The Staff

290. Interdisciplinary Research Seminar (2 credits). F,W,S

Research seminars presented weekly throughout the year by environmental studies and affiliated faculty, by visiting scholars, and by graduate students. Students discuss the content and methodology of research presented following each seminar. Enrollment restricted to graduate students. May be repeated for credit. Z. Tzankova

290L. Graduate Research Seminar (2 credits). F,W,S

Graduate student presentations of doctoral research proposals, dissertation work-in-progress, grant applications, and conference papers. This weekly laboratory meeting seeks to develop professional skills, teach constructive criticism, and foster effective discussion among peers. Enrollment restricted to graduate students. W. Cheng, S. Rajan, G. Gilbert

291. Advanced Readings in Environmental Studies (3 credits). F,W,S

Focusing on a recently published volume or on a topic of current interest, this seminar requires a rigorous analysis of the principles and methods employed in the four core areas of the program: sustainable agriculture and agro-ecology; conservation biology; environmental policy analysis; and political economy. Enrollment restricted to graduate students. May be repeated for credit. The Staff

291C. Advanced Readings in Risk and Public Policy (3 credits). *

Advanced readings and research on environmental risk and public policy. Explores environmental decision making given the question of the burden of proof and scientific uncertainty and grapples, in an advanced manner, with emergent policy alternatives, such as the precautionary principle. Also offered as course 281C for 5 credits. Prerequisite(s): course 172 or equivalent work demonstrated by an interview. Enrollment restricted to graduate students. May be repeated for credit. S. Rajan

291D. Advanced Readings in Tropical Ecology, Agriculture, and Development (3 credits). S
Analyzes recent publications in ecology, conservation, agroecology, and development in

tropical and subtropical regions, particularly Latin America. Discussions place special emphasis on integration across natural and social science disciplines to address issues of sustainability in tropical regions. Enrollment restricted to graduate students. G. Gilbert

291M. Advanced Readings in Biogeochemistry (3 credits). *

Course consists of three parts: fundamental biogeochemistry of the Earth, global cycles of nutrient elements, and societal and scientific issues of global change. Class activities include (1) presentation of summary statements based on reading assignments; (2) discussion of theories, concepts, methodologies, and applications; (3) computer simulation and modeling of elemental cycles using STELLA; and (4) integration of scientific information on global change with social issues by writing. Enrollment restricted to graduate students. W. Cheng

291P. Advanced Readings in Environmental History and Anthropology (3 credits). *

Course of readings systematically surveying the theoretical contributions of the disciplines of environmental history, historical ecology, environmental anthropology, and geography. After an overview of the evolution of 20th-century thought on the relationship between environment and culture as seen through the lenses of these disciplines, explores emerging research hybrids and new research frontiers. Enrollment restricted to graduate students. S. Rajan

292. Topics in Research in Environmental Studies (2 credits). F,W,S

Seminar in which students give critically evaluated presentations regarding current research in environmental studies and issues in research design. Students should consult with faculty prior to enrolling. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent study and research under faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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416 Humanities 1

(831) 459-2461 or 459-2757

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<http://feministstudies.ucsc.edu/>

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Lower-Division Courses

1. Feminist Studies: An Introduction. F

Introduces the core concepts underlying the interdisciplinary field-formation of feminist studies within multiple geopolitical contexts. Explores how feminist inquiry rethinks disciplinary assumptions and categories, and animates our engagement with culture, history, and society. Topics include: the social construction of gender; the gendered division of labor, production, and reproduction; intersections of gender, race, class, and ethnicity; and histories of sexuality. (Formerly Introduction to Feminisms.) (General Education Code(s): CC, IH.) A. Arondekar

10. Feminisms of/and the Global South. W

Explores feminist theories from domestic U.S. and global contexts in order to ask how interventions of women of color in the U.S. and of radical feminist movements in non-U.S. locations radically re-imagine feminist politics. Rather than focusing on feminist movements that represent different regions of the world, course examines feminist theory through multiple histories of colonialism, post-colonialism, and globalization. (Formerly course 80F.) (General Education Code(s): CC, T5-Humanities and Arts or Social Sciences, E.) A. Arondekar

14. Popular Culture in South Asia. F

Popular culture enables people to make sense of their modern selves and their place in the world. Focusing on South Asia, this course explores the region's rich and variegated popular culture forms, including film, music, television, the painted and printed image, and sport. It also investigates how the popular articulates with nation and global conjunctures and how it constructs hierarchies of class, gender, caste, and sexuality. (General Education Code(s): IM.) M. Murty

20. Feminism and Social Justice. F

Examines, and critically analyzes, select post-World War II movements for social justice in the United States from feminist perspectives. Considers how those movements and their participants responded to issues of race, class, gender, and sexuality. A feminist, transnational, analytic framework is also developed to consider how those movements may have embraced, enhanced, or debilitated feminist formations in other parts of the world. (Formerly course 80A.) (General Education Code(s): ER, T5-Humanities and Arts or Social Sciences.) B. Aptheker

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■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
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■ Economics
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■ Electrical Engineering
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■ Film and Digital Media
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■ History of Art and Visual Culture
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■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
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■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

21. Religion in American Politics and Culture. *

Introduces dominant discourses about Christianity and Islam in the American public sphere, with particular attention paid to race, gender, sexuality, and class in thinking about religion. Visual and textual media, political commentary, and popular ethnographies are analyzed. (Formerly course 80T.) (General Education Code(s): IM.) M. Fernando, N. Atanasoski

30. Feminism and Science. S

Explores questions of science and justice. Examines the nature of scientific practice, the culture of science, and the possibilities for the responsible practice of science. Rather than focusing on feminist critiques of science, the course examines how science and technology are changing our world and the workings of power. (Formerly course 80K.) Enrollment limited to 80. (General Education Code(s): PE-T, T5-Humanities and Arts or Social Sciences.) K. Barad

40. Sexuality and Globalization. *

Examines the relationship between sexuality and the contemporary term "globalization" as a dense entanglement of processes that emerges from a history of U.S. empire. Sexuality cannot be separated from power struggles over the classification of bodies, territories, and questions of temporality. Examines how sexualized contact zones produce new knowledge, commerce, inequalities, possibilities, and identities. (Formerly course 80B.) (General Education Code(s): CC, T5-Humanities and Arts or Social Sciences.) F. Schaeffer-Grabiel

41. Trans Gender Bodies. W

Draws from representations of transgender/transsexual people in popular, biomedical, and political contexts. Examines the impact of transgender lives on concepts of gender, identity, and technology. Engages with biological and sexological frameworks of sex/gender, trans experience, and social movements and theories. (Formerly course 80M.) M. Ochoa

80S. Women in Music. F

An exploration of the sociological position of women as composers and performers in Western and non-Western musics, with a focus on both ethnographic and historical sources. (Also offered as Music 80S. Students cannot receive credit for both courses.) Offered in alternate academic years. (General Education Code(s): CC, T4-Humanities and Arts, A.) T. Merchant

Upper-Division Courses

100. Feminist Theories. W

Core course for feminist studies. Serves as an introduction to thinking theoretically about issues of feminism within multiple contexts and intellectual traditions. Sustained discussion of gender and its critical connections to productions of race, class, and sexuality. Focus will change each year. Enrollment restricted to sophomores, juniors, and seniors. A. Arondekar

102. Feminist Critical Race Studies. *

Working from the perspective that race is a cultural invention and racism is a political, economic, and social relation, investigates how "race" is produced as a meaningful and powerful social category, examines the effects of racism as a social relation, and argues for the necessity of combining feminist and critical race studies. By considering different historical periods and places, aims to equip students with the tools necessary to critically examine the production and reproduction of race and racism in the U.S. Prerequisite(s): one course from feminist studies. Enrollment restricted to juniors and seniors. Enrollment limited to 20. (General Education Code(s): E.) The Staff

112. Women and the Law. *

Interdisciplinary approach to study of law in its relation to category "women" and production of gender. Considers various materials including critical race theory, domestic case law and international instruments, representations of law, and writings by and on behalf of women living under different forms of legal control. Examines how law structures rights, offers protections, produces hierarchies, and sexualizes power relations in both public and intimate life. (Also offered as Politics 112. Students cannot receive credit for both courses.) Enrollment restricted to feminist studies, politics, legal studies, and Latin American and Latino studies/politics combined majors during priority enrollment only. G.

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Dent

115. Gender, Sexuality, and Transnational Migration Across the Americas. F

Examines migration as a mode of inquiry into transnational practices across geographic locales and temporal zones. Analyzes migration in relation to the transnational formation of gender, race, and sexuality as well as processes of neocolonialism, the state, and globalization. Prerequisite(s): course 1, 100, or 145. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): ER, E.) F. Schaeffer-Grabiel

120. Transnational Feminisms. *

Explores the emergence of transnational feminism through U.S. women of color and postcolonial feminism. Underscores the role of globalization, nationalism, and state formation in relation to feminist theorizing, activism, and labor across the Global South. In an attempt to understand the salience of inequalities, the course interrogates the continuation of feminist critique that is attentive to the war on terror, neocolonialism, and empire. Prerequisite(s): course 1. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 40. (General Education Code(s): CC, E.) F. Schaeffer-Grabiel

123. Feminism and Cultural Production. S

Explores relationship between feminism and culture. Topics will vary and include different forms of cultural production such as film and literature. Regional/national focus will also vary. Prerequisite(s): course 1. Enrollment restricted to sophomores, juniors, and seniors. May be repeated for credit. (General Education Code(s): A, E.) V. Cooppan, J. Gonzalez

124. Technology, Science, and Race Across the Americas. *

Examines new ways of understanding the body and race through the intersection of technology and science. Addresses how broader structures of power and the rise of new technological and scientific discoveries mediate power relations and alter how race, national boundaries, the body, and citizenship are normalized and contested from colonialism to the present. Course content may vary; themes may include: U.S. eugenics, I.Q. tests, patenting debates, sterilization, assisted reproduction, biometrics, and genetics across the Americas. (Formerly Technologies and Latinidad: Cyberspace and Beyond.) Enrollment restricted to sophomore, junior, and senior feminist studies majors during priority enrollment only. Enrollment limited to 25. (General Education Code(s): PE-T, E.) F. Schaeffer-Grabiel

126. Images, Power, and Politics: Methods in Visual and Textual Analysis. W

Introduces the analysis of visual images and text with particular emphasis on feminist critical methodologies. Using case studies from photography, film, TV, advertising, and new media, students learn how to read and analyze culture. Enrollment restricted to sophomore, junior, and senior feminist studies majors during priority enrollment only. Enrollment limited to 25. (General Education Code(s): IM.) N. Atanasoski

132. Gender and Postcoloniality. F

Postcolonial feminist studies. Explores how discourses of gender and sexuality shaped the policies and ideologies of the historical processes of colonialism, the civilizing mission, and anticolonial nationalism. Considers orientalism as a gendered discourse as well as colonial understandings of gender and sexuality in decolonialization. Explores Western media representations, literature, the law, and the place of gender in the current debate between cultural relativism and universalism. Provides an understanding of some key terms in postcolonial studies and an in-depth examination of the place of gender in these processes. Enrollment restricted to juniors and seniors. Enrollment limited to 20. (General Education Code(s): E.) A. Arondekar

133. Science and the Body. *

Contemporary technoscientific practices, such as nano-, info-, and biotechnologies, are rapidly reworking what it means to be human. Course examines how both our understanding of the human and the very nature of the human are constituted through technoscientific practices. Prerequisite(s): courses 1 and 100. Enrollment restricted to juniors and seniors. (General Education Code(s): PE-T.) K. Barad

135. Topics in Science and Sexuality. *

Introduces the multiple debates animating the linkages between science, race, and sexuality. Interrogates the interrelated, epistemological frameworks of science and sexuality/queer studies across a range of interdisciplinary and geopolitical locations.

Prerequisite(s): course 100 or 145. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. May be repeated for credit. A. Arondekar

139. African American Women's History. *

Considers African American women as central to understanding of U.S. history, focusing on everyday survival, resistance, and movements for social change. Discussion of critical theories for historical research, gender, and race. Emphasis on biography, cultural history, and documentary and archival research. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): ER, E.) B. Aptheker

145. Racial and Gender Formations in the U.S. F

Introduces the defining issues surrounding racial and gender formations in the U.S. through an understanding of the term "women of color" as an emergent, dynamic, and socio-political phenomenon. Interrogates organizing practices around women of color across multiple sites: film and media, globalization, representation, sexuality, historiography, and war, to name a select few. (General Education Code(s): ER, E.) F. Schaeffer-Grabiel

148. Gender and Global Development. *

Uses the critical tools of feminist theory and cultural anthropology to look at how global development discourses and institutions mobilize, reinforce, and challenge systems of gender-based inequality. Topics include non-governmental organizations (NGOs), development practice, microcredit, and technocrat cultures. (Formerly Gender and Development.) (Also offered as Anthropology 148. Students cannot receive credit for both courses.) M. Moodie

150. Mediating Desire. *

From a foundation in semiotics, considers the ways race and gender are constructed, understood, performed, embraced, commodified, and exploited through representations. Uses representations of, by, and for the margins to engage theories of communication, identity, and representation. Creative final projects encouraged. (Formerly Community Studies 152) Enrollment restricted to sophomore, junior, and senior feminist studies majors or by permission of instructor. (General Education Code(s): ER, E.) M. Ochoa

168. Topics in Feminist Philosophy. *

Topics in feminist philosophy, which may include: the nature of feminist philosophy, feminist approaches to philosophical issues, social and political philosophy, theories of knowledge, ethics, aesthetics, and science, technology, and medicine studies. Presupposes some familiarity with philosophy or feminist scholarship. (Also offered as Philosophy 147. Students cannot receive credit for both courses.) Prerequisite(s): Philosophy 100A or 100B or 100C. The Staff

175. Gender and Sexualities in Latina/o America. *

Advanced topics in gender and sexuality in Latin America and Latina/o studies. Analyzes role of power, race, coloniality, national and transnational processes in the production and analysis of genders and sexualities. Materials include memoir, fiction, ethnography, social documentary and history. (Formerly, Gender and Sexuality in Latin America.) Enrollment restricted to sophomore, junior, and senior feminist studies majors or by permission of instructor. (General Education Code(s): CC, E.) M. Ochoa

189. Advanced Topics in Feminist Theory. S

Focus on a particular problem in feminist theory. Problems vary each year but might include theorizing the gendered subject, racializing gender, the meeting points of psychoanalysis and social-political analysis in theorizing gender, the relationship between queer theory and feminist theory, postcolonial feminist theory. Prerequisite(s): course 100. Enrollment restricted to juniors, seniors, and graduate students. Enrollment limited to 20. May be repeated for credit. The Staff

193. Field Study. F,W,S

Individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Individual field study in the vicinity of the campus under the direct supervision of a faculty

sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Senior Seminar.

Discussion classes providing a broad overview of some general "area of concentration." Discussion of assigned readings, focus on oral presentations, and a final 20- to 25-page paper. Satisfies the senior comprehensive requirement in feminist studies. Enrollment limited to 20. The Staff

194A. Feminist Jurisprudence. *

Approaches legal reasoning from a feminist and intersectional perspective with attention to structures and jurisdiction, case materials, and emerging international frameworks for gender justice. Designed to facilitate completion of a substantial research essay based in feminist legal philosophy. Instructor permission required to enroll. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; course 112 or Politics 112. Enrollment restricted to senior feminist studies majors. Enrollment limited to 20. G. Dent

194D. Feminist Science Studies. *

Examines different feminist approaches to understanding the nature of scientific practices. Particular attention paid to notions of evidence, methods, cultural and material constraints, and the heterogeneous nature of laboratory practices. Considers the ways in which gender, race, and sexuality are constructed by science and how they influence both scientific practices and conceptions of science. Also examines the feminist commitment to taking social factors into account without forfeiting the notion of objectivity. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; and courses 1 and 100. Enrollment restricted to senior feminist studies majors. Enrollment limited to 20. K. Barad

194F. Chicana/Latina Cultural Production. W

Traces the intersection between Chicana studies and Latin American studies through transnational forms of cultural production, imaginaries, and empowerment. Analysis of theories of cultural production and discussion of the political salience of culture as a site for resistance, critique, and creativity. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; course 100. Enrollment restricted to senior feminist study majors. Enrollment limited to 20. (General Education Code(s): E.) F. Schaeffer-Grabiel

194G. Images of Africa. *

Explores questions of colonialism, empire, race, gender, and geopolitics in the proliferating images-filmic, televisual, and media-of Africa in the United States. Facilitates the completion of a substantial research essay based on the study of popular culture. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; course 100; enrollment restricted to seniors. Enrollment by permission of instructor. Enrollment limited to 20. G. Dent

194H. Michel Foucault: An Introduction. F

French philosopher Michel Foucault's writings on modern forms of knowledge, power, and subjectivity provide a serious challenge to how we negotiate social oppression. Engages some of Foucault's most cited works, and grapples specifically with his primary claim that modern societies are marked less by freedom and autonomy than by discipline and docility. Prerequisite(s): courses 1 and 100; and satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to juniors, seniors, and graduate feminist studies majors. Enrollment limited to 20. A. Arondekar

194I. Feminist Oral History and Memoir. S

Designed to train students in oral history and memoir writing. Emphasizes the specialness of transgressive voices; race, class, and sexuality, women's silence, erasure, censorship, and marginalization are addressed. The politics of memory, narratives, storytelling, and editorial judgment are considered. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 100. Enrollment restricted to senior feminist studies majors. Enrollment limited to 20. (General Education Code(s): W.) B. Apthecker

194K. Black Diaspora. F

Seminar focuses on the historical and subjective processes that produce the concept of an African or Black Diaspora. In narrative, film, and cultural studies, themes of slavery, exile, home, identity, alienation, colonialism, politics, and reinvention are explored.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 100. Enrollment restricted to senior feminist studies majors. Enrollment limited to 15. G. Dent

194N. Gender, Class, and Sex in Shanghai. *

Focusing on Shanghai, course examines issues of gender, class, and sex in modern urban Chinese history. Given Shanghai's history as a treaty port, particular attention paid to ways in which its semi-colonial status inflected the articulation of gender identities, class formations and issues of sexuality (particularly sexual labor). Also looks at Shanghai during the Maoist period and in the context of more contemporary economic reforms. (Also offered as History 194A. Students cannot receive credit for both courses.) **Prerequisite(s):** satisfaction of Entry Level Writing and Composition requirements; and History 40B, 140C, 140D, or 140E, or permission of instructor. Restricted to junior and senior feminist studies majors. Enrollment limited to 20. (General Education Code(s): W.) E. Honig

194O. The Politics of Gender and Human Rights. W

Examines human rights projects and discourses with a focus on the politics of gender, sexuality, race, and rights in the international sphere. Reading important human rights documents and theoretical writings, and addressing particular case studies, emphasizes the tensions between the ideals of the universal and the particular inherent in human rights law, activism, and humanitarianism. **Prerequisite(s):** satisfaction of Entry Level Writing and Composition requirements; courses 1 and 100. Enrollment restricted to senior feminist studies majors. Enrollment limited to 20. N. Atanasoski

194Q. Queer Diasporas. *

Queer diaspora emerged from Third World/queer-of-color critique of queer theory and provides a framework for analyzing racializations, genders, and sexualities in colonial, developmental, and modernizing contexts. Readings from anthropology, history, literature, and feminist and cultural studies. **Prerequisite(s):** course 100 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 20. M. Ochoa

194T. Transgender Studies. *

Explores literature from the natural sciences, anthropology, history, cultural studies, and sociology. Provides theoretical approaches to complex questions in queer studies and geopolitics, and a framework for understanding embodiment, medical regulation, gender formation, the human/animal divide, etc. **Prerequisite(s):** satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to senior feminist studies majors. Enrollment limited to 20. M. Ochoa

195. Senior Thesis or Project. F,W,S

The senior thesis/project which satisfies the major requirement. Course is for independent research and writing. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements; students submit petition to sponsoring agency. May be repeated for credit. (General Education Code(s): W.) The Staff

198. Independent Field Study. F,W,S

Provides for individual study program off campus for which faculty supervision is not in person. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for individual study program off campus for which faculty supervision is not in person. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Feminist Theories. F

Introductory required course for feminist studies graduate students. Covers major theorists, debates, and current questions as well as foundational texts through which feminist critiques have been grounded. Content changes with instructor. Enrollment restricted to graduate students. Enrollment limited to 15. G. Dent

201. Topics in Feminist Methodologies. W

Explores feminist theorizing across disciplinary and cultural contexts for both methodology (theories about the research process) and epistemology (theories of knowledge). Goal is to orient students toward changes in organization of knowledge and provide them with different feminist methodologies in their pursuit of both an "object" of study and an epistemology. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. F. Schaeffer-Grabiel

202. Disciplining Knowledge/Graduate Research. S

Prepares students to develop research skills and initiate their research projects. Students consider what is meant by feminist research and undertake designing and performing feminist research. Prerequisite(s): course 200 and course 201. Enrollment restricted to graduate students. Enrollment limited to 15. N. Atanasoski

203. Feminist Pedagogies. *

Examines feminist pedagogies as projects in transgressing traditional disciplinary boundaries. Examines historical examples of alternative pedagogies and contemporary models for creating communities dedicated to social justice. Designed to assist graduate students develop teaching strategies in multiple fields. Enrollment restricted to graduate students. Enrollment limited to 15. B. Apteker

204. Ways of Seeing and Hearing. *

Graduate-level advanced seminar explores ways that seeing, hearing, and knowing are influenced by culture, power, race, and other factors. Readings emphasize how documentary subjects are constituted and known, addressing questions of epistemology, social constructivism, objectivity, and method. (Also offered as Social Documentation 204. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. M. Ochoa

207. Topics in Queer/Race Studies. *

Explores the interrelated epistemological frameworks of critical race studies and queer studies. Through the study of a range of philosophical, scientific, literary, and cinematic texts, course historicizes and theorizes discourses of race and sexuality. Enrollment restricted to graduate students. Enrollment limited to 15. A. Arondekar

211. Sexuality, Race, and Migration in the Americas. *

Analyzes the ways transnational processes intersect with changing notions of gender, sexuality, and race. Examines processes such as tourism, the Internet, capitalism, and labor spanning Brazil, the Dominican Republic, and the United States. Enrollment restricted to graduate students. Enrollment limited to 15. F. Schaeffer-Grabiel

214. Topics in Feminist Science Studies. S

Graduate seminar on feminist science studies. Topics will vary and may include: the joint consideration of science studies and poststructuralist theory; the relationship between discursive practices and material phenomena; and the relationship between ontology, epistemology, and ethics. Enrollment restricted to graduate students. Enrollment limited to 15. K. Barad

215. Postcolonial and Postsocialist Transactional Analytics. *

Addresses the intersection of the postcolonial and the postsocialist as theoretical ground. Considers how (neo)liberal ideologies about race, class, gender, secularism, and democracy are shaped by the intersection between postsocialist geopolitics and imperial legacies. (Formerly Postsocialism, Postcolonialism, Neoliberalism.) Enrollment restricted to graduate students. Enrollment limited to 15. N. Atanasoski

216. Archives/Genders/Histories: An Introduction. *

Explores the entanglements of archives, genders, and histories across a number of intellectual and imperial contexts. Approaches the concept of the archive to reflect on who counts as a historical and/or gendered subject and what are the ethics of representation that guide such archival formations. Draws on literature from philosophy, gender/sexuality

studies, anthropology, history, and literary criticism. Enrollment restricted to graduate students. Enrollment limited to 15. A. Arondekar

222. Religion, Feminism, and Sexual Politics. *

Focuses on the increasing importance of religion as a category of analysis in feminist theory. Addresses the relationship of religion, feminist politics, and activism in connection with nationalism, the family, sexuality, and geopolitics. Enrollment restricted to graduate students. Enrollment limited to 15. N. Atanasoski

232. Topics in Postcolonial Studies. W

Variable topics that could include postcolonial approaches to questions of epistemology and knowledge production, theories of nationalism and nation-state formation, subaltern historiography, analyses of modernization and developmental theory, postcolonial approaches to globalization, and transnationalism. Significant component of feminist contributions to these literatures. Enrollment restricted to graduate students. Enrollment limited to 15. A. Arondekar

240. Culture and Politics of Human Rights. *

Examines cultural, philosophical, and political foundations for human rights and provides students with critical grounding in the major theoretical debates over conceptualizations of human rights in the Americas. Addresses the role of feminist activism and jurisprudence in the expansion of human rights since the Universal Declaration of Human Rights. Addresses challenges of accommodating gender rights, collective rights, and social and economic rights within international human rights framework. (Also offered as Latin American&Latino Studies 240. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. R. Fregoso

245. Race and Representation. *

Explores how human subjects come to be visually defined and marked by "race" discourse. Covers diverse theoretical literatures on the topic, primarily in visual studies, but also in cultural studies, post-colonial studies, and psychoanalysis. (Also offered as History of Consciousness 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. J. Gonzalez

251. Feminist Theory and Social Psychology. *

Course bridges feminist theory and social psychological research to explore connections between theory covered and empirical studies on various topics in social psychology. Seminar format allows students opportunity for extensive discussion. (Also offered as Psychology 251. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. The Staff

260. Black Feminist Reconstruction. S

Re-visions and extends Reconstruction from 1865–1920 from a black feminist standpoint. Topics include: redefining democracy; labor; literacy and education; suffrage; re-visioning sexuality; childbirth; parenting, etc. Analyzes traditional historiography and the methodological implications of the boundaries between history and fiction, and archival and oral traditions. Enrollment restricted to graduate students Enrollment limited to 15. B. Apteker

264. The Idea of Africa. *

Examines the position of Africa in cultural studies and the simultaneous processes of over- and under-representation of the continent that mark enunciations of the global and the local. Themes include defining diaspora, the West as philosophy, and Africa in the global economy. (Also offered as History of Consciousness 264. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. G. Dent

268A. Science and Justice: Experiments in Collaboration. *

Considers the practical and epistemological necessity of collaborative research in the development of new sciences and technologies that are attentive to questions of ethics and justice. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267A, Biomolecular Engineering 268A, and Sociology 268A. Students cannot receive credit for more than one course.) Enrollment limited to 15. J. Reardon, K. Barad

268B. Science and Justice Research Seminar.

Provides in-depth instruction in conducting collaborative interdisciplinary research. Students produce a final research project that explores how this training might generate research that is more responsive to the links between questions of knowledge and questions of justice. Prerequisite(s): Sociology 268A, Biomolecular Engineering 268A, Feminist Studies 268A, or Anthropology 267A. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267B, Biomolecular Engineering 268B, and Sociology 268B. Students cannot receive credit for more than one course.) Enrollment limited to 15. J. Reardon, K. Barad

297. Independent Study. F,W,S

Independent study and research under faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study (2 credits). F,W,S

Independent study and research under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Enrollment restricted to students who have advanced to candidacy. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

10. Professional Topics in Film, Television, and Digital Media (2 credits). *

Taught by a working professional, lectures and workshop provide students with career-related information and insight into a specific profession in film, television, and digital media. Students research various aspects of a film, television, or digital media profession. Enrollment restricted to film and digital media majors and minors, pre-majors and proposed majors. The Staff

20A. Introduction to Film Studies. F

An introduction to the basic elements, range, and diversity of cinematic representation and expression. Aesthetic, theoretical, and critical issues are explored in the context of class screenings and critical readings. Students are billed a course materials fee. If space allows, restrictions may be lifted after priority enrollment. Enrollment restricted to first-year, sophomore, and junior proposed and pre-film and digital media majors and film and digital media minors. P. Limbrick

20B. Introduction to Television Studies. S

Introduction to the basic forms of televisual presentation, including differing narrative structure from movies and situation comedies to soap opera, plus modes of direct discourse in news, advertising, sports, music, television, and other genres. Alternative forms and modes in electronic media, such as independent video art and documentary, public television, cable, and electronic networks are explored, with their potential for expressing cultural diversity set in relation to social, cultural, and political conditions. Students are billed a course materials fee. If space allows, restrictions may be lifted after priority enrollment. Enrollment restricted to first-year, sophomore, and junior declared, proposed, and pre-film and digital media majors and film and digital media minors. The Staff

20C. Introduction to Digital Media. W

Introduces fundamental features of digital media and examines the immense visual, social, and psychological impact of the "digital revolution" on our culture. Topics include the concepts and forms of the digital hypertext interface, Internet, and web, and the impact of digital media on conceptions of the self, body, identity, and community. Students are billed a course materials fee. If space allows, restrictions may be lifted after priority enrollment. Enrollment restricted to first-year, sophomore, and junior declared, proposed, and pre-film and digital media majors and film and digital media minors. W. Sack

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

20P. Introduction to Production Technique. W
Introduction to production process with emphasis on low-budget, independent film and video making. Explores conceptualization, planning, shooting, editing of documentary, personal essay, and feature narrative works. Emphasis on visualization and shooting style, and scriptwriting, but not hands-on editing. Open to students of varied backgrounds and goals. Students are billed a course materials fee. Prerequisite(s): Course 20A, 20B, 20C, or 80A. Enrollment restricted to pre-majors, proposed majors, majors, minors, frosh, sophomores, juniors, and students not currently declared in the production concentration. (General Education Code(s): PR-C.) The Staff

42. Student-Directed Seminar. W,S
Seminars on selected topics taught by upper-division students under faculty supervision (see course 192). Students submit petition to sponsoring agency. The Staff

80A. The Film Experience. F
Students learn to understand how films reach the public through a collaborative, industrial, and artistic practice; how films "work" in a narrative sense; how they construct meanings for viewers; and how their formal techniques construct different possibilities for meaning and interpretation. (General Education Code(s): IM.) The Staff

80M. Understanding Media. *
Introduces students to contemporary concerns, issues, and topics of media and media criticism. With an emphasis on visual analysis, students develop conceptual tools to think critically about photography, cinema, television, video, and print journalism. (General Education Code(s): IM.) J. Horne

80S. Special Topics in Film and Digital Media. F,S
Study of selected aspects of film, television, and/or digital media. Includes weekly screenings and historical/theoretical readings. May be repeated for credit. (General Education Code(s): IM, T5-Humanities and Arts or Social Sciences, A.) S. Ruiz, The Staff

80T. Technothrillers. *
Examination of recent films classified as "thrillers" that approach technology (computers, robotics, biotech, the Internet, etc.) through suspense, anxiety, and paranoia. It will also address how technologically produced popular culture negotiates attitudes toward technological change. Students are billed a course materials fee. (Formerly course 80A.) (General Education Code(s): PE-T, T5-Humanities and Arts or Social Sciences, A.) The Staff

80V. Video Games as Visual Culture. W
Through the aesthetics and theory of electronic games, course introduces the histories, ideas, and debates that inform game studies. Topics include: games and cinema; race, class, and representation; narratology/ludology debates; interactivity; serious games; and alternative games. (General Education Code(s): PE-T.) S. Murray

80X. Sex in the Cinema. *
Examines the historical representation of sexual difference, orientation, and politics in film and video using cultural studies, political and economic historiography, and feminist and queer theory and paying special attention to intersections of U.S. political movements with filmmaking and reception. (General Education Code(s): IM, T5-Humanities and Arts or Social Sciences, A.) The Staff

Upper-Division Courses

120. Introduction to Film Theory and Criticism. W
An introduction to classical and contemporary film theory and those theoretical paradigms and methods that have illuminated the media: formalism, realism, structuralism, semiotics, psychoanalysis, Marxism, feminism, and issues of identity and difference. Students are billed a course materials fee. Prerequisite(s): course 20A, satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to film and digital media majors, pre-majors, and minors during priority enrollment; may be opened if space allows. (General Education Code(s): W.) J. Horne

130. Silent Cinema. S
Presents the development of silent film as a cultural form from the early period to the beginning of sound, addressing its historical evolution, technological development,

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aesthetic transformations, and varied cultural contexts. Students are billed a course materials fee. Usually offered in alternate academic years. Prerequisite(s): course 20A . (General Education Code(s): IM.) S. Stamp

132A. International Cinema to 1960. *

A survey of significant developments in narrative film outside Hollywood from the advent of sound technology to the late '50s. Differing inter/national contexts, theoretical movements, technological innovations, and major directors are studied. Students are billed a course materials fee. Usually offered alternate academic years. Prerequisite(s): course 20A . (General Education Code(s): CC, A.) P. Limbrick

132B. International Cinema, 1960 to Present. *

A survey of significant developments in narrative film outside Hollywood from 1960 to the present. Major film movements and directors from around the world are studied. Students are billed a course materials fee. Usually offered in alternate academic years. Prerequisite(s): course 20A . (General Education Code(s): CC, A.) P. Limbrick

132C. Gender and Global Cinema. W

Offers students historical and critical tools to investigate global film through the framework of gender. Focused in particular on contemporary film (from 1960 to present), the class is structured both chronologically and via national industries. Students are billed a course materials fee. Prerequisite(s): course 20A. (General Education Code(s): CC, E.) Y. Wang

134A. American Film, 1930–1960. *

A survey of American narrative cinema from 1930 to 1960. Examines developments in film style, film technology, and the film industry in relation to American cultural history. Students are billed a course materials fee. Prerequisite(s): course 20A or 20B. Offered in alternate academic years. (General Education Code(s): IM.) S. Stamp

134B. American Film, 1960–Present. F

A survey of American narrative cinema from 1960 to the present. Examines developments in film style, film technology, and the film industry in relation to American cultural history. Students are billed a course materials fee. Prerequisite(s): course 20A or 20B. Offered in alternate academic years. (General Education Code(s): IM.) The Staff

136A. Experimental Film and Video. *

A survey of various experimental styles and practices in film and video, addressing the historical developments of these media formats. The course situates experimental film and video work within the larger contexts of artistic traditions as well as networks of production and reception. Students are billed a course materials fee. Prerequisite(s): course 20A .

(General Education Code(s): IM, A.) The Staff

136B. History of Television. W

Survey of the historical development of broadcast television from its origins to the present day phenomena of cable, satellite, and electronic networks. Examination of major genres, forms, and modes of production and consumption within cultural, social, and economic contexts. Offered every other year, alternating with course 136A. Students are billed a course materials fee. Prerequisite(s): course 20B. (General Education Code(s): IM, A.) R. Prelinger

136C. Visual Culture and Technology: History of New Media. *

Explores the relationship between technology and change and surveys the history of various technologies of visual culture from print to computer based imagery and the Internet. Students are billed a course materials fee. Prerequisite(s): course 20C. (General Education Code(s): PE-T.) The Staff

136D. Documentary Film and Video. F

Explores the category of nonfiction through a historical and theoretical study of documentary in film and video. Addresses ethnographic film, Soviet and Griersonian documentary, cinema verite and/or other selected documentary texts and the issues of representation they raise. Students are billed a course materials fee. (Formerly course 161.) Prerequisite(s): course 20A or 20B. Offered in alternate academic years. (General Education Code(s): IM.) J. Kahana

142. Beyond Cybernetics: Advanced Topics in New Media Technologies. *

Analysis of the effects of communication and information technologies on culture and

cultural production through the study of systems and networks. Assignments may include papers, Internet presentations, development/participation in virtual communities, interactive multimedia. Emphasis on advanced critical and experimental approaches. Students are billed a course materials fee. Prerequisite(s): course 20C. Enrollment restricted to film and digital media majors. Enrollment limited to 40. L. Andrews, S. Daniel

150. Screenwriting. F

Problems in writing for film and television are explored through the writing of original material and analysis of existing works. Various film genres, conventions, and styles, both fictional and nonfictional, are examined. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Admission by application process which may begin prior to start of quarter; application materials generally available final week of preceding quarter. See enrollment conditions section in quarterly Schedule of Classes for application dates and other application instructions that may apply. May be repeated for credit.

(General Education Code(s): PR-C, W.) The Staff

151. Film Directing. S

Workshop that explores the director's involvement in film and video production. Topics will include the manipulation of time and space, continuity, script planning and blocking, and working with actors and crew. Students will participate in group and individual exercises in pre-production and scene direction. Prerequisite(s): courses 20A, 20P, and/or 170B are recommended. Admission by application process which may begin prior to the start of the quarter; application materials generally available final week of preceding quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Enrollment limited to 25. (General Education Code(s): PR-E, A.) The Staff

152. Script Analysis. *

Students analyze diverse narrative techniques, dramatic structures, and genre forms to understand the craft of screenwriting and prepare for their own creative writing and filmmaking. Students read finished scripts and view films. Prerequisite(s): course 120. Enrollment restricted to film and digital media majors and film and digital media pre-majors. Enrollment limited to 25. The Staff

160. Film Genres. S

Concentrated study of films from one cinematic grouping with similar themes and narrative structures such as westerns, musicals, or science fiction, or a comparative study of different genres. History, theory, and criticism of the genre are covered. Students are billed a course materials fee. Prerequisite(s): course 130, 132A, 132B, 132C, 134A or 134B. May be repeated for credit. (General Education Code(s): A.) The Staff

161. Topics in Documentary.

Study of topics in documentary film and video. The Staff

161B. Documentary Animation. *

Examines the history, practice, and emergence of documentary animation in contemporary film, on the Web and as activist media with emphasis on the discourse central to social documentary, decolonial theory, and the politics of representation. Prerequisite(s): course 20A. Enrollment restricted to juniors and seniors. J. Leanos

162. Film Authors. F

Intensive critical study of the work of one film auteur (director, screenwriter, actor, cinematographer). Themes, style, and structure are explored using various critical modes of analysis. Students are billed a course materials fee. Prerequisite(s): course 130, 132A, 132B, 132C, 134A, or 134B.. May be repeated for credit. (General Education Code(s): IM.) S. Stamp

165A. Film, Video, and Gender. *

A study of texts, theories, and issues of gender in film and/or video. Changing focus on one or more topics, including production and authorship, representation, reception, theories of identification, sexual preference, and related issues. Students are billed a course materials fee. Usually offered in alternate academic years. Prerequisite(s): course 20A or 20B. (General Education Code(s): A.) I. Gustafson

165B. Race on Screen. *

Review of historical and critical tools to interpret representations of race on cinematic, television, and computer screens. Class will consider the place of race in theoretical and historical scholarship and examine the debates about race produced within and across film and digital media. Students are billed a course materials fee. Usually offered in alternate academic years. Prerequisite(s): course 20A or 20B. (General Education Code(s): ER, E.) Y. Wang

165C. Lesbian, Gay, and Queer Film and Video. *

An overview of homosexuality and LGBT representations in American film. Explores the format and historical significance of New Queer Cinema. Recent independent queer film and video discussed. Topics include: authorship; spectatorship; genre and genre reappropriation; historical gender constructs; the "art" film; mainstream versus independent production; and the relationship of film to popular music. Students are billed a materials fee. Enrollment restricted to juniors, sophomores, and seniors. (General Education Code(s): IM.) The Staff

165D. Asian Americans and Media. W

Examines media representations about, as well as by, Asian Americans. Using critical essays on film theory, racial studies, feminist criticism, and independent cinema, students develop the skills necessary to conduct critical analysis of Asian Americans in film and television. Students are billed a course materials fee. Prerequisite(s): course 20A. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 60. (General Education Code(s): ER, E.) L. Kim

165E. Chicana/o Cinema, Video. *

Examines emergence of Chicana/o cinema and video from a place of social displacement, resistance, and affirmation. Looks at Chicana/o representation and spectatorship as it pertains to ethnicity, class, gender, and the beginning of a new Chicana/o film aesthetic. Students are billed a course materials fee. (Formerly course 185E.) Prerequisite(s): course 20A. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 60. (General Education Code(s): CC, E.) The Staff

168. National Cinema and Culture. S

Study of a specific cinematic or other media tradition of a region, nation, language, diasporic collectivity or other unifying cultural entity. Not a survey, this course selects one focus or offers a comparative of cross-cultural framework. Students are billed a course materials fee. Prerequisite(s): course 130, 132A, 132B, or 132C. May be repeated for credit. (General Education Code(s): CC.) P. Limbrick

170A. Fundamentals of Digital Media Production. F,S

Introduction to the conceptual and technical fundamentals of making digital media. Covers principles of digital image manipulation, basic web authoring, and interface design through projects that introduce production techniques and methods. Students are billed a course materials fee. Prerequisite(s): course 20C or Computer Science 101 or Computer Science 109. Enrollment limited to 20. (General Education Code(s): PR-C, A.) W. Sack, The Staff

170B. Fundamentals of Film and Video Production. F,W,S

An introduction to the art and craft of making films and videos. Covers principles of cinematography, videography, editing, production planning, and lighting involving both production techniques and methods. Students are billed a course materials fee. Prerequisite(s): course 20A or 20B and one other film/video and digital media critical studies or history course required. Completion of additional upper-division film and digital media critical studies or history courses improves students' ability to be admitted to this course. Admission by application and entrance essay. The online application process begins several weeks prior to the start of the quarter. See enrollment conditions section in quarterly Schedule of Classes for application dates and other application instructions that may apply. Enrollment limited to 24. (General Education Code(s): PR-C, A.) I. Gustafson, J. Taylor, I. Lusztig, L. Andrews

171. Special Topics Workshops.

Study of selected aspects of film, video, and/or digital media production. The Staff

171A. Sound. W

The cinematic equation equals images plus sound. What are sound-specific properties? What is the relationship between sound and image? Examines these and

other questions through the creation of audio and audiovisual pieces. Students are billed a course materials fee. Prerequisite(s): priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A or 170B may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Enrollment limited to 20. L. Andrews

171C. Special Topics Workshop: Found Footage. S

Students will consider the practice of "recycling" images perhaps not intended by the original "owner" or "creator." In addition to assigned readings and technical workshops, students produce three video projects and give a presentation on a specific issue or artist/group. Prerequisite(s): course 170A or 170B; priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A or 170B may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Enrollment limited to 20. (General Education Code(s): PR-C.) R. Prelinger

171D. Social Information Spaces. *

Investigates how information spaces can be designed to be inhabited, socially navigable spaces. Emphasizes the social navigation of information spaces, a set of techniques and ideas from computer-supported cooperative works, human-computer interaction, and architecture. Prerequisite(s): course 170A. Enrollment limited to 20. The Staff

171F. Special Topics Workshop: Autobiographical Film. F

Students explore autobiography as a filmmaking genre and practice, using experimental, fictionalized, documentary, and hybrid forms. Readings and screenings provide a theoretical context for production work. Topics include: strategies of (self) representation, reenactment, performance, portraiture, memoir, confession, and diaristic film. Admission is by an online application process which begins several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A or 170B may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Students are billed a course materials fee. Enrollment limited to 20. I. Lusztig

171G. Documentary Animation Workshop. W

A project-based production seminar in documentary animation: students learn diverse animation styles and techniques, and apply them to a documentary-animation class project. Courses 161B and 170A are strongly recommended as preparation (or equivalent background). Enrollment by interview only: an online application process is available in the preceding quarter. Enrollment limited to 20. J. Leanos

172. Narrative Video Workshop. F,W

Intermediate workshop in film and video production concentrating on narrative production, development of critical standards, and technical methods. Topics include cinematography, sound, and non-linear digital editing techniques. Each student is responsible for the completion of short narratives from assignments. Students are billed a course materials fee. Prerequisite(s): priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See enrollment conditions section in quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A or 170B may apply by submitting an application and sample of production work at first class

meeting; these applications will be considered on a space-available basis. (Formerly Film and Video Studio.) Enrollment limited to 20. G. Vazquez, The Staff

173. Narrative Digital Media Workshop. *

Analysis of cinematic codes and narrative structure through digital video, Internet and interactive multimedia projects. Required readings address contemporary research in narratology and hyper-media, exploring the potential of digital technology to reconfigure the role of both author and audience. Students billed a materials course fee. (Formerly Narrative Workshop: Reconfiguring Narrative Within the Digital Realm.) Prerequisite(s): course 170A. Enrollment limited to 20. S. Daniel

175. Documentary Video Workshop. W

Workshop in documentary video production, development of critical standards, ethical issues, and technical methods. Each student is responsible for the completion of short documentaries from assignments. Students are billed a course materials fee. Prerequisite(s): priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A or 170B may apply by submitting an application and sample of production work at first class meeting; applications will be considered on a space-available basis. Enrollment limited to 20. E. Hollander

176. Experimental Video Workshop. S

Introductory workshop in video production (non-narrative, experimental). Topics include a survey of non-narrative experimental video from a historical/theoretical perspective and an introduction to videography, fundamentals of video editing, and sound. Students are billed a course materials fee. Students must bear the cost of all materials. Prerequisite(s): course 170B; priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170B may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Enrollment limited to 20. (General Education Code(s): A.) The Staff

177. Digital Media Workshop: Computer as Medium. W

Introduction to the computer as a medium as well as a tool. Students explore art practice within digital imaging and information and communications environments through projects, readings, and "screenings." Assignments may include designing virtual communities and /or interactive, multimedia web works. Students are billed a course materials fee. Prerequisite(s): course 170A. Enrollment limited to 20. S. Daniel

178A. Personal Computers in Film and Video. W

Introduction to the specific applications of computers for film and video. By using computer-generated, enhanced and imported graphics, animation, text, sound, and moving video, students create still and time-based works in a computer environment. Prerequisite(s): course 170A or 170B; priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins several weeks prior to the start of the quarter. See enrollment conditions section in quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170B may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Students are billed a course materials fee. Enrollment limited to 20. S. Ruiz

178B. Advanced Personal Computers in Film and Video. *

Study of advanced computer tools in digital media, including exploration, creation, and manipulation of sound with the same level of complexity as required in composing the moving image. Students produce a final project that demonstrates skills learned. Prerequisite(s): course 170A; priority given to students who have been accepted into the production concentration. Admission is by an online application process which begins

several weeks prior to the start of the quarter. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions that may apply. Students who are not in the production concentration and who have completed course 170A may apply by submitting an application and sample of production work at first class meeting; these applications will be considered on a space-available basis. Enrollment limited to 20. The Staff

180. Writing About Film, Television, and Digital Media. *

Improves students' ability to write and edit, and invites students to explore different kinds of writing related to film, television, and digital media including historical, theoretical, cultural criticism, popular reviews, grant proposals, online forums, and publishing.

Prerequisite(s): course 20A, 20B, or 20C. Enrollment restricted to sophomore and junior film and digital media majors. Enrollment limited to 20. L. Kim

185. Special Topics in Film and Video.

Study of selected aspects of film and/or video history, theory, or criticism. Students are billed a course materials fee. The Staff

185D. Sound and Image in Theory and Criticism. *

Explores theories and critiques of sound in culture and analyzes sound in relation to media images in film, video, and other media. Voice, noise, and music are addressed. Students are billed a course materials fee. Prerequisite(s): course 120. (General Education Code(s): A.) J. Kahana

185R. The Film Remake. *

History and theory of the remake through case studies across cultural, gender, and genre boundaries. Examines changing cultural, social, stylistic, and technical values and explores notions of originality, repetition, homage, allusion, quotation, and intertextuality from Feuillade and Hitchcock to Raimi and Johnny To. Students are billed a course materials fee. Prerequisite(s): course 120, 130, 132A, 132B, 132C, 134A or 134B. The Staff

185S. Advanced Topics in Film Studies. S

Study of a selected aspect of film history, theory ,or criticism. Includes weekly screenings and historical/theoretical readings. Usually offered in alternate academic years with rotating topics. Students are billed a course materials fee. Prerequisite(s): courses 120, 130, 132A, 132B, 132C, 134A, or 134B. May be repeated for credit. Y. Wang

185X. EyeCandy Seminar. W

Seminar and workshop on writing, producing, and publishing a journal. Students engage in assignments and exercises directly and indirectly related to the production of a web launch as well as a print copy of EyeCandy . Permission of instructor required based upon student's participation in EyeCandy in winter and spring quarters. Preference given to film and digital media majors and minors; others may apply based on qualifications and as space allows. Students are billed a course materials fee. May be repeated for credit. (General Education Code(s): PR-E.) L. Kim

187. Advanced Topics in Television Studies. S

Study of a selected aspect of television history, television criticism, or national television. Includes weekly screenings and historical/theoretical readings. Usually offered in alternate academic years, with rotating topics. Students are billed a course materials fee. Prerequisite(s): course 20B. Enrollment restricted to junior and senior film and digital media majors and minors. May be repeated for credit. The Staff

189. Advanced Topics in Digital and Electronic Media Studies. *

Study of a selected aspect of digital and/or electronic media history and criticism. Topics can include virtual environments, electronic networks, video installations, computer games, and hyper-media. Usually offered in alternate academic years. Students are billed a course materials fee. Prerequisite(s): course 20C. Enrollment restricted to junior and senior film and digital media majors and minors during priority enrollment; may be opened if space allows. May be repeated for credit. The Staff

192. Directed Student Teaching. F,W,S

Teaching a lower-division course under faculty supervision (see course 42). Proposal supported by a faculty sponsor and department. The Staff

194A. Film Theory Seminar. F

Advanced senior seminar examining classical and contemporary film theory and those theoretical paradigms and methods that have illuminated the medium: formalism, realism, structuralism, semiology, psychoanalysis, Marxism, feminism, and phenomenology. Primary texts are read. Students are billed a course materials fee. Prerequisite(s): course 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. P. Limbrick

194B. Electronic Media Theory Seminar. S

Study of the major theoretical approaches to electronic media and their critical application to texts from television, independent video art and documentary, and electronic networks. Readings include a range of theoretical approaches selected from semiotic, ideological, feminist, cultural studies, reception theory, postmodernist, and other critical traditions. Students are billed a course materials fee. Prerequisite(s): courses 20B and 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. L. Kim

194C. New Media Theory Seminar. *

Study of theories of emerging genres of electronic culture, with emphasis on the discourse about computer-assisted and computer-generated forms of art and mass culture such as digital imagery, virtual environments, telematics, hyper- and multimedia, and electronic networks. Students are billed a course materials fee. Prerequisite(s): courses 20C and 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. S. Daniel

194D. Film History Seminar. S

In-depth study of film history investigating developments in cinematic style, technological innovation, and industrial practice against the broad canvas of cultural history. Students will acquire the basic tools necessary to conduct informed film historical research. Students are billed a course materials fee. Prerequisite(s): course 120 and either 130 or 134A or 134B. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. The Staff

194E. International Cinemas. S

In-depth study of the history and theory of international cinemas with changing topics such as globalism and resistance, postcolonial theory, international productions and querying race, the "national," and cinema. Students are billed a course materials fee. Prerequisite(s): course 120 and either 132A, 132B, or 132C. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. Y. Wang

194F. Film and the Other Arts. *

Examines the use of artistic media within films and of films that thematically are about other media. What do other art forms allow for—in terms of the story, the film's meaning, the gaze, and the spectator? Students are billed a course materials fee. (Formerly Film and the Other Arts: Music and Dance.) Prerequisite(s): course 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. L. Kim

194G. New(s) Media. *

Addresses the role of new media technologies in the production, distribution, and reception of the news, especially international news. Examines software and network technologies as amplifying, filtering, extending, and countering the forces of media. Students are billed a course materials fee. Prerequisite(s): courses 20C and 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. W. Sack

194S. Special Topics Seminar. W

Intensive research and writing on a changing topic chosen to demonstrate critical mastery in a specific area of film and digital media studies, for example, film adaptations and their literary sources, documentary/reality shows, or networked new media texts. Students are billed a course materials fee. Prerequisite(s): course 120. Enrollment restricted to senior film and digital media majors. Enrollment limited to 20. May be repeated for credit. The Staff

195. Senior Thesis/Project. F,W,S

An individually supervised course, with emphasis on independent research, to culminate in a senior thesis/project/production. Proposals should be submitted to adviser one quarter in advance. Petition required, approved by instructor and department; thesis petitions available in the department office. The Staff

196A. Senior Project in Narrative Production. W,S
 Students accomplish a range of production work focused on narrative production including script development, casting, and rehearsing to shooting and post-production work.

Students are billed a course materials fee. Admission by application during the preceding quarter. Students may apply a maximum of two times. See the enrollment conditions section in the quarterly Schedule of Classes for application dates and other application instructions. (Formerly Senior Project in Film and Video Production.) Enrollment limited to 20. G. Vazquez, The Staff

196B. Senior Project in Screenwriting. W

Students write a full-length (75–100 page) screenplay in this seminar while studying structural concepts and character development in selected films. Scheduling, outlining, pitching ideas, and critique are all part of the workshop format of the class. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 150 or another screenwriting course. Interview only: petition required; special application should be submitted to adviser one quarter in advance; see department office for more information. Enrollment restricted to senior film and digital media majors. Enrollment limited to 16. (General Education Code(s): W.) The Staff

196C. Senior Documentary Workshop. S

Students are responsible for producing short documentaries (up to 12 minutes). In class, students discuss each other's work as well as view and discuss other documentary films. Admission by application during the preceding quarter. Enrollment restricted to senior film and digital media majors. Students are billed a course materials fee. Enrollment limited to 20. I. Gustafson

197. Senior Digital Media Workshop. *

Independent projects using the computer as a medium as well as a tool. Students will design and implement projects in digital imaging, information, and communications environments. Students' projects may include designing virtual communities, building collaborative networks, and/or interactive, multimedia web works. Students are billed a course materials fee. Admission by application during previous quarter. See department office for more information. Enrollment limited to 20. W. Sack

198. Independent Field Study. F,W,S

Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Students engaging in field study must complete application procedures for such study by the fifth week of the previous quarter. Field study may not be used to satisfy major requirements. Petition required, approved by instructor and department; petitions available in the department office. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Students engaging in field study must complete application procedures for such study by the fifth week of the previous quarter. Field study may not be used to satisfy major requirements. Petition required, approved by instructor and department; petitions available in the department office. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual study in areas approved by sponsoring instructors. Tutorial may not be used to satisfy major requirements. Petition required, approved by instructor and department; petitions available in the department office. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual study in areas approved by sponsoring instructors. Tutorial may not be used to satisfy major requirements. Petition required, approved by instructor and department; petitions available in the department office. May be repeated for credit. The Staff

Graduate Courses

200A. Introduction to Graduate Study. F

Introduces graduate study in the critical practice of film and digital media. Conducted as a pro-seminar, with faculty presentations and discussion. Enrollment restricted to graduate

students. Enrollment limited to 15. J. Horne
200B. Theory and Praxis of Film and Digital Media 1. W Investigates methods for rhetorical production of written and visual/aural texts. Emphasizes questions about delineation between theory and practice, and provides groundwork in theories relevant to key areas in film, television, and digital media studies. (Formerly Theory and Praxis of Digital Media 1.) Enrollment restricted to graduate students. Enrollment limited to 15. J. Kahana
200C. Theory and Praxis of Film and Digital Media 2. S Investigates methods for rhetorical production of written and visual/aural texts. Emphasizes interwoven practices of the artist/researcher/teacher, formal and expressive possibilities of "hybridized" research, and cultural issues raised by integrated methods of inquiry. Students are billed a course materials fee. Enrollment restricted to graduate students. Enrollment limited to 15. I. Lusztig
204. Grant Writing (2 credits). * Devoted entirely to writing grant proposals. Students work on grants for educational support, their doctoral dissertation grants, or both. (Also offered as History of Art&Visual Culture 204. Students cannot receive credit for both courses.) Enrollment restricted to visual studies and film and digital media graduate students. Enrollment limited to 15. May be repeated for credit. The Staff
222. Critical Methodologies in Film and Television. * Introduces graduate students to critical methodologies in media studies and offers sustained examination of theoretical approaches to media studies. Methodologies may include (but are not limited to) contemporary theory (semiotic, psychoanalytic, ideological), cultural studies, intertextuality, feminist film, and television theory. Enrollment restricted to graduate students. Enrollment limited to 14. The Staff
223. The Film/Video Essay. S Focuses on "essayistic" approaches to scholarship and production, emphasizing relationships between theory and praxis that this mode of production requires. Enrollment restricted to graduate students. Enrollment limited to 15. I. Gustafson
224. Mediating Difference. F Considers theoretical and strategic, situated "difference" in the era of (semi-)colonialism, post-colonialism, and globalism, examining theoretical writing alongside media works on the topic. Enrollment restricted to graduate students. Enrollment limited to 15. Y. Wang
225. Software Studies. * Today, our lives are woven into vast software systems that facilitate our family communications, personal relations, jobs, and cultural, economic, political, and social institutions. Course examines these conditions of life and thought using insights from the arts and humanities. Enrollment restricted to graduate students. W. Sack
226. Queer Theory and Global Film and Media. * Examines queer subjectivities, practices, and theories in relation to globalization, transnationalism, and postcoloniality, focusing on film/media produced outside the United States. The course addresses representation and also uses queer theoretical work to engage wider contexts of film/media production, distribution, and exhibition. Enrollment restricted to graduate students. P. Limbrick
227. Representing Memory. * Studio-based hybrid practice/theory to explore problems of historical representation in film, video, and new media and engage with the production of new cinematic/visual forms that take on issues of personal, collective, and national memories. Enrollment restricted to graduate students Enrollment limited to 15. I. Lusztig
228. Moving Image Archives and the Frontiers of Information. S Explores moving image archives in relation to social movements, technological change, and moving image use and reuse. Theories of memory, information, and technology provide a framework for discussions, site visits, and individual projects. Enrollment restricted to graduate students. Enrollment limited to 15. R. Prelinger
229. Topics in Documentary Studies. *

Examines the forms, discourses, and practices of documentary film, television, video, and other media in relation to cultural, social, and political history and theory. While the thematic focus varies from term to term, each edition of the course places critical thought and documentary work in conversation around issues central to forms of social knowledge and action. Enrollment restricted to graduate students. Enrollment limited to 15. J. Kahana

230. Expanded Documentary. *

Students explore the aesthetic, political, and ethical dimension of new and expanded forms of documentary practice including: new media; database-driven, interactive documentary; participatory media; social media; and documentation-based art practices. Enrollment restricted to graduate students. Enrollment limited to 15. S. Daniel

231. Topics in Postcolonial Theories, Film, and Media. *

Explores topics in postcolonial theories and film and media around themes such as colonialism, modernity, and institutions of cinema; colonial histories and national or transnational film and media; race, gender, sexuality and colonialism; the uneven implications, pitfalls, and possibilities of the term "postcolonial" in relation to film and media. Enrollment restricted to graduate students. Enrollment limited to 15. P. Limbrick

232. Audiovisual Ethnography. *

Students learn the technical and critical skills required for fieldwork-based ethnographic video and audio media production. The course is structured around cumulatively building filmmaking skills with an emphasis on critically informed nonfiction ethnographic observation. Enrollment restricted to graduate students in film, anthropology, or social documentation. Enrollment limited to 10. I. Lusztig

233. Studies and Practice for Social Documentation, Filmmaking, and New Media. W

This thematic, graduate-level, hybrid, production/critical studies course provides opportunities to learn specific technical skills while engaging in the analysis and critical interpretations of cinema, social documentary, animation, art, television, and new media. Technical topics may include animation; motion graphics; interactive web media; and installation, editing, cinematography, and sound. (Also offered as Social Documentation 293. Students cannot receive credit for both courses.) Enrollment restricted to graduate students in film and digital media. Graduate students from other programs may enroll by permission of the instructor. Enrollment limited to 15. J. Leanos, L. Andrews

234. Toward an Ethics of New Media. F

Investigates an ethics of new media. Using an intersectional approach, students read thematic units that consider issues of race, class, and gender as they crosscut questions of advanced technological tools and their implementation in modern society. Enrollment restricted to graduate students. Enrollment limited to 15. S. Murray

283. New Media Art and Digital Culture. *

A study of new media art in the context of digital culture. Electronic, digital and online technology art are set in critical relation to discourse on history, aesthetics, hypermedia, the interface, hacks, embodiment, robotics, artificial life and other topics. Students are billed a course materials fee. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

284. Film, Culture, and Modernity. W

Traces the rise of motion picture culture from the late 19th century through the end of the 1920s, looking at film's emerging visual and narrative grammar, its changing cultural status, and its engagement with shifting registers of class, ethnicity, gender, and sexuality. Enrollment restricted to graduate students. Enrollment limited to 15. S. Stamp

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to course-sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Either study related to a course being taken or a totally independent study. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. May be repeated for credit. The Staff

297F. Independent Study (2 credits). F,W,S

Students submit petition to course-sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to course sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Lower-Division Courses

1. First-Year French.
Introduction to French language and culture with practice in all four language skills: listening, speaking, reading, and writing. Intended for students with no previous study of French. (Formerly Instruction in the French Language.) The Staff
2. First-Year French.
Further development of cultural competence and basic French language skills, both written and spoken. Students learn past tenses in this course. (Formerly Instruction in the French Language.) Prerequisite(s): course 1 or placement by interview. The Staff
3. First-Year French.
Final quarter of first-year sequence. Students complete study of French language basics, including the future tense and the conditional and the subjunctive moods, while continuing to learn about French and Francophone cultures. (Formerly Instruction in the French Language.) Prerequisite(s): course 2 or placement by interview. The Staff
4. Second-Year French.
First course in intermediate sequence. Students review and expand upon their previous study of the language through short literary readings, vocabulary building, grammar study, composition, and discussions. (Formerly Intermediate French.) Prerequisite(s): course 3 or placement by interview. (General Education Code(s): CC, IH.) The Staff
5. Second-Year French.
Further development of intermediate-level oral and written skills through study of vocabulary and structures. Students also read and discuss a French or Francophone play. (Formerly Intermediate French.) Prerequisite(s): course 4 or placement by interview. (General Education Code(s): CC, IH.) The Staff
6. Second-Year French.
Final course of intermediate sequence includes grammar study, vocabulary building, extensive writing, and discussion. Reading of a French or Francophone novel is an integral part of course. (Formerly Intermediate French.) Prerequisite(s): course 5 or placement by interview. (General Education Code(s): CC, IH.) The Staff
94. Group Tutorial. F,W,S
Provides a means for a small group of students to study a particular topic in consultation

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■ Film and Digital Media
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■ Legal Studies
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■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
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with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

108. French Cinema. F

Investigation of a variety of topics (historical, cultural, and linguistic) in France and the French-speaking world. Topics are explored through film. Conducted in English. (Formerly course 80.) Enrollment limited to 40. May be repeated for credit. (General Education Code(s): IM.) The Staff

111. Stylistics. W

Intensive work in French composition with the aim of attaining fluency and accuracy of expression while developing literary appreciation. May be repeated for credit with consent of instructor. Prerequisite(s): course 6. Students interested in this course who have not taken the prerequisite should meet with the instructor prior to the first class meeting. May be repeated for credit. The Staff

114. French Phonetics. F

Introduction to the French sound system and basic phonetics. Extensive practice of French pronunciation and phonetic transcriptions of both written and spoken language samples. Prerequisite(s): course 6. Enrollment limited to 20. The Staff

125A. French Civilization: 19th Century. S

Survey of the important historical events, social changes, and artistic movements contributing to the development of French culture during the 19th century. Prerequisite(s): course 6. The Staff

125B. French Civilization: 20th Century. *

A survey of the important historical events, social changes, and artistic movements contributing to the development of French culture during the 20th century. Prerequisite(s): course 6. The Staff

136. La Francophonie. *

In-depth multidisciplinary study of one or more French-speaking regions of the world. Topics may include history, language, society, literature, and the arts. All coursework will be done in French. (Also offered as Cowell College 136. Students cannot receive credit for both courses.) Prerequisite(s): course 6. May be repeated for credit. A. Elsey

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Lower-Division Courses

1. First-Year German. F
German 1, a beginning-level course, introduces the German language and culture for students with no previous knowledge of German. The course focuses on speaking, reading, writing, and listening. The first-year sequence (1–2–3) starts in fall quarter only. (An accelerated sequence, courses 1A–1B, begins in winter quarter.) (Formerly Instruction in the German Language.) The Staff

1A. Accelerated German. W
Accelerated course covers German 1 and part of German 2. It is designed for motivated beginning students. Students develop skills in speaking, reading, writing, and listening to real-life German. (Formerly Intensive Elementary German.) The Staff

1B. Accelerated German. S
Accelerated course part 2 covers part of German 2 and all of German 3. In this course, students who have successfully completed German 1A (or its equivalent) continue to develop competence in speaking, reading, writing, and understanding real-life German. (Formerly Intensive Elementary German.) Prerequisite(s): course 1A or 2 or placement by examination. For students completing course 2, course 3 is preferable. The Staff

2. First-Year German. W
German 2, a second-quarter course, is designed for students who have successfully completed German 1 (or its equivalent). Students continue to develop competence in speaking, reading, writing, and understanding in the context of real-life language use. (Formerly Instruction in the German Language.) Prerequisite(s): course 1 or 1A or placement by examination. The Staff

3. First-Year German. S
German 3 is designed for students who have successfully completed German 2 (or its equivalent; e.g., 2–3 years of high school German). Students continue to develop competence in speaking, reading, writing, and understanding real-life German. (Formerly Instruction in the German Language.) Prerequisite(s): course 2 or placement by examination. The Staff

4. Second-Year German. F
Intermediate composition and conversation based on the reading of selected prose and related cultural material. Speaking, reading, writing, and listening comprehension skills are

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developed by extensive use of media materials. Conducted entirely in German. (Formerly Intermediate Studies in German Language.) Prerequisite(s): course 1B or 3 or placement by examination. (General Education Code(s): CC, IH.) The Staff

5. Second-Year German. W

Intermediate composition and conversation based on the reading of selected prose and related cultural material. Speaking, reading, writing, and listening comprehension skills are developed by extensive use of media materials. Conducted entirely in German. (Formerly Intermediate Studies in German Language.) Prerequisite(s): course 4 or placement by examination. (General Education Code(s): CC, IH.) The Staff

6. Second-Year German. S

Intermediate composition and conversation based on the reading of selected prose and related cultural material. Speaking, reading, writing, and listening comprehension skills are developed by extensive use of media materials. Conducted entirely in German. (Formerly Intermediate Studies in German Language.) Prerequisite(s): course 5 or placement by examination. (General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

119. German Media.

This third-year language and culture course is designed for students who are comfortable speaking and writing German at the German 5 level or above. Using a variety of German media sources, students give oral presentations and write reports on contemporary issues. Taught in German. Prerequisite(s): course 5 or placement by examination. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): CC.) The Staff, Z. Abrams, W. Campbell

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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1. Elementary Ancient Greek. F

Instruction in the grammar of Attic Greek, together with readings from ancient authors, designed to prepare for the study of classical literature. The sequence begins in the fall quarter only. The Staff

2. Elementary Ancient Greek. W

Instruction in the grammar of Attic Greek, together with readings from ancient authors, designed to prepare for the study of classical literature. Prerequisite(s): course 1, or permission of instructor The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Lower-Division Courses

1. First-Year Hebrew. F

Speaking, listening comprehension, reading, and writing fundamentals. The use of Modern Hebrew is encouraged through classroom practice supplemented by work with computer tutorials. The first-year sequence (1–2–3) begins in fall quarter only. (Formerly Instruction in the Hebrew Language.) The Staff

2. First-Year Hebrew. W

Speaking, listening comprehension, reading, and writing fundamentals. The use of Modern Hebrew is encouraged through classroom practice supplemented by work with computer tutorials. (Formerly Instruction in the Hebrew Language.) Prerequisite(s): course 1 or by consent of instructor. The Staff

3. First-Year Hebrew. S

Speaking, listening comprehension, reading, and writing fundamentals. The use of Modern Hebrew is encouraged through classroom practice supplemented by work with computer tutorials. (Formerly Instruction in the Hebrew Language.) Prerequisite(s): course 2 or by consent of instructor. The Staff

4. Second-Year Hebrew. F

Development of the students' familiarity with the spoken and written language through grammar review, discussions, and vocabulary building. Varied readings on literary and cultural topics related to modern Israel. (Formerly Intermediate Hebrew.) Prerequisite(s): course 1B or 3 or by consent of instructor. (General Education Code(s): IH.) The Staff

5. Second-Year Hebrew. *

Development of the students' familiarity with the spoken and written language through grammar review, discussions, and vocabulary building. Varied readings on literary and cultural topics related to modern Israel. (Formerly Intermediate Hebrew.) Prerequisite(s): course 4 or by consent of instructor. (General Education Code(s): IH.) The Staff

80. Introduction to Biblical Hebrew. *

Introduces students to the basic lexicon and grammatical structures of biblical Hebrew, with an emphasis on the development of a set of useful translation strategies. Throughout the course, students will be applying their emergent skills to translating a variety of biblical texts. (General Education Code(s): T4–Humanities and Arts.) The Staff

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- [Psychology](#)
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- [Science Communication](#)
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- [Spanish for Heritage Speakers](#)
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- [Technology and Information](#)

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. Enrollment limited to 10. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

1. Theories of History/Theories of Society. *

European social thought understands society to be the product of the historical process. Readings from early-modern natural law thinkers (Hobbes, Lock, Rousseau), 19th-century theorists of the democratic and industrial revolutions (Tocqueville, Marx), and 20th-century social scientists (Weber, Braudel), explore the nature of this fertile connection. (General Education Code(s): TA, IH.) The Staff

2A. The World to 1500. *

Surveys the rise of complex societies: the formation of classical civilizations in Afroeurasia and the Americas, post-classical empires and cross-cultural exchange, technology and environmental change, the Mongol Empire, and oceanic voyages and the origins of the modern world. (General Education Code(s): CC, IH.) The Staff

2B. The World Since 1500. W

Examines major world issues over the past 500 years. Topics include European expansion and colonialism, the Muslim empires, East Asia from Ming to Qing, the Americas, Africa, the scientific-technological revolution, decolonization, and modern environmental problems. Designed primarily for first- and second-year students, it provides a time frame for understanding events within a global framework. (General Education Code(s): CC, IH.) G. O'Malley

5A. Early Muslim World. *

Surveys the history of the Muslim world from its beginnings through the Caliphal period. Islam is approached as a religious, social, political, and cultural phenomenon. Special emphasis on understanding Islam in the context of contemporary developments in the Near East, Europe, Africa, and Central Asia. (General Education Code(s): CC, IH, E.) The Staff

5B. Early Christianity: First to Fourth Century A.D.. *

Christianity from its origins as a Jewish messianic movement, its expansion in multiple forms in the Greco-Roman world and the East, to its transformation into the major religion of the Roman and Byzantine empires. (General Education Code(s): CC, IH.) The Staff

7. Archives and Public History. *

Through readings on local history topics and bi-weekly field expeditions, students discover different types of archives and historical repositories, the diversity of sources that they contain, and the varied uses to which they can be put. Course also explores the range of career opportunities open to history majors (sometimes loosely grouped together under the

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

- rubric "public history"). Students are billed a materials fee. Enrollment limited to 35. The Staff
9. Introduction to Native American Studies. S
Introduction to the interdisciplinary field of Native American Studies and the Indigenous experience. Topics include: history of United States–Indian relations; colonialism; sovereignty; identity; representation of Native Americans in popular culture; and contemporary efforts toward decolonization in indigenous communities. (General Education Code(s): ER.) A. Lonetree
- 10A. United States History to 1877. F
Focuses on the building of British American colonies and the establishment, disintegration, and reconstruction of the nation with an emphasis on how class, race, ethnicity, and gender impacted colonial development and structured the nation's agenda and the definition of citizenship. Satisfies American History and Institutions Requirement. (General Education Code(s): ER, IH.) C. Jones
- 10B. United States History, 1877 to 1977. S
Surveys the political, social, and cultural history of the United States from 1877 to 1977. Focuses on national politics with emphasis on how class, race, ethnicity, and gender changed the nation's agenda. Satisfies American History and Institutions Requirement. (General Education Code(s): ER, IH.) M. Lasar
- 11A. Latin America: Colonial Period. W
Introduces the social, cultural, economic, and political history of the New World through a close examination of the process of European "conquest" in the 16th century and its consequences for both native and settler peoples. Medieval and Renaissance European and African backgrounds; Inca, Maya, Aztec, plains, woodland, and tropical rainforest native American societies; processes of military and cultural conquest; epidemics and ecological changes; native resistance and the establishment of the fundamental institutions of colonial society. (General Education Code(s): CC, IH, E.) M. Diaz
- 11B. Latin America: National Period. F
An introduction to the study of Latin American history from the Independence Wars in the early 19th century to the present. Topics include changing economic models of development, U.S. role, rural and urban life, women, nationalisms, populism, revolution, the military in politics, and the problem of democracy. (General Education Code(s): CC, IH, E.) M. O'Hara
12. Introduction to Latino American History. S
Introduces students to the history of U.S. Latinos drawing on the experience of Central Americans, people of Mexican descent, Puerto Ricans, Dominican Americans, and Cuban Americans. Emphasizes international processes that fundamentally shape U.S. Latino communities. (General Education Code(s): ER.) The Staff
13. Introduction to American Religious Culture. F
Introduction to the many communities found within the American religious landscape, balancing extraordinary diversity characterizing American pluralism against the dominant religious culture. Proceeds historically, engaging major problems and developments including utopianism, the rise of evangelicalism, religion and reform, manifest destiny, secularization and modernity, and the intersection of politics and religion. (General Education Code(s): TA, IH.) M. Westerkamp
14. Race and Ethnicity in the U.S. *
- An introductory course on the racial/ethnic history of the U.S. Of central concern are issues of race, ethnicity, oppression, resistance, mass migrations, city life in urban America, and power and protest in modern America. Priority enrollment to freshmen and sophomores. (General Education Code(s): ER, IH, E.) The Staff
20. Introduction to World Prehistory. *
- Introduces the prehistory of humankind from the development of agriculture to social stratification and states. Emphasis is on the origins of civilization in ancient China, Egypt, Mesoamerica, Mesopotamia, and South America, as well as on the processes driving change. (General Education Code(s): CC.) The Staff
30. The Making of Modern Africa. *

<p>Management</p> <p>▪ UCDC Program</p> <p>▪ Writing Program</p> <p>▪ Theater Arts</p> <p>▪ Yiddish</p> <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>Examines the loss and reassumption of local and state autonomy in Africa during the 19th and 20th centuries. Delineates the modalities of the colonial state and society, modes of resistance to alien occupation, and the deformation of social, class, and gender relations. (General Education Code(s): CC, IH, E.) D. Anthony</p> <p>40A. Early Modern East Asia. F Surveys the history of East Asia from 1500 to 1894. Covers political, social, economic, and cultural histories of China, Japan, and Korea with the goal of perceiving a regional history that encompassed each society. (General Education Code(s): CC, IH, E.) M. Hu</p> <p>40B. The Making of Modern East Asia. W A broad introductory survey of the political, social, economic, philosophical, and religious heritage of modern China, Japan, and Korea. Emphasis on the historical foundations of modern nationalism, the colonial experience, and revolutionary movements. (Formerly course 40.) (General Education Code(s): CC, IH, E.) A. Christy</p> <p>41. The Making of the Modern Middle East. F History of the modern Middle East from 1800 to the present, with special reference to the 20th century and forces which have shaped the area. The impact of imperialism, nationalism, and revolution in the area, with particular attention to the history of four countries: Turkey, Iran, Egypt, Israel. (General Education Code(s): CC, IH, E.) J. Derr</p> <p>42. Student-Directed Seminar. F,W,S Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff</p> <p>43. Traditional India. * A survey of the early histories of Indus Valley, Vedism, the epics, Buddhism, Jainism, with an exploration among original sources: archaeological, visual, ritual, literary, and epic texts. Thematic focus on communities, social systems, elite and popular cultures, and their mutual interaction. (Formerly Histories of Traditional India) (General Education Code(s): CC, IH, E.) The Staff</p> <p>44. Modern South Asia, 1500 to Present. W Provides an introductory survey of South Asian history and society from the beginning of the 16th Century until the dawn of the 21st Century. Students gain an understanding of major events and long transformations in society, economy, culture, and politics. J. Shaikh</p> <p>45. Japanese Pop Culture. * Introduction to Japanese popular culture from the Tokugawa era to the present. Pursues the role of mass media on Japanese society through analyses of popular movies, animation, comic books, music, and other artifacts in historical context. (General Education Code(s): CC, E.) N. Aso</p> <p>50. Introduction to the History of Ancient Egypt. * Introduces the political and social history of ancient Egyptian civilization from the Predynastic through the end of the Pharaonic period. (General Education Code(s): CC.) E. Sullivan</p> <p>61. Classical Mythology. * Introduces the philosophy of myth, and surveys classical Greek mythology. Students explore the mythic mode of thinking and its distinguishing characteristics as well as the repertoire of Greek myths and their cultural contexts. C. Hedrick</p> <p>62A. Classical World: Greece. * An overview of Greek history from the beginnings through the Hellenistic period, with emphasis on the Archaic and Classical periods (ca. 800 B.C. through 323 B.C.). (General Education Code(s): CC, IH.) C. Hedrick</p> <p>62B. Classical World: Rome. F A lecture course offering an overview of Roman history and civilization from the legendary founding of Rome in 753 B.C. to the collapse of the Roman Empire's central administration in the West in 476 A.D. (General Education Code(s): CC, IH.) C. Hedrick</p> <p>63. Women in the Ancient World. * Examines the lives of women in the ancient Greco-Roman world. Most readings are from</p>
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primary texts (i.e., ancient sources), literary, historical, and documentary; material and artistic evidence also is considered. (General Education Code(s): CC.) J. Lynn

65A. Medieval Europe: 200–1000. F

A survey of Europe from the third through 10th centuries. Emphasizes cultural conflict and assimilation (Roman and Germanic, pagan and Christian, East and West). Topics include the rise of Christianity, Germanic migrations, Byzantium and Islam, the cult of saints and relics, Vikings, and gender roles. (General Education Code(s): CC, IH.) C. Polecritti

70A. Modern European History, 1500–1815. W

Surveys the economic, social, cultural, and political history of Europe since the late 15th century: 1500–1815. Course 70A is not a prerequisite to course 70B. (Formerly Modern European History, 1500–1789.) (General Education Code(s): CC, IH.) K. Silver

70B. Modern European History, 1815–present. S

Surveys the political, social, and cultural history of Europe from the era of the Industrial Revolution to the beginning of the second millennium. Course 70A is not prerequisite to 70B. (Formerly Modern European History, 1789–1914.) (General Education Code(s): CC, IH.) B. Thompson

74. Introduction to Jewish History and Cultures. S

Surveys 3,000 years of Jewish history. Themes include origins of the Jews in the ancient world, formation and persistence of the Jewish diaspora, coherence and diversity of Jewish experience, Jewish narrative and textual traditions, interaction between Jews and other cultures, productive tensions between tradition and modernity in Jewish history and literature. (General Education Code(s): ER.) N. Deutsch

75. Film and the Holocaust. *

Examines a series of distinguished documentary and feature films about the destruction of European Jewry. Each film is placed in its historical context, and wherever possible, the readings include the original documents on which films were based. Emphasis is placed on the strategies the filmmakers used to address the problem of representing genocide without succumbing to mere melodrama. (General Education Code(s): ER, E.) B. Thompson

80H. Class, Gender, and Community in China, 1700–Present. *

Examines gender, sexuality, and family across classes in late imperial China, and the transformation of all three by revolution (and vice versa). Concentrates throughout on gender as a category of historical analysis that has remained largely invisible in the construction of conventional Chinese history. (General Education Code(s): CC, T4–Humanities and Arts, E.) G. Hershatter

80N. Gender, Labor, and Feminist Productions. *

Examines how constructions of gender and intersecting constructions of race, class, and sexuality define the power of women differentially in the world of work. Beginning with the history of emancipation, traces the broader constructions of paid and unpaid labor in the 20th-century U.S. Traces the specific histories of transgender women workers, specific regional and industrial histories, and those marked by the meaning given to African, Asian, Euro-, indigenous, and Mexican descent in the construction of gender and work. Uses feminist methodology and contemporaneous visual and written work by women artists and filmmakers. (Formerly "Topics in U.S. Women's History: Women at Work.") (General Education Code(s): CC, T4–Humanities and Arts.) L. Haas

80X. Civil Rights Movement: Grassroots Change and American Society. W

The civil rights movement of the 1950s–60s was one of the most important grassroots social movements in American history. Course examines this movement and its effects on American society, focusing especially on the experiences of rank-and-file participants. (Formerly Community Studies 80B) (General Education Code(s): ER, T3–Social Sciences, E.) D. Brundage

80Y. World War II Memories in the U.S. and Japan. S

Examines how the meaning of such issues as war origins, war responsibility, the atomic bomb, reparations, and racism have been subjects of contention in postwar U.S. and Japan. Students explore the relations between history, memory, and contemporary politics. (General Education Code(s): CC, T4–Humanities and Arts, E.) A. Christy, A. Yang

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100. Historical Skills and Methods. S

Designed to train students in the fundamental skills required for advanced historical research. Students read historical theory and learn the basics of historical analysis, research, and disciplinary writing. Recommended to majors but open to all interested students. (General Education Code(s): TA.) C. Jones

100A. Digital History. W

Investigates questions relating to how new technologies are changing the way historians do research and interact with the public. This course has both a critical classroom component and a hands-on computer laboratory component. Enrollment restricted to junior and senior history, Jewish studies, German studies, and classical studies majors. Enrollment limited to 20. E. Sullivan

101A. The Making of the Modern World, 1400–1750. *

Focuses on the transformation of many different societies of Asia, Africa, and the Americas from 1400 to 1750 through case histories and the comparative study of European colonial hegemony, labor systems, global economic exchange, missions, and warfare. (General Education Code(s): CC, E.) The Staff

101B. The Making of the Modern World, 1750–1950. *

The history of the world from 1750. Focuses on the liberal project (the industrial and democratic revolutions) and its impact on the world—slavery and abolition, self-strengthening movements, race and class, imperialism, colonialism, and nationalism. (General Education Code(s): CC, E.) The Staff

101C. Oceans in World History. F

Oceans, human communities, and the variety of relations between societies have been linked closely in world history. This course focuses on the three most well-researched and, historically, most important oceanic worlds—those that developed to link the regions bordering the Mediterranean Sea, Indian Ocean, and Atlantic Ocean. (General Education Code(s): CC.) M. Matera

101D. Topics in the World History of Science. F,S

Detailed consideration of some specific topic or period in the history of science and technology with significant global implication. Topic varies from year to year. Examples include: Copernicanism, Darwinism, climate change, and military technology. (Formerly course 142, World History of Science) May be repeated for credit. (General Education Code(s): SI.) M. Hu

102A. The Crusades, 1000–1300. *

Examines history of Middle East and Latin Europe from 1000–1300, in particular, Latin Crusade and colonization and Muslim response. Format is chronological; topics such as acculturation, Holy War, and ethnicity examined through lectures and writing. (General Education Code(s): CC.) The Staff

102C. The Mediterranean in the Modern Era, 1730–1930. *

The cultural transformation of the Mediterranean region in comparative historical perspective from the rise of the Hapsburg and Ottoman empires to modern times. Topics include orientalism, political and economic transformations, social movements, cultural change, gender, colonialism, and imperialism. (General Education Code(s): CC.) The Staff

103. Medieval Spain, 600–1500. *

History of the Iberian Peninsula and Northwest Africa from the Visigoths through the reign of the Catholic Monarchs. Political and economic history form the basis, with special attention paid to religious and social history, particularly the interrelation between the peninsula's ethno-confessional groups . Prerequisite(s): one history course; course 65A and/or course 65B recommended. (General Education Code(s): CC.) The Staff

104C. Celluloid Natives: American Indian History on Film. S

Examines how American Indian history and culture has been portrayed in Hollywood films, with an emphasis on films that represent Native Americans over the broad spectrum of Native American/white relations. (Formerly American Studies 123M.) (General Education

Code(s): IM, E.) A. Lonetree

104D. Museums and the Representation of Native American History, Memory, and Culture. *

Provides an historical overview of the relationship between American Indians and museums. Current issues and practices in museums are explored, primarily those associated with ethics, collecting practices, exhibitions, education/interpretation, and administration/governance. (Formerly American Studies 136.) (General Education Code(s): ER, E.) A. Lonetree

105. Nations and Nationalism. S

Provides an historical, comparative, and theoretical exploration of the development of nations and nationalism. Emphases include the historical formation of nation-states, modernization, colonialism, decolonization, nations and globalization, and the intersections between ethnicity, race, religions, and nationalism. (General Education Code(s): CC.) K. Silver

106A. Vietnam War Memories. *

Compares memories and interpretations of war in Southeast Asia by diverse groups in France, America, and Vietnam. Topics include war origins, military strategies, propaganda, combat, civilians, media, activism, MIAs, refugees, mixed race children, memorials, textbooks, films, music, literature, and art. (General Education Code(s): CC, E.) A. Yang

106B. Asian and Asian American History, 1941–Present. *

Analyzes immigration, race relations, war, gender ideology, family life, acculturation, political activism, interracial marriage, multiracial identity, and cultural representations between 1941 and the present. Emphasis on discussion, writing, research, and group presentations. (General Education Code(s): ER, E.) The Staff

107. Religion and Modernity. *

Explores the impact of modernity on a variety of religious traditions. Examines the rise of secularism and the phenomenon of disenchantment; the "invention" of religion; and the emergence of fundamentalism in the modern period. (General Education Code(s): CC.) N. Deutsch

108. Social Movements in Historical Perspective. *

Readings examine 18th- through 20th-century social movements and related phenomena in Europe/America: examples include Tulipomania; revolutionary action in France; U.S. Civil Rights movement; and the environmental and feminist movements. Lectures focus on social science frameworks used to explore the social base, tactics, success or failure, and inter-relationships of social movements as a distinctive mode of social change. The Staff

109A. Race, Gender, and Power in the Antebellum South. *

Examines how ideologies of race and gender shaped the development of slavery and empire in the American South from European colonization to the eve of the American Civil War. (General Education Code(s): ER, E.) C. Jones

110A. Colonial America, 1500–1750. *

Explores the social, economic, cultural, and political development of British North America from the first European/Amerindian contacts in the late 16th century through the establishment of a provincial British colonial society. Course 110A is not a prerequisite to course 110B. Satisfies American History and Institutions Requirement. (General Education Code(s): ER.) M. Westerkamp

110B. Revolutionary America, 1740–1815. *

Explores the political, social, economic, and cultural development of British North America from the first stirrings of resistance to the establishment of the U.S. Course 110A is not a prerequisite to course 110B. Satisfies American History and Institutions Requirement. G. O'Malley

110D. The Civil War Era. *

Social, political, and economic history of the American Civil War and Reconstruction, focusing on the war's changing nature and significance, emancipation, and the postwar struggle over the future of the South and the nation. C. Jones

110E. What Is a Nation? The U.S. from 1877 to 1914. W

History of the U.S. during what was perhaps its most socially turbulent era, the period following Reconstruction through the First World War. What did it mean to be a nation in the post-Reconstruction era? How did a country that had only recently unified itself under one system of labor now resolve the question of national identity? Was America truly a nation by 1914? Satisfies American History and Institutions Requirement. M. Lasar

110F. Crossroads for American Capitalism: The U.S., 1914 to 1945. F

Between the First and Second World Wars, American society accepted the need for a regulatory state to save capitalism from itself. Takes an in-depth look at many aspects of U.S. politics and culture during these years. M. Lasar

110G. The U.S. After the Second World War. *

From the Good War to the Cold War, the Sixties to the rise of the New Right, the post-1945 American experience has been one of extremes. This survey course looks for evidence of commonality during those times. M. Lasar

110H. Greater Reconstruction: Race, Empire, and Citizenship in the Post-Civil War United States. F

Examines how the consolidation of United States sovereignty in North America and the establishment of an overseas empire during the period between the conclusion of the Civil War and the Philippine-American War reshaped conceptions of race and citizenship. Satisfies American History and Institutions Requirement. (General Education Code(s): ER.) C. Jones

111. Popular Conceptions of Race in U.S. History, 1600–Present. *

Explores how race has been constructed and perceived, examining Americans' use of race to describe themselves and to label others. Particularly concerned with ordinary people and how and why their ideas of race have changed over time. (General Education Code(s): ER, E.) G. O'Malley

112. American Feminist Thought, 1750–1950. *

Traces history of feminist thought in the United States from the 18th century Enlightenment to the mid-20th century. Focusing on questions of social identity, gender difference, and legal/political status, examines writings of philosophers, activists, novelists, and ordinary women that challenged religious, political, and scientific beliefs underlying gender inequality. M. Westerkamp

113C. Women and American Religious Culture. W

Historical introduction to religious culture of U.S. as experienced and created by women. Explores religious ideas about women, the treatment of women by mainstream institutions and religio-social communities, and female religious leaders and followers. Takes an explicitly feminist analytical approach and uses a variety of "texts," including historical and literary scholarship, sacred texts, fiction, autobiography, material artifacts, visual art, and music. M. Westerkamp

114. Market Revolution in Antebellum U.S.. S

Examines the cultural, political, and environmental upheaval associated with antebellum market revolution. Topics include: markets and U.S. territorial expansion; reform movements that coalesced around disputes over what should, and should not be sold (e.g., antislavery activism; anti-prostitution reform movements). C. Jones

115A. U.S. Labor History to 1919. *

Explores the history of work, working-class people, and the labor movement in the U.S., with attention to race and gender dynamics as well as to the development of workers' organizations. (Formerly U.S. Labor History, Colonial Period to 1919.) Satisfies American History and Institutions Requirement. (General Education Code(s): ER.) D. Frank

115B. U.S. Labor History, 1919 to the Present. F

Explores the history of work, working-class people, and the labor movement in the U.S. in global perspective with attention to race and gender dynamics and political-economic changes. Satisfies American History and Institutions Requirement. (General Education Code(s): ER.) D. Frank

115C. Learning from the U.S. Great Depression. W

Examines U.S. society, politics, and culture during the 1930s, with emphasis on the relationship between social movements and public policy, and dynamics of race, ethnicity,

	immigration, and gender, and dynamics between labor, business, and the state. D. Frank
116. Slavery Across the Americas. *	Examines the exploitation of African people as slaves throughout European colonies in the Americas. How did slavery affect slaves, enslavers, and their societies? Emphasizes the diversity of slave regimes and their importance for shaping American life for all. Satisfies American History and Institutions Requirement. (General Education Code(s): ER.) G. O'Malley
117. Wired Nation: Broadcasting & Telecommunications in the US from the Telegraph to the Internet. *	Explores the history of telecommunications systems in the US starting with the telegraph, the telephone, wireless telegraph, radio, television and the Internet. Students learn about the development of these systems and the cultures that they foster. M. Lasar
117A. From the Player Piano to Pandora. F	Explores the history, culture, and politics of the distribution of recorded and live sound from the 1870s through the present. M. Lasar
118. The Global Cold War, 1945–1991. W	Explores the history of the Cold War from a global, multinational perspective. Begins with the opening salvos between the United States and the Soviet Union in 1945, and concludes with the collapse of the latter empire in 1991. M. Lasar
121A. African American History to 1877. *	A survey of pre-contact Africa, indigenous social structures, class relations, the encounter with Europe, forced migration, seasoning, resistance, Africa's gift to America, slavery and its opponents, industrialization, emigration vs. assimilation, stratification, Convention Movement, Black feminism, Civil War, and Reconstruction. (General Education Code(s): ER, E.) D. Anthony
121B. African American History: 1877 to the Present. *	A survey of the period from 1877 to present, highlighting Jim Crow, Militarism, Black feminism, WWI, New Negro, Garveyism, Harlem Renaissance, Black Radicalism, Pan Africanism, Depression, WWII, Desegregation Movement, Black Power, 1960s, Reaganism. Cultural and economic emphases. (General Education Code(s): ER, E.) D. Anthony
122A. Jazz and United States Cultural History, 1900–1945. *	Explores the meaning of jazz in United States society and as a U.S.-based art form in other societies. Examines the social and cultural forces that have produced different jazz styles and the various ways that social conflicts and ideals have been displaced onto the music. (General Education Code(s): IM.) E. Porter
122B. Jazz and United States Cultural History, 1945 to the Present. F	Explores the meaning of jazz in United States society and as a U.S.-based art form in other societies since 1945. Examines the social and cultural forces producing jazz movements and the social transformations, conflicts, and ideals read into the music. (General Education Code(s): IM.) E. Porter
123. Immigrants and Immigration in U.S. History. *	Introduces U.S. immigration history from the colonial era to the present, with emphasis on the recent past. Particular attention given to changing immigration patterns; the character of the immigrant experience; and the range of responses to immigration, including nativism. (General Education Code(s): ER.) D. Brundage
124. American Empire. *	Examines U.S. expansion and subsequent ascent to global power. In tracing the presence of the U.S. in different areas of the world during the 20th century, course considers the ideas, politics, gender, and social relations that have influenced imperial aspirations. L. Haas
125. California History. *	California had a multi-ethnic indigenous society for centuries. Course traces the persistent multi-ethnic quality of the region as it became part of the Spanish empire, Mexico, and the United States. Considers the many diasporas that have shaped California's steady connection to the world, especially to Mexico and other nations that border the Pacific. (Formerly California History.) (General Education Code(s): ER.) L. Haas
126. From Indigenous Colonial Borderlands to the U.S.–Mexico Border. *	

Examines the interactions and integration of indigenous people and settlers in the Southwest U.S. and Northern Mexico from a region defined by its indigenous colonial borderlands to national borders. Explores the connections between the U.S. and Mexico. Within the deeply cross-cultural region studied, also examines the particular histories of states, indigenous peoples, and Mexican-origin groups and regions. (Formerly History of the Southwest: Colonial Period to 1920.) (General Education Code(s): ER, E.) L. Haas

127. Race and the American City. *

History of racial and ethnic minorities in the American city in the 19th and 20th centuries. Examines the experiences of several non-white groups, with analyses of race, class, culture, gender, acculturation, and implications for social policy in the urban environment. Satisfies American History and Institutions Requirement. (General Education Code(s): ER, E.) The Staff

128. Chicana/Chicano History. F

A survey course on the social history of the Mexican (Chicana/o) community and people in the U.S. through the 20th century. Themes include resistance, migration, labor, urbanization, culture and politics. Satisfies American History and Institutions Requirement. (General Education Code(s): ER, E.) G. Delgado

129. History and Public Policy. *

Helps students better understand the various social/economic/political issues of public policy by providing a historical perspective analysis. Each student is required to participate in a public history/public service internship. Satisfies American History and Institutions Requirement. (General Education Code(s): PR-S.) The Staff

130. History of Modern Cuba. S

Covers from the Cuban sugar revolution (late 18th century) to the socialist revolution and its aftermath (1959-present). It is intended to be not only a modern history of Cuba but also a broader history of Latin America through the case of Cuba. (General Education Code(s): E.) M. Diaz

131. Women in Colonial Latin America. W

Introduction to the social history of Latin America through a focus on the inflections of class and ethnicity on gender in this region. First six weeks focuses on the colonial period. The last three weeks covers the 19th and 20th centuries. (Formerly Women in Latin America.) M. Diaz

132. History of the Caribbean: Colonial Period. *

A study of the Caribbean from the conquest to the abolition of slavery in the 19th century. Focus on the Greater Antilles, particularly the Spanish Caribbean. Emphasis on economic and social issues such as colonialism and the role of sugar production, slavery, and race/ethnicity in these multicultural societies. (General Education Code(s): E.) M. Diaz

133. Topics in Colonial Latin American History, Early and Middle Period. *

Studies Pre-18th century colonial Latin America, with particular emphasis on Peru and Mexico. Topics include: strategies of colonization; cities and urban life; and knowledge, technology, and the professions (ethnographic projects, indigenous intellectuals, schools and universities, medicine and hospitals, the law and the courts). (General Education Code(s): E.) M. Diaz

134A. Colonial Mexico. S

Covers the social, cultural, economic, and political history of colonial Mexico (New Spain). Special attention paid to colonial identity formation, religion, and labor systems. Begins by examining indigenous societies prior to the arrival of Europeans and concludes with Mexico's independence movement in the early 19th century. (Formerly History of Mexico, 1500-1850.) (General Education Code(s): ER, E.) M. O'Hara

134B. History of Mexico, 1850 to Present. *

Social, cultural, economic, and political history from the triumph of Liberalism to the present day, focusing on four key periods: the dictatorship of Porfirio Diaz (1900-1910), the armed phase of the Revolution (1910-1920), the consolidation of revolutionary programs and a "single-party democracy" (1920-1940), and the developmentalist counter-revolution since 1940. Provides background for understanding the Mexican diaspora to the U.S. (General Education Code(s): CC, E.) M. O'Hara

135A. Brazil to 1889. *

Exploration of the social history of colonial and imperial Brazil. Material progresses chronologically and thematically from the pre-contact indigenous societies that were encountered in South America to the colonization of Brazil through independence to the 19th-Century empire that ended in 1889. The Staff

135B. Brazil Since 1889. S

Exploration of the social history of the Brazilian republic. Course passes chronologically and thematically from the end of the Empire in 1889 to present-day Brazilian films, texts, and lectures. The Staff

137A. Africa to 1800. F

Introduction to history of Africa. Topics include states and "stateless" societies, culture, society and economy in the pre-modern era, stratification, oral traditions, long distance trade, the coming of Islam, and the evolution of the South Atlantic system and its social, political, and other consequences. Some background knowledge of Africa helpful. (General Education Code(s): CC, E.) D. Anthony

137B. Africa from 1800 to the Present. W

How Africa lost its continental, regional, and local autonomy in the era of European imperialism. The components of European hegemony, Christian proselytization, comparative colonial strategies and structures, nationalism, decolonization and independence and the disengagement from neo-colonial patterns and the colonial legacy. Case studies from northern and subsaharan Africa. Some background knowledge of Africa helpful. (General Education Code(s): CC, E.) D. Anthony

137C. African Cinema. S

Historical study of modern African cinematography from the emergence of film as a tool of social control in the imperial and colonial periods to its theoretical and practical transformation by African cineastes in the post-independence era. Films and videos from northern, eastern, western, central/equatorial, and southern Africa viewed. Prerequisite(s): course 30 or 137A or 137B, or by permission of instructor. (General Education Code(s): CC, E.) D. Anthony

140B. History of Qing China, 1644–1911. *

Introduces students to how Qing China arose, expanded, and struggled to enter the modern world. Focuses on what the Qing empire had in common with other agrarian empires across Eurasia, commercialization and communication networks, elite mobility and peasant revolts, political legitimacy of the alien rule, maintaining social order (such as merchants' control and gender segregation), massive population growth and internal migration, as well as its conflicts with the industrial West. (General Education Code(s): CC.) M. Hu

140C. Revolutionary China 1895–1960. F

Explores history of China from the late 19th century to the early years of the People's Republic, focusing on the end of imperial rule, the sources and development of revolution, and early attempts at socialist transformation. (General Education Code(s): CC, E.) E. Honig

140D. Recent Chinese History. W

Explores history of China from establishment of the People's Republic of China to the present, focusing on competing strategies of socialist transformation, urban/rural relations, and the effects of the post-Mao economic reforms. (General Education Code(s): CC, E.) G. Hershatter

140E. Women in China's Long 20th Century. S

Introduces changes in Chinese women's lives--and changes in shared social ideas about what women should do and be--from the mid-19th century to the present. When we foreground gender as a category of analysis, how does history look different? (General Education Code(s): CC.) G. Hershatter

141A. Classical Chinese Culture and Literature, 10th Century B.C.E. through Sixth Century C.E. *

Survey of writing and culture from the 10th century B.C.E. through the sixth century C.E., focusing on poetry, philosophical and historical writing, supernatural fiction,

Buddhist/Taoist texts in contexts of fragmentation, empire building, dynastic collapse, rebellion, eremitism, and courtly society. Satisfies the Pre- and Early Modern and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. (Also offered as World Lit & Cultural Studies 135. Students cannot receive credit for both courses.) (General Education Code(s): E.) C. Connery

141B. Classical Chinese Culture and Literature, Sixth Century through 16th Century. *
Survey of writing and culture from the Tang through early Ming dynasties (sixth century C.E. through 16th century C.E.). Themes include literary, religious, and philosophical innovation; courtly life; cultural contacts with non-Chinese people; and transformations of state and society. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. (Also offered as World Lit & Cultural Studies 136. Students cannot receive credit for both courses.) (General Education Code(s): E.) C. Connery

144A. Modern Korea: History, Literature, and Culture. *
Studies the making of modern Korea through history, literature, and culture. Beginning with the period of Korea's opening, covers topics like Japanese colonialism, national division, the Cold War, North Korea, and South Korean globalization. The Staff

144B. Gender in Korea. *
Studies the history of gender relations and women's writings in Korea from the Choson era to contemporary Korea. Topics include new women, women as proletarians, revolutionary womanhood, masculinity and militarism, camptown culture, and motherhood. The Staff

145. Gender, Colonialism, and Third-World Feminisms. *
Introduces the history of feminism in the third world, focusing on the ways in which colonialism (and post-colonialism) has shaped gender relations and on the feminist movements that have emerged in response to the impact of colonialism. (General Education Code(s): E.) E. Honig

146A. Colonial South Asia 1750–1947. *
Introduces key transformations—political, economic, social, and cultural—in colonial Indian history. The focus is on the processes, institutions, and ideas that shaped colonial power and resisted it. J. Shaikh

147A. History of Premodern India. *
A study of religions (Vaisnavism, Tantrism, Islam, Sikhism), art, literature, and social movements in their historical contexts from 1000 A.D. to 1800. (General Education Code(s): CC, E.) The Staff

147B. Political and Social History of Modern South Asia. *
Social, political, and religious movements in the colonial and postcolonial contexts of the 19th and 20th centuries in modern and contemporary South Asia. (General Education Code(s): CC, E.) The Staff

148. Cinema and History: Film Author Satyajit Ray. *
Satyajit Ray is widely acclaimed as a master of world cinema. Course considers his work to examine "authorship" at multiple levels: the cultural, historical, social, and familial contexts and the relationship of his film to fiction, the politics and poetics of his vision, and its relationship to colonial, nationalist, and postcolonial India. Also studies the question of gender and the underclass. (General Education Code(s): E.) The Staff

150A. Ancient Japan. W
Surveys the history of the peoples of the Japanese islands from prehistorical migrations through the 15th century. Emphases include examination of social structures, political formations, cultural production, and religion. (General Education Code(s): CC.) N. Aso

150B. Tokugawa Japan. S
Surveys the history of the peoples of the Japanese islands from the middle of the 15th century to the middle of the 19th century. Focus is on the era of civil war, the formation of the early modern federated state, social structure, and cultural production. A. Christy

150C. Modern Japan. *
Surveys the history of the peoples of the modern Japanese nation from the Meiji Restoration to the present. Focuses on the formation of the modern state, empire, social

movements, and cultural production. (General Education Code(s): CC, E.) N. Aso
150D. The Japanese Empire, 1868–1945. *
Examines the history of the Japanese colonial empire from 1868 to 1945, including the colonies of Taiwan, Korea, Micronesia, and Manchuria. Considers how the colonies were ruled and what the legacies of the empire have been. A. Christy, N. Aso
152. Trade and Travel on the Silk Roads. *
Introduction to two millennia of history along the ancient trade routes popularly known as the "Silk Road." These routes carried precious goods between Asia and Europe, while also serving as important conduits for the flow of people and ideas. (General Education Code(s): CC.) M. Peterson
154A. Classic Islamic Civilization. *
The civilization of Islam to 1258 A.D. Origins and early florescence, an international civilization, the coming of the steppe peoples. (Formerly course 161.) Enrollment limited to 35. (General Education Code(s): E.) The Staff
155. History of Modern Israel. *
The conflict between Israelis and Palestinians is one of the most intractable disputes in our troubled world. Course begins with a glimpse of Palestine in the late 19th and early 20th centuries, surveys the rise and fall of utopian Zionism, pays especially close attention to the events of 1948 and 1967, and concludes by analyzing the collapse of hopes for peace after Oslo and Camp David meetings. (General Education Code(s): CC, E.) B. Thompson
156. Interrogating Politics in the Post-Colonial Middle East. S
Explores the political trajectory of the post-colonial Middle East. Topics include: the Cold War and rise of Third Worldism; women's movements; political Islam; Arab-Israeli conflict; Lebanese Civil War; impact of oil production; Iranian Revolution; rise of the Arabian Gulf. (General Education Code(s): CC.) J. Derr
157. The Ottoman Empire. *
Explores the history of the Ottoman Empire with emphasis on its Arabic-speaking provinces. In addition to critically considering the political trajectory of the empire, we interrogate a wide range of topics relating to community organization, economic networks, international affairs, and the significance of religion within the Ottoman realm. (General Education Code(s): CC.) J. Derr
159A. Greco-Roman Egypt. *
Examines the political, social, religious, and material culture of ancient Egypt during these periods of intense interaction with the ancient Near East and Mediterranean, from the period of Alexander (332 BCE) through the beginning of Coptic Christianity (3rd century CE). (General Education Code(s): CC.) E. Sullivan
159B. Women and Gender in Ancient Egypt. *
Explores sex and gender in ancient Egypt with a specific focus on women. Artistic representations, texts, objects of daily life, and burials are used to examine the practices that encoded gender in this ancient culture. (General Education Code(s): CC.) The Staff
160A. Athenian Democracy. *
Athenian democracy from foundation to the fourth century B.C., with emphasis on its practices and ideologies. Readings from ancient sources and modern theory. Topics to include foundations and development; Athenian concepts of freedom, equality, law, citizenship. Lectures and discussion. (General Education Code(s): CC.) C. Hedrick
160C. Topics in Greek History. *
Detailed consideration of some specific topic or period in Greek history, varying from year to year. Examples include Greek religion, Alexander, the Hellenistic world, the ancient Greek economy, and Greece and India; Thucydides and the Peloponnesian War; Greek art and archaeology. Enrollment restricted to history and classical studies majors. May be repeated for credit. (General Education Code(s): CC.) The Staff
161B. Topics in Roman History. W
Detailed consideration of some specific topic or period in Roman history, varying from year to year. Examples include Roman religion, Augustus and the Roman Empire, Julio-Claudian emperors and the principate, Roman slavery, and Christianity and Rome. Enrollment

restricted to history and classical studies majors or minors, or by permission of instructor.
May be repeated for credit. C. Hedrick

161C. Age of Augustus. *

Surveys Rome's transition from Republic to Empire, and the politics, people, and literary and material culture of the principate. Enrollment restricted to history and classical studies majors and minors, or by permission of instructor. J. Lynn

162. Canaan, Israel, and Palestine from Polytheism to Monotheism. *

This social and cultural history of Israel begins with the rise of the Israelite monarchy and ends in the early Roman period. Economy, political organization, and religious practices and beliefs such as polytheism and monotheism are compared with those of neighboring peoples. Priority given to history majors. The Staff

163A. A History of Sin. *

Ancient and modern conceptions of sin, and remedies offered for it. Course is not a theology of sin and redemption, but an invitation to reflect on ways sin and fault have been imagined and formulated. (Formerly course 163.) The Staff

163B. Genesis: A History. *

Introduction to historical, textual, source, and redaction criticism of the book of Genesis and to exegesis as science and ideology. Texts, history, and iconography of neighboring traditions (Mesopotamian, Ugaritic, Egyptian, Greek) are also studied when appropriate. Course 44, Literature 80A, or some basis in Hebrew or Greek is strongly suggested. (General Education Code(s): CC.) The Staff

164A. Late-Medieval Italy, c. 1200–1400. W

Italy from the birth of the commune to the early Renaissance in Florence. Topics include urban life and social conflict, gender roles, St. Francis, the Black Death, female mystics, Dante, Boccaccio, humanism, artistic developments from Giotto through Donatello. Requires viewing several films outside of class. C. Polecritti

164B. Renaissance Italy, c. 1400–1600. S

Italy from the Florentine Renaissance through the Reformation. Topics include social change and political consolidation, the rise of the papacy, court life, witch hunting, Machiavelli, artistic developments from Donatello through late Venetian Renaissance. Requires viewing several films outside of class. Course 164A recommended as preparation. C. Polecritti

165. The Power of Writing: Books and Libraries 600–1500. *

Surveys how books were made and used in Europe from 600–1500. Focuses on the relationship between book production and the development of libraries. Meets in Special Collections, McHenry Library. Exhibition as class project. Enrollment limited to 25. E. Remak-Honnerf

166. Northern Ireland: Communities in Conflict. F

Introduction to the so-called "troubles" in Northern Ireland, from the 1960s to the present. Examination of the historical background to the conflict, the patterns of conflict in the 1970s and 1980s, and the emergence of a peace process in the 1990s. (Formerly Community Studies 136.) (General Education Code(s): CC.) D. Brundage

167A. The First World War. F

An intensive analysis of the First World War from multiple perspectives: military, diplomatic, political, economic, technological, global, and cultural. The emphasis is on the transformative impact of the war on European societies, international relations, and modern culture. The Staff

168. Rise of the Dutch Republic. *

Focuses on the origin of the Republic in the revolt against Spanish overlordship, and its political, social, and economic development in the 16th and 17th centuries. The Staff

169. Dutch and Belgian History, 1500 to Present. *

The political, social, economic, and cultural history of the modern Netherlands and Belgium from 1500 to the present day. E. Kehler

170A. French History: Old Regime and Revolution. F

French history from the Middle Ages through the Revolution. Focus on the rise and fall of

"absolute" monarchy, the nature of Old Regime society, the causes and significance of the French Revolution. Attention to those who endured as well as to those who made events. K. Silver

170B. French History: The 19th Century. *

Social, political, and cultural history of France from the Revolution to WWI. Focus on the Revolutionary tradition, the Napoleonic myth, the transformation of Paris, and the integration of the peasantry into the national community. Readings may include novels by Stendhal and Balzac. The Staff

171. Revolutions in France. *

Examines the political/social upheaval in 1789, 1830, and 1848 in light of the sweeping changes brought to 19th-century France by those other great "revolutions" of the age, the democratic and the industrial. Students' written work focuses on the comparative analysis of revolution. Offered in alternate academic years. The Staff

172A. German History. S

The development of German civilization, including philosophy and literature as well as politics and diplomacy in the nineteenth and twentieth centuries. The Staff

172B. German Film, 1919–1945. *

Introduction to German films from 1919 to 1945. Through combination of movies and documentaries, gain insight into political, economic, social, and cultural conditions of Weimar and Nazi Germany. The Staff

173A. Medieval Russia. *

Topics include Russia's relations with Scandinavia, Byzantium, and the Mongols; Orthodoxy; and the roles of women. Materials include chronicles, letters, law codes, household manuals, travelogues, epics, art, architecture, and maps. Also explores the continuing relevance of Russia's medieval past through operas and film. (Formerly course 175A.) (General Education Code(s): CC.) M. Peterson

173B. Imperial Russia, 1696–1917. *

Russian history from Peter the Great through the collapse of the Russian Empire. Explores the relationship between state and subjects (both Russian and non-Russian), alongside the role that geography played in an expanding empire in an increasingly globalizing world. (General Education Code(s): CC.) M. Peterson

173C. History of the Soviet Union. F

Covers Soviet history from the late imperial period through the Soviet collapse. Explores the nature of the Soviet state, relationships between state and society, the role of the Soviet Union in the Cold War, and experiences of everyday life. (Formerly course 175B, Modern Russian History.) (General Education Code(s): CC.) M. Peterson

174. Spies: History and Culture of Espionage. *

Analyzes the roles of espionage and intelligence in modern European history with emphasis on major conflicts from the Franco-Prussian War through the Cold War and beyond. Also examines images of spies in popular culture from the early 20th century to the present. (Formerly course 80K.) (General Education Code(s): CC.) B. Thompson

175D. History of Soviet Film. *

Does not stress questions of aesthetics or technical aspects of film making, but the changing ideology inherent in Soviet films. The goal of examining cinema is to enrich our understanding of Soviet history. Readings include works of famous directors and theorists—Eisenstein, Vertov, Pudovkin, and Kuleshov—in addition to secondary works by Denise Youngblood, Richard Taylor, Josephine Woll, and Anna Lawton. The Staff

176. Eastern Europe, 1848–2000. *

Examines the political and social history of modern Eastern Europe, excluding the Balkans and Baltic States, from 1848 to the present. Focuses on the development of nationalism, war, occupation, ethnic strife, communism, and democratic reform in this region. (General Education Code(s): CC.) The Staff

177. Smoke, Smallpox, and the Sublime: Thinking about the Environment in the 19th Century. F

Examines ways in which Europeans and others thought about the environment and nature

in the 19th century and how their concerns about issues such as climate change, pollution, and conservation were both similar to and different from environmentalist thinking today. (General Education Code(s): PE-E.) M. Peterson

178A. European Intellectual History: The Enlightenment. *

Study of European thought and literature from Hobbes and Swift to Rousseau and Goethe. Focuses on relation of ideas to their social and cultural context. Special attention to traditions of religious conflict and criticism rising from the Protestant Reformation; to the discovery of the world beyond Europe; and to the intellectual and cultural roots of the French Revolution. (Formerly European Intellectual History.) N. Deutsch

178B. European Intellectual History: The 19th Century. W

Study of European thought and literature from Blake to Nietzsche. Focuses on relation of ideas to their social and cultural context. Special attention to the rise and fall of the Romantic movement, to changing conceptions of history, and to the development of socialist and aesthetic critiques of industrial civilization. (Formerly European Intellectual History.) The Staff

178C. European Intellectual History, 1870–1970. *

Drawing on experiments in autobiography, the arts, and social theory, this course focuses on ideas and images of modernity in European culture. It also highlights the role of the intellectual as politically engaged or disillusioned witness in a violent century. Offered in alternate academic years. (General Education Code(s): CC.) B. Thompson

178D. Russian Intellectual History. *

Focus on the emergence in 19th-century Russia of a westernized intelligentsia; its effort both to assimilate western ideas and to define the destinies of Russia; the shaping of the Russian revolutionary movement. Readings in Dostoyevsky, Turgenev, Herzen, and representative Russian Slavophils, Populists, and Nihilists. The Staff

178E. Modern Jewish Intellectual History. S

Surveys European Jewish intellectual history from the Enlightenment to the present. Major themes include emancipation and assimilation, the flowering of Yiddish literature, the rise of Zionism, new variations on the messianic idea, and Jewish contributions to the culture of urban modernism. Offered in alternate academic years. (General Education Code(s): ER.) B. Thompson

180A. English History. *

Emphasis on the interaction between social, economic, religious, and political developments. An attempt to place these phenomena in the context of the wider European and world scene. The period from 1485 to 1689. The Staff

180B. English History. *

Considers how Britain became the pacemaker of modernity in the 18th and 19th centuries; how national, regional, class, and gender identities formed and altered; and how Britain coped with loss of global power in the 20th century. The Staff

181. Modern Britain and the British Empire. *

Examines the history of the British Isles and the British Empire from the late 17th century to the present. Traces the expansion, transformation, and dissolution of the British Empire as well as the changing meanings of "Englishness" and "Britishness" over this period. (General Education Code(s): CC.) M. Matera

183A. Nineteenth-Century Italy. *

Italian politics, culture, and society from the Napoleonic era through early leftist movements. Central emphasis on the Risorgimento and Unification. Other topics include: north-south conflict; banditry; urban change; growth of tourism; popular religion; family structures and gender; visual arts and opera. C. Polecrichti

183B. Fascism and Resistance in Italy. *

Examines Italian politics, society, and culture (c. 1900–1950), emphasizing the Fascist regime; interdisciplinary focus emphasizing history, literature, and film. Course 183A recommended as preparation. (Formerly course 183.) C. Polecrichti

185A. Conflict of Interest: War, Holocaust, and Industry in the Lodz Ghetto. *

Examines how Nazi war machine exploited Jewish slave labor in the Lodz ghetto industrial

complex while a state apparatus systematically exterminated the workers. Includes a visit from a survivor of ghetto factories and graphics from ghetto workshops. Prerequisite(s): one upper-division history course. Enrollment restricted to juniors and seniors. (General Education Code(s): ER, E.) The Staff

185B. Rethinking the Holocaust: Bioscience, Race Theory, and Genocide. *

Traces the Nazi "Superstate" project from its origins at the conjunction of bioscientific theory and racialist ideology to its conclusion in the Holocaust, providing a historical perspective for social and political dilemmas raised by contemporary biomedical advances. (General Education Code(s): ER, E.) The Staff

185D. Jewish Social Movements. *

Jewish social movements of the late 19th and 20th centuries, in Europe (Eastern and Western) and the U.S.: the confrontation between Hasidism and Haskahah, tensions between socialism and Zionism, between religiosity and secularism, the mutual influences among these tendencies. (Also offered as History of Consciousness 118. Students cannot receive credit for both courses.) Enrollment restricted to juniors and seniors. Enrollment limited to 20. (General Education Code(s): E.) B. Epstein

185E. The Historiography of the Holocaust. *

Offers a comprehensive historiography of the Holocaust, distinct from the narrowly focused perspectives generally presented in Holocaust studies, to familiarize students with the origins, evolution, and major developments in the Nazi genocide and its historical consequences. Enrollment restricted to juniors and seniors. (General Education Code(s): ER, E.) The Staff

185F. Private Lives, Family Histories, and the Holocaust Experience. *

Holocaust historiography has surveyed the broad landscape of genocide or focused narrowly on individual experience. Course examines the middle ground of family and its role in resistance during the destruction of communal existence and survival in the aftermath. (Formerly course 196Q.) Prerequisite(s): two upper-division history courses or permission of instructor. Enrollment restricted to junior and senior history, German studies, and classical studies majors. Enrollment limited to 20. (General Education Code(s): ER, E.) The Staff

185H. Women, Gender, and Jewish Modernity (1800–Present). W

Explores the impact of modernization upon women and the concepts of gender, both feminine and masculine, in Jewish societies across Europe, the Middle East, and India. N. Deutsch

185I. Latin American Jewish History in the Modern Period. *

Explores Jewish immigration settlement and identity negotiation in Latin America from the mid-19th Century to the present. The Staff

185J. The Modern Jewish Experience. *

Historical comparative overview of the political, socio-cultural, and intellectual transformation of Jewish societies in Europe and the Middle East from the late 18th Century to the present. The Staff

185K. Jewish Life in Eastern Mediterranean Port Cities. *

Overview of the Jewish experience in important cities in the age of empire. Istanbul, Beirut, Alexandria, and Salonica were home to thriving, culturally diverse Jewish populations. Course explores these urban Jewish cultures, the institutions, and intellectual production. The Staff

185L. Where Civilizations Met—Jews, Judaism, and the Iberian Peninsula. S

Surveys Jewish life in the Iberian Peninsula from Roman times to the present, and explores offshoot Hispanic Jewish societies in the aftermath of the 1492 expulsion. P. Daccarett

190. Advanced Research and Reading Seminars. *

An opportunity for advanced students to focus on specific research problems resulting in a substantial research paper of 25 pages, or discussion of assigned readings resulting in a series of short papers totaling 25 pages. Courses must be taken in area of concentration in order to count towards the major. The Staff

190A. Slavery and Race in Latin America. S

Covers comparative history of slavery in Latin America with questions of race in the colonial and national periods and key moments and debates in the historiography of slavery and its relation to ideologies of the past and the nations. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) M. Diaz

190B. Race and the Nation in Latin America. *

Focuses on the ways in which nation and race have been thought about in Latin America throughout the 19th and 20th centuries. These concepts were closely intertwined, albeit in differing and changing ways, since the wars of independence from Spain and Portugal (1810-1825). Compares the ways in which "black," "Indian," and "racially mixed" ("mulatto" or "mestizo") have been socially constructed, ideologized, and contended in different countries, including Brazil, the Spanish-speaking Caribbean, Mexico, Peru, and Argentina. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) M. Diaz

190C. 9/11 in Historical Perspective. *

Explores how scholars and other observers have tried to make sense of the events of and following September 11, 2001, through analysis and other invocations of historical precedent. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) E. Porter

190D. Asian and Latino Immigration Since 1875. F

Examines Asian and Latino immigration into the United States since 1875. Students explore the relationship between U.S. foreign policies and immigration policies, transnational ties and homeland connections, and the cultural and political influences they have on American society. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. G. Delgado

190E. Topics in Chicana/o History. *

A seminar on the history of Chicanos/Mexicans in the United States, 1848 to the present. Topics include Chicana/o labor, family, social, urban, cultural, and political history. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) The Staff

190F. Research Seminar in the Americas. F

Students learn how to conduct research and write history. Primary and secondary sources are extensively read. Research sources include a rich array of government documents, newspapers, memories and diaries, visual material and film. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors Enrollment limited to 20. (General Education Code(s): W.) A. Lonetree

190G. History and Theory. *

Each year students study one or more theorists or schools of philosophy and history. Themes vary by year and include: Walter Benjamin, Hayden White, Agnes Heller, the Frankfurt School, and the Subaltern School. Prerequisite(s): two upper-division history courses and satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) L. Haas

190H. History of Time. W

Writing-intensive seminar on the experience, manipulation, and representation of time in history. Students pursue advanced research using primary and secondary sources. Prerequisite(s): two upper-division history courses and satisfaction of the

Entry Level Writing and Composition requirements. Enrollment limited to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. O'Hara

190I. California and the Borderlands. S

Complete original research in California and borderlands history in this senior research seminar. Focus on selected problems and themes. Assignments and discussions help students frame their research and edit their writing. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) L. Haas

190J. Diaspora and Migration in World History. *

Diaspora studies recently have included a range of movements and people in colonial, post-colonial, and national dilemmas. Diaspora studies share historical themes with migration studies, and include the study of forced exile and situations of genocide and femicide experienced by indigenous and national minorities. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. L. Haas

190K. Wired Planet: Readings on the Global History of Broadcasting and Telecommunications. *

Locates common themes in the history of broadcasting and telecommunications throughout the world. Why do certain strategies for developing broadcasting and telecommunications systems succeed or fail? Why do some nations outstrip other nations of comparable development in the growth of their communications systems? Why do national or regional communication systems suddenly become more or less open—or more or less centralized? Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Lasar

190L. Personal Politics in the New South. *

Examines the tensions between movements for political reform and reaction in the southern United States between Reconstruction and the second world war. Students develop a research paper grounded in primary research that addresses these questions. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) C. Jones

190M. History of Children and Culture of Childhood in the 19th Century. W

Explores the lives of children and the functions of the literary figure of the child in the cultural politics of the 19th century in the United States. Examines the historically contingent nature of childhood through historical, literary, and visual sources. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) C. Jones

190N. Topics in African History. *

Examines contemporary crises in Africa: the new South Africa, refugees, HIV/AIDS, children of war, blood or conflict diamonds, civil war, and genocide in Rwanda. Seminar format where students will be prepared to undertake studies on specific subjects and two rounds of 15–20 page papers. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) D. Anthony

190O. African American Historiography. S

Major themes in contemporary African American historiography on a topical basis. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education

Code(s): W, E.) D. Anthony

190P. Early American Society and Culture. *

Explores subjects and themes in the political, social, and cultural history of early U.S. history from the colonial period through 1850. Includes critical reading of current scholarship and research in primary texts. The focus of this course is the production of a 25-page research paper. Recommended for senior history majors. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Westerkamp

190Q. The Novel and History. *

Explores novels and novelists in relation to the writing of historical scholarship. Breaking down the simplistic genre division between fiction and nonfiction, provides opportunities for students to read novels as historical evidence, novels as editorial commentary, and novels as analytical narrative. Students produce a series of papers that culminate in a 25-page research project. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and two upper-division history courses or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Westerkamp

190R. Research in the History of American Religions. *

Readings and research in the history of religions in the United States. Readings focus on topics including the rise of evangelicalism; gender and religion; class, race, and religious diversity; and modernity. Students produce papers that culminate in a 25-page research project. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements and two upper division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) M. Westerkamp

190S. Women and Social Movements in the U.S. *

Examines history of women and social movements in the U.S., such as abolitionism, anti-lynching, Chinese and Jewish garment workers, Chicana farm labor activism, the American Indian Movement, the Ku Klux Klan, and the Civil Rights movement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) D. Frank

190T. Latin America in the Cold War. *

Writing-intensive seminar on Latin America during the Cold War. Particular attention given to U.S.-Latin American relations, including moments of covert or direct interventions. Students pursue advanced research using primary and secondary sources. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. O'Hara

190U. Power, Culture, and the Federal Bureau of Investigation. F

In this research seminar, students explore F.B.I. files obtained under the Freedom of Information Act on a prominent citizen of the United States of America. (Formerly Power and Cutlure in the U.S.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Lasar

190W. Topics in U.S. Civil War and Reconstruction. *

Students read historiographically significant works in the history of the U.S. Civil War and Reconstruction. Students develop research projects grounded in primary source material on a related topic of their choosing. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) C. Jones

190X. History of the Atlantic World, 1492–1824. W
Explores the transatlantic societies created by Europeans' colonization of the Americas, and their exploitation of African slaves. Questions whether the cultural, economic, and political links across the ocean integrated the adjacent lands into a fundamentally "Atlantic World." Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) G. O'Malley

190Y. The Atlantic Slave Trade. *

Before 1800, far more Africans than Europeans colonized the Americas, arriving unwillingly in the slave trade. Course examines the captives' experiences; the trade's organization and significance in the Atlantic economy; and the eventual movement to abolish the traffic. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) G. O'Malley

190Z. The Long Civil Rights Movement. *

Explores the concept of the "long civil rights movement" as a framework for understanding a wide range of social, economic, and political developments in the African American freedom struggle, in both North and South, from the 1930s through the 1980s. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) D. Brundage

192. Directed Student Teaching.

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. The Staff

193. Field Study.

To allow promising, well-qualified undergraduates to pursue directed programs of archival or archaeological study in the field under supervision of the UCSC history faculty, concentrating their work within a single given quarter. Students may take two or three courses concurrently. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Advanced Research and Reading Seminars. *

An opportunity for advanced students to focus on specific research problems resulting in a substantial research paper of 25 pages, or discussion of assigned readings resulting in a series of short papers totaling 25 pages. Courses must be taken in area of concentration in order to count toward the major. The Staff

194A. Gender, Class, and Sex in Shanghai. *

Focusing on Shanghai, course examines issues of gender, class, and sex in modern urban Chinese history. Given Shanghai's history as a treaty port, particular attention paid to ways in which its semi-colonial status inflected the articulation of gender identities, class formations and issues of sexuality (particularly sexual labor). Also looks at Shanghai during the Maoist period and in the context of more contemporary economic reforms. (Also offered as Feminist Studies 194N. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; and course 140C, or 140D, or 140E, or permission of instructor. Restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) E. Honig

194B. Okinawan History. F

Examines the history of Okinawa with particular attention paid to the modern era. The goal is to give students a solid foundation in the historiography of major themes in the study of Okinawan society. (Formerly course 196X.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements two upper-division history courses, or permission of instructor. Enrollment limited to 20. (General Education Code(s): W.) A. Christy

194D. Topics in Korean History. *

Overview of Korean history with emphasis on international relations from tributary links with China through colonization by Japan to postwar division between patron states, the USSR and U.S. History of women in Korea also a major theme. (Formerly course 196Q.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses or permission of instructor.

Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

194E. Women in Japanese History. *

Examines through both primary and secondary sources such issues as work, sexuality, education, class, and ethnicity in relation to constructions of female gender in Japanese society over the past several centuries, particularly focusing on the modern era. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor.

Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) N. Aso

194F. Jewish Shanghai. W

Explores the migration of the more than 10,000 Jewish refugees who fled Europe during World War II and settled in Shanghai. Examines the different Jewish populations that fled to Shanghai, the "Shanghai ghetto," and the recovery of this piece of history from the 1980s through the present. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. E. Honig

194G. China Since the Cultural Revolution: Histories of the Present. *

Explores the rapid and often destabilizing shifts that have taken place in China since the late 1970s (the "reform era"), tracing the effects of China's earlier experiment with revolutionary socialism on the market-driven present. Examines how various meanings of reform are negotiated; changes in rural and urban environments; and class, gender, and ethnic differences. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) G. Hershatter

194H. Gender, Family, and State in China: 1600–Present. *

Explores gender, family, and state power in China from 1600 to present, examining gendered norms, education, political movements, revolutionary practice, sexuality and sex work, and state interventions in contemporary families. Responses to reading and a research paper required. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) G. Hershatter

194M. Literati, Samurai, and Yangban: Comparative History of State and Elite in East Asia, 1600–1900. F

Critically examines the formation of political elites in East Asia. Compares literati in Ming and Qing, China; samurai in Tokugawa, Japan; and yangban in Joeson, Korea. Each group occupied specific roles and functions in their state and society but differed in scale and character. Students cannot receive credit for this course and course 294M. Prerequisite(s): course 40A or 140B, and one additional upper-division history course or permission of instructor, and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Hu

194N. Comparative Studies in Modern Asian History. *

Seminar on cultural and social changes in Asia, mainly in the 19th and 20th centuries. Topics include colonial encounters, cities, narratives of ordinary persons, nationalism and identity, visual cultures, and Orientalism. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) The Staff

194O. South Asia in the Twentieth Century. *

Introduces students to key ideas and ideologies of the Indian nation and the practices of the late-colonial and post-colonial Indian State. In the process, students become familiar with themes like modernity, gender, state formation, space, nationalism, democracy, and development. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. J. Shaikh

194Q. Making Space in the Colonial and Post-Colonial World. *

Explores the production and experience of new forms of space in the colonial and post-colonial world through historical, political, and anthropological case studies with an emphasis on the Middle East and Africa. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) J. Derr

194R. Cairo: The City Victorious, 1750–2000. *

The modernization of a world city from 1750 to the present. Cairo's social and cultural history (literature, film, music) against the background of its changing political and economic contexts. Topics include: orientalism, nationalism, imperialism, minorities, women, migration, urbanism, popular culture, tourism. Prerequisite(s): Two upper-division history courses; and course 41 or 101A or 101B; and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

194S. Comparative Studies in World History. *

Explores a broad topic in world history (varies from year to year) such as settler colonial nationalism, mission, involuntary labor, pre-political resistance, or defensive modernization in comparative historical perspective. (Formerly course 196W.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): W.) The Staff

194U. The Cold War and East Asia. *

Considers through primary and secondary sources the events and aftermath of the Cold War in East Asia in terms of state formation, domestic and foreign policy, and protest movements in China, Taiwan, Korea, and Japan with reference to Vietnam. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) N. Aso

194X. The Cold War in the Mediterranean, 1942–1991. *

Writing-intensive course on the Mediterranean. Topics include: U.S. relations with the region (including direct and indirect intervention), local responses, and cultural transformations. Students pursue advanced research using primary and secondary sources. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

194Y. Memories of WWII in the U.S. and Japan. S

Research seminar comparing U.S. and Japanese memories of World War II. Topics include war origins, total war, the atomic bomb, war responsibility, reparations, memorials, museums, and monuments. Primary work devoted to research in original texts and documents. Prerequisite(s): two upper-division history courses or permission of instructor; satisfaction of the Entry Level Writing and Composition requirements; course 80Y recommended. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W, E.) A. Yang

195A. Thesis Research.

Prerequisite(s): petition on file with sponsoring agency (students should have completed two upper-division courses, preferably in their area of concentration). The Staff

195B. Thesis Writing.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; petition on file with sponsoring agency (students should have completed two upper-division courses, preferably in their area of concentration). (General Education Code(s): W.)
The Staff

196. Advanced Research and Reading Seminars.

An opportunity for advanced students to focus on specific research problems resulting in a substantial research paper of 25 pages, or discussion of assigned readings resulting in a series of short papers totaling 25 pages. Courses must be taken in area of concentration in order to count towards the major. The Staff

196A. Global 1930s. F

Explores the turbulent 1930s from a global perspective. Students consider the great events of the decade--the Great Depression, the consolidation of communism, and the rise of fascism--within the context of global connections and forces, including those fostered by imperialism and various forms of internationalism. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses. Enrollment restricted to junior and senior history majors.
Enrollment limited to 20. M. Matera

196B. Social Protests in Late Medieval and Early Modern England. *

Explores the social, cultural, economic, and political context of popular protest in England from 1347 through 1631. An important dimension of that exploration is an examination of official government responses to riot and rebellion. Two courses in medieval or early modern European history recommended as preparation.
Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196C. Modern Italian Culture. *

Developments in Italian culture and society from the postwar to the present. Topics include north-south divisions, family and gender, cinema and modernity, urbanization, mafia, and terrorism. Prerequisite(s): course 164A or 164B or 183A or 183B, or permission of instructor and one upper-division history course; and satisfaction of the Entry Level Writing Requirement. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) C. Polecritti

196D. City of Rome. W

Explores the long-term urban history of Rome from its founding through the modern tourist city. Emphasizes the cityscape and geographical centers of political power, culture, and religion, as well as the everyday life of neighborhoods. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history, classical studies, and Italian studies majors. Enrollment limited to 20. (General Education Code(s): W.) C. Polecritti

196E. Modern Irish History. *

Aims to illuminate major themes and turning points of modern Irish history: the causes and consequences of the famine; the development of Irish nationalism; revolution, civil war, and partition; and the recent economic boom. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) B. Thompson

196F. European Environmental History. *

Examines interactions between human societies and the natural world in Europe. Topics include: impact of European imperialism; changing attitudes toward the natural world; the Industrial Revolution in ecological perspective; the beginnings of preservationist and conservationist movements; the evolution of 20th-century environmentalism; and the historical context of contemporary environmental problems. Prerequisite(s): satisfaction of the Entry Level Writing and Composition

requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) B. Thompson

196G. Modern Germany and Europe. *

A senior reading and research seminar that explores the major historiographic debates in German history during the 19th and 20th centuries. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history, German studies, and Jewish studies majors. Enrollment limited to 20. (General Education Code(s): W.) M. Cioc

196H. Sex and the City--The History of Sexuality in Urban Areas Around the Globe. *

Focuses on the history of sexuality in major urban areas globally. Topics include: sexual identities and race, class, and gender; sex work, policing, and urban spaces; gay, lesbian, and transgender communities; race, gender, and sexuality within the context of colonialism. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses, or by permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Matera

196I. The French Revolution. *

Students conduct original research on the French Revolution of 1789 based on mix of primary and secondary sources. Classroom discussions focus on interpreting contemporary documents and addressing historiographical issues. Seminar format with significant written requirements. Presumes familiarity with the period. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 70B and one upper-division history course; or course 170A or 171. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196J. Autobiography and History. *

Students prepare research papers using a combination of sources, both primary (the autobiographies, diaries, or memoirs of historically relevant figures) and secondary (chronologically and thematically appropriate works of synthesis that help contextualize the lives of their subjects). Seminar format with significant written requirements. Prerequisite(s): satisfaction of the Entry Level Writing requirement; Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196K. Studies in European Intellectual History. *

Topics in European intellectual history from the French Revolution to World War I. Readings exemplifying approaches from history of ideas and intellectual biography to recent studies of rhetoric and political culture. Preparation and presentation of research paper. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196M. Shtetl: Eastern European Jewish Life. *

For several centuries, the shtetl functioned as the center of Jewish life in Eastern Europe. Alternately mythologized and pathologized, the shtetl continues to exist as an imaginary space that defines and distorts the historical image of Eastern European Jewish life. Students cannot receive credit for this course and course 257. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and two upper-division history courses. Enrollment restricted to junior and senior history and Jewish studies majors. Enrollment limited to 20. (General Education Code(s): W.) N. Deutsch

196N. Eastern European Jewish Social History. W

Study of 19th- and 20th-century Eastern European and Russian Jewish social history. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history, German studies, and Jewish studies majors. Enrollment limited to 20. (General Education Code(s): W, E.) The Staff

196O. Russian Revolution, 1917–1932. *

Study of the major political, social, and intellectual conflicts and transformations of the period. Topics include February and October revolutions, Civil War, NEP, rise of Stalinism, and collectivization. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196P. Hitler and Stalin. *

A discussion of 20th-century totalitarianism. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history, German studies, and Jewish studies majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196Q. Europe and the World During the Cold War. S

Explores European history from the end of World War II through the fall of the Soviet Union. Examines how Europe evolved from a fragmented, polarized array of colonial rivals to a more economically and culturally integrated place. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Lasar

196R. Social World of Roman Palestine. *

Inquiry into the structures of Roman Palestine on the basis of parables from the synoptic Gospels, the Dead Sea Scrolls, Josephus, inscriptions, and archaeological discoveries. Physical, social, economic, and ideological conditions are researched in an ethnographic fashion. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses. Enrollment restricted to junior and senior history, classical studies, and Jewish studies majors. Enrollment limited to 20. (General Education Code(s): W.) The Staff

196S. Special Topics in Ancient History. F,S

Seminar focuses on different topics in ancient history. In addition to assigned readings, the student is expected to do additional research that culminates in a 20-page paper on a topic of the student's choice. General topics for the course will vary from year to year. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors and classical studies majors. Enrollment limited to 20. (General Education Code(s): W.) E. Sullivan, C. Hedrick

196U. Topics in Medieval History. *

Addresses contemporary and modern interpretations of the events relation to medieval history. Through critical discussion and debate, assesses the value and limitations of various historical sources, as well as developing skills in research, presentation-making, and writing. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 102A or 103, and one upper-division history course, or by permission. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): W.) The Staff

196V. The Soviet Experience. S

Uses memoirs, diaries, novels, films, oral interviews and histories, and scholarly works to explore everyday life in the Soviet Union, and the extent to which the Soviet Union represented a totalitarian society. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment is restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Peterson

196W. Brave New World? Scientific & Technological Visions of Utopia and Dystopia in Russia/Soviet Union. *

Focuses on the role of scientific and technological developments in creating the kinds

of social, economic, and ecological change that inspired utopian thinking--as well as utopia's counterpart, dystopia--in Russia in the late 19th and 20th centuries.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, two upper-division history courses, or permission of instructor. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Peterson

196X. National Socialism and the Third Reich. F

A senior reading and research seminar that explores the major historiographic debates in German history during the Nazi period. Students conduct original research on the Third Reich using primary and secondary sources. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and two upper-division history courses, or by instructor permission. Enrollment restricted to junior and senior history, Jewish studies, and German studies majors. Enrollment limited to 20. E. Kehler

196Y. Saints and Holiness in Medieval Europe. *

Examines popular religious belief and practice, including conversion, the cult of the saints, relics, pilgrimage, miracles and visions. Emphasis on Medieval Europe, but some attention also paid to modern patterns of devotion. Prerequisite(s): two upper-division history courses; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) C. Polecrichti

196Z. Europe From the Margins: Outside Influences on Modern European Thought and Culture. *

Europe's engagement with the outside world, which ranged from cultural and intellectual borrowings to relations of domination and colonialism, shaped its modern history and culture. This course examines the cultural and intellectual history of modern Europe by focusing on the ways in which European thinkers and cultural producers drew upon or were influenced by non-European sources. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; two upper-division history courses. Enrollment restricted to junior and senior history majors. Enrollment limited to 20. (General Education Code(s): W.) M. Matera

198. Independent Field Study.

Student's supervision is conducted by a regularly appointed officer of instruction by means other than the usual supervision in person (e.g., by correspondence) or student is doing all or most of the course work off campus. May be repeated for credit. The Staff

199. Tutorial.

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits).

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Methods and Theories of History. F

An overview of theories, methods, and philosophies concerning the nature and production of history. Topics vary with instructor. Enrollment restricted to graduate history students and others by permission of instructor. Enrollment limited to 20. M. Cioc

201. Directed Research Colloquium. W

Having already prepared a bibliography and research prospectus in a graduate research seminar, students will undertake further research on their projects, write a 25-30 page research paper, and present their work to their fellow students. Prerequisite(s): history graduate research seminar. Enrollment restricted to graduate history students. Enrollment limited to 15. D. Frank

202. Practicing World History. F

Because world history surfaces in curriculums at all educational levels, this seminar interrogates its value. Why do historians advocate world (and transnational) history? How do historians actually practice it? What are the pitfalls? Can global perspectives apply to localized subjects? Enrollment restricted to graduate students. Enrollment limited to 15. G. O'Malley

- 204A. History of Gender Research Seminar. W
Introduction to theories and methods employed in gendered historical research. Readings are drawn from a range of chronological, national, and thematic fields and explore the intersection of gender analysis with such historical problems as the body and sexuality, modernity, national identity, and production/consumption. Enrollment restricted to graduate students. Enrollment limited to 15. M. Westerkamp
- 204B. Approaches to Social and Cultural History. *
Graduate reading course focusing on both classic and contemporary approaches to social and cultural history. Readings include: Bakhtin, Benjamin, Foucault, Auerbach, and Berlin, and a variety of more recent studies in social, cultural, and intellectual history. Course not limited to graduate students in History.(Formerly Society and Culture Research Seminar .) Enrollment restricted to graduate students. Enrollment limited to 15. The Staff
- 204C. Colonialism, Nationalism and Race Research Seminar. *
Research seminar introducing theories and methods of the comparative histories of race, ethnicity, colonialism, and nationalism. Enrollment restricted to graduate students. Enrollment limited to 15. M. O'Hara
- 204E. Transnationalism, Borderlands, and History. S
Graduate seminar exploring the history of Canada–United States–Mexico borderlands. Approaches and arguments compare nation-state centered histories with narratives that construct the North American borderlands as places wrought from a multiplicity of overlapping indigenous, imperial, national, transnational, and global forces. Prerequisite(s): Enrollment restricted to graduate students. Enrollment limited to 15. G. Delgado
205. Diaspora and World History. *
Examines the histories and historiography concerning diaspora. This area of study includes populations from Asia, Africa, Europe, and the Americas. Students study the histories of diasporic populations, and the questions, theory, and methods that scholars use to approach the subject. Enrollment restricted to graduate students. Enrollment limited to 10. L. Haas
206. Empire in World History. S
Introduces the study of empire (as opposed to nations, regions, or continents) as an approach to world history and to recent historiographical trends in the history of empires. Enrollment restricted to graduate students, Enrollment limited to 15. M. Matera
- 210A. Readings in U.S. History.
Introduction to major themes and controversies in the interpretation of U.S. history. Readings cover both chronological eras and topical subjects, often in a comparative context: colonial and early national periods. Enrollment restricted to graduate students. Enrollment limited to 15. G. O'Malley
- 210B. Readings in U.S. History. S
Introduction to major themes and controversies in the interpretation of U.S. history. Readings cover both chronological eras and topical subjects, often in a comparative context: 19th century. Enrollment restricted to graduate students. Enrollment limited to 15. D. Frank
- 211A. Research Seminar in Early American History. *
First quarter of a two-quarter introduction to research in early American history (1550–1820). Readings include both historiographically definitive texts as well as recent scholarship reflecting the field's developments. Students complete analyses of historical sources, brief critical essays, and a significant research project. Course A is not a prerequisite to course B. Enrollment restricted to graduate students. Enrollment limited to 20. G. O'Malley, M. Westerkamp
- 211B. Research Seminar in Early American History. *
Second quarter of a two-quarter introduction to research in early American history (1550–1820). Readings include both historiographically definitive texts as well as recent scholarship reflecting the field's developments. Students complete analyses of historical sources, brief critical essays, and a significant research project. Course A is not a prerequisite to course B. Enrollment restricted to graduate students. Enrollment limited to 20. G. O'Malley, M. Westerkamp

212A. Citizenship in U.S. History. *

A reading-intensive graduate seminar in United States history that examines citizenship and its exclusions, grounded in race, gender, sexuality, age, and disability. This seminar also explores how forms of belonging intersected with evolving understandings of nationalism and sovereignty. Enrollment restricted to graduate students. Enrollment limited to 15. C. Jones

212B. Citizenship in United States History. *

A reading-intensive graduate seminar in United States history examining citizenship and its exclusions, grounded in race, gender, sexuality, age, and disability. The course also explores how forms of belonging intersected with evolving understandings of nationalism and sovereignty. Enrollment restricted to history graduate students. Enrollment limited to 15. C. Jones

215A. Topics in American History: U.S. Labor and Working Class History. *

Addresses topics in history of working people, the labor movement broadly defined, and political-economic change in the U.S. Topics include race, ethnic and gender dynamics, and U.S. labor and working-class history in global context. Enrollment limited to graduate students. Enrollment limited to 15. D. Frank

215B. Visions of Progress. *

Explores the emergence of the welfare/regulatory state in the United States from the 1870s to World War I, examining different schools of historical thought about this period. Enrollment restricted to graduate students. Enrollment limited to 15. M. Lasar

215C. U.S. Immigration and Ethnic History. F

Introduces key issues and debates in United States immigration and ethnic history. Topics include causes of immigration; constructions of race, gender and ethnicity; assimilation; transnationalism; and forces shaping immigration policy. Enrollment restricted to graduate students. Enrollment limited to 10. D. Brundage

216. Readings in the History of American Religions. *

Research in the history of religions in the United States. Addresses topics, such as the rise of evangelicalism; class, race, and religious diversity; gender and power; modernity; and civil religion through analyses of visual and literary texts, iconography, ritual, theology, and praxis. Enrollment restricted to graduate students. Enrollment limited to 15. M. Westerkamp

217. Critical Conversations in Native American History. F

Overview of key historical texts focusing on the Native American experience, with particular focus on scholarship that seeks to decolonize Western methodologies and research practices. Readings explore such topics as decolonization, indigenous identity, sovereignty, repatriation efforts, gender and sexuality, and historical memory. The format consists of discussions of readings. Students give oral presentations on the readings, and write book reviews and a final historiographical paper. (Formerly American Studies 224.) Enrollment restricted to graduate students. Enrollment limited to 10. A. Lonetree

220. The Atlantic World, 1500–1800. *

Explores the economic, social, and cultural history of early America in terms of its Atlantic connections and intersection with the cultures of early modern Europe, Africa, and Latin America. Builds upon previous work in early America and early modern Europe, challenging students both to work comparatively and to break out of traditional geographic models. (Formerly Topics in American History: The Atlantic World 1500–1800.) Enrollment restricted to graduate students. Enrollment limited to 15. M. Westerkamp

221. Empires and New Nations in the Americas. *

Compares the history of the colonial and 19th-century Americans through a world-history perspective. Focuses on the interrelated themes of indigenous histories, slavery and other forms of servitude, commodity production, and the meaning of equality and freedom in new nations. Enrollment restricted to graduate students. Enrollment limited to 15. L. Haas

225. Spanish Colonialism. *

Reading-intensive graduate seminar with emphasis on theoretical and historiographical questions regarding the field of Spanish colonialism in the Americas. Students encouraged to engage in discussions of comparative colonialisms. Enrollment restricted to graduate

	<p>students. Enrollment limited to 10. M. Diaz</p>
227.	<p>Gender and Colonialism. *</p> <p>Explores the relationship between colonialism and gender. Examines the construction of gender categories (in conjunction with race) in the context of colonial conquest and rule; contested definitions of motherhood, domesticity, and citizenship; and regulation of sexuality. Enrollment restricted to graduate students. E. Honig</p>
230A.	<p>Readings in Late Imperial China. *</p> <p>Survey of the major works on and historiographical controversies about Qing Dynasty (1644–1911) China. Enrollment restricted to graduate students. Enrollment limited to 20. M. Hu</p>
230B.	<p>Engendering China. *</p> <p>Reading seminar on the history of Chinese gender, focusing on the Qing dynasty (1644–1911) to the present. Topics include marriage and family, sexuality, work, the gendered language of politics, and major reform movements. Enrollment restricted to graduate students. Enrollment limited to 20. G. Hershatter</p>
230C.	<p>Readings in 20th-Century China. *</p> <p>A survey of major Western-language works and historiographical controversies in Chinese history from 1900 to the present. Weekly readings emphasize particular social and political movements as well as long-term changes in urban and rural society. Enrollment restricted to graduate students. Enrollment limited to 20. E. Honig</p>
231.	<p>Historicizing the People's Republic of China. F</p> <p>An overview of the scholarly literature on the People's Republic of China. Readings include works by historians as well as by social scientists. Students consider what kinds of questions historians have and can ask. Enrollment is restricted to graduate students. Enrollment limited to 15. E. Honig</p>
238A.	<p>Research Methods: China. *</p> <p>An introduction for graduate students to the use of major research tools and sources in Chinese history since 1600, with a focus on 20th-century materials. Students complete a series of bibliographical exercises and prepare a research prospectus. (Formerly course 228A.) Enrollment restricted to graduate students. Enrollment limited to 20. G. Hershatter</p>
238B.	<p>Research Methods: China. *</p> <p>Building on the research and bibliographic skills developed in course 228A, students develop a research topic and write a paper of 20–30 pages using primary sources as appropriate in English, Chinese, and/or Japanese. (Formerly course 228B.) Enrollment restricted to graduate students. Enrollment limited to 20. G. Hershatter</p>
242.	<p>Readings in Modern Japan. W</p> <p>A graduate course intended to give students a fundamental understanding of the major themes in the study of modern Japanese history. Central themes include modernity and modernization, colonialism, postwar recovery, gender, race, and nationalism. (Formerly course 210.) Enrollment restricted to graduate students. Enrollment limited to 15. N. Aso</p>
243.	<p>Transnational Japan. *</p> <p>Examines how "Japanese" history has been forged across, outside, and beyond the boundaries of the modern nation-state of Japan. Considers how Japan has transformed the world. Students debate how the world made Japan and how Japan re-made the world. Enrollment restricted to graduate students. Enrollment limited to 10. A. Christy</p>
244.	<p>Gender and Japanese History. *</p> <p>Examines—through primary and secondary sources—constructions of gender (masculine, feminine, and transgender) in Japanese society over the past several centuries, focusing on the modern era. Enrollment restricted to graduate students. Enrollment limited to 15. A. Christy</p>
250A.	<p>Readings in European Social and Cultural History. *</p> <p>A readings seminar that introduces beginning graduate students to some of the major conceptual and methodological approaches to early modern European social and cultural history, 1400–1789. (Formerly course 205A.) Enrollment restricted to graduate students. Enrollment limited to 20. The Staff</p>

- 250B. Readings in European Social and Cultural History. *
A readings seminar that introduces beginning graduate students to some of the major problems in modern European social and cultural history, 1789 to the present. (Formerly course 205B.) Enrollment restricted to graduate students. Enrollment limited to 20. The Staff
256. Nationalism, Anti-Semitism, and Jewish Resistance in World War II. *
Jewish resistance to Nazism during World War II, in Eastern Europe, and its historical context. Includes the pre-war rise in nationalism and anti-Semitism in Poland and Lithuania, Jewish integration in the Soviet Union, and the consequences for wartime resistance. (Also offered as History of Consciousness 243A. Students cannot receive credit for both courses.) Enrollment restricted to seniors and graduate students. Enrollment limited to 15. B. Epstein
257. Shtetl: Eastern European Jewish Life. *
For several centuries, the shtetl functioned as the center of Jewish life in Eastern Europe. Alternately mythologized and pathologized, the shtetl continues to exist as an imaginary space that defines and distorts the historical image of Eastern European Jewish life. Students cannot receive credit for this course and course 196M. Enrollment restricted to graduate students. Enrollment limited to 20. N. Deutsch
260. History and the Spatial Turn: Making Space, Place, and Geography in History. *
Explores the making of space, place, and geography in a body of recent historical work. Explores key theoretical work interrogating the significance of space as a critical element of social theory and historical consideration. Proceeds through three thematic units: questions of colonial economy in South Asia; spaces of empires and its end in the Eastern Mediterranean; and histories of infrastructure. Enrollment restricted to graduate students. Enrollment limited to 20. J. Derr
- 280A. History Graduate Proseminar: Teaching Pedagogy (2 credits). F
Devoted to professionalism and socialization of history graduate students. Includes formal and informal meetings with faculty and other graduate students. Topics include TAships, designing course syllabi, pedagogy, teaching technologies, and teaching in different venues. This course is required for first-year students; however, it is open to all other graduate students as needed. Enrollment restricted to graduate students . May be repeated for credit. N. Aso
- 280B. History Graduate Proseminar: Research Presentations and Grant Writing (2 credits). *
Devoted to professionalism and socialization of history graduate students. Topics include discussion of researching grants; effective CV writing; successful grant applications and publication proposals; and conference paper and panel proposals. Required for first-year graduate students; however, open to all history graduate students as needed. This course is required for first-year students; however, it is open to all other graduate students as needed. Enrollment restricted to graduate students . May be repeated for credit. G. O'Malley
- 280C. History Graduate Proseminar: Job Market (2 credits). F
Devoted to professionalism and socialization of history graduate students. Includes formal and informal meetings with faculty and other graduate students. Topics include researching position; preparing a CV and the job-application letter; preparing for an interview; practice interview; preparing a job talk and/or teaching presentation; and practice job talk. This course is required for first-year students; however, it is open to all other graduate students as needed. Enrollment restricted to graduate students . May be repeated for credit. N. Aso
283. Foreign Language Preparation (2 credits). F,W,S
Independent study course in which history graduate student reads selected texts to fulfill foreign language requirement. Student meets with instructor to discuss readings, deepening his knowledge of the foreign language. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
284. Qualifying Examination Preparation (2 credits). F,W,S
Independent study course designed to help students prepare for qualifying exams. Students meet on regular basis with one or more members of qualifying examination committee to monitor preparation for exam. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

285. Readings in Research Field (2 credits). F,W,S
 Independent study focusing on selected texts or authors in history or historical theory.
 Students meet on regular basis with instructor to discuss readings and deepen their knowledge of a particular author or historical theory. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit.
 The Staff
286. Research Colloquium on Colonialism, Nationalism, and Race (2 credits). F,W,S
 Acquaints students with the department's thematic research clusters in their field to coordinate training in historical research. Students meet on a regular basis with a faculty member of a particular cluster to discuss most important readings in the field. Enrollment restricted to graduate students. Enrollment restricted to graduate students. May be repeated for credit. The Staff
287. Research Colloquium on Gender (2 credits). F,W,S
 Acquaints students with the department's thematic research clusters in their field to coordinate training in historical research. Students meet on a regular basis with a faculty member of this cluster to discuss most important readings in their field. Enrollment restricted to graduate students. Enrollment restricted to graduate students. May be repeated for credit. The Staff
288. Teaching Assistant Preparation (2 credits). F,W,S
 Independent study designed to help history graduate students prepare to teach in an area of history outside their specialization. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
289. History Colloquium (2 credits). F,W,S
 Independent study designed to foster departmental and cross-disciplinary participation in campus talks, colloquia, conferences, and events. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
- 294M. Literati, Samurai, and Yangban: A Comparative History of State. *
 Critically examines the formation of political elites in East Asia. Compares literati in Ming and Qing China; samurai in Tokugawa, Japan; and yangban in Joeson, Korea. Each group occupied specific roles and functions in their state and society but differed in scale and character. Students cannot receive credit for this course and course 194M. Enrollment restricted to graduate students. Enrollment limited to 20. M. Hu
297. Independent Study.
 Students submit petition to sponsoring agency. May be repeated for credit. The Staff
299. Thesis Research.
 Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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D-201 Porter College

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Lower-Division Courses

10. Introduction to African Visual Culture. S

An interdisciplinary approach to the study of the basic structures (gender, art within political sphere, and spiritual aspects of visual culture) and cultural institutions (initiations, closed associations, kingship, title association, etc.) around which the study of African visual culture revolves. (General Education Code(s): CC.) E. Cameron

20. Visual Cultures of Asia. *

An introduction to the art and architecture of East Asia, including China, India, Southeast Asia, and Japan. In order to achieve a fuller understanding of the arts of these countries a historical, cultural, and religious context is provided. (Formerly course 10D, Presence and Power in the Visual Cultures of Asia.) (General Education Code(s): CC, IH, A.) The Staff

22. Religion and Visual Culture in China. *

Introduction to the study of religious currents and practices in China and their visual expression. In addition to "religious art," topics include such pivotal matters as body concepts and practices, representations of the natural world, and logics of the built environment. (Formerly course 80G.) (General Education Code(s): CC, A, E.) R. Birnbaum

24. Southeast Asia Visual Culture. *

Introduces the visual cultures of Southeast Asia. Topics include indigenous megalithic art, textiles, and jewelry, as well as Hindu and Buddhist art and architecture. Also considers shadow play and dance performance as alternative lenses to looking at ritual and visual narratives rendered on stone temples. (Formerly course 10C.) (General Education Code(s): CC, IH, A, E.) B. Ly

27. Image and Ideology in Indian Art. *

Examination of the ways social, religious, and political patronage have affected the production and reception of art in the Indian subcontinent. The course is designed as a series of case studies from different periods of Indian history. (Formerly course 80N, Indian Art: Image and Ideology.) (General Education Code(s): IM, A, E.) K. Thangavelu

30. Introduction to European Visual Culture. W

An introduction to the European tradition in visual culture, from antiquity to the present, but not in chronological order. All media, including the fine arts, architecture, film, video,

■ Community Studies
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■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
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■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
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■ History of Consciousness
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■ Legal Studies
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■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
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■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

and installation and performance work are incorporated. Presents the major visual regimes of representation while it probes the meanings and limits of Europe and the European tradition in the context of the visual. (Formerly course 10G, Europe.) (General Education Code(s): IM, IH, A.) A. Langdale

31. The Nude in the Western Tradition. S

The human body without clothing in European and European-American art and visual culture from ancient Greece to the present day. Among the themes to be addressed: gender, youth and age, sexuality and sexual preference, fecundity and potency, erotic art and pornography, primitivism and the naked body of the non-European. (Formerly course 10F.) (General Education Code(s): IM, IH, A.) D. Hunter

40. Museum Cultures: The Politics of Display. W

Explores the history of collecting and displaying art (museums, galleries, fairs) since the mid-19th century and the effect of institutional changes on aesthetic conventions. Follows the history from the origins of museums and collections to contemporary critiques of institutional exclusion and misrepresentation. (Formerly course 80D.) (General Education Code(s): IM, A.) J. Gonzalez, The Staff

41. Modern Art in Context. *

Examines the social, economic, and political significance of European and U.S. modernist art and architecture, moving from French realism to American minimalism. Provides the historical background and theoretical frameworks needed to make sense of modernist art and culture. (Formerly course 80V.) (General Education Code(s): IM, A.) M. Berger

43. History of Modern Architecture. F

Examines the origins and development of modern architecture, from the Enlightenment and the Industrial Revolution to the 20th Century and beyond. Buildings, urban plans, and works of art and design are discussed in relation to political, social, and cultural currents. (Formerly course 46.) (General Education Code(s): IM, IH, A.) The Staff

45. Photography Now. W

Explores recent methods and approaches in photography. Surveys significant aesthetic, conceptual, and theoretical shifts occurring in the photographic medium and related discourses. Special attention given to the "current" landscape of contemporary photography (1980–present). (General Education Code(s): IM.) D. Murray

46. Introduction to U.S. Art and Visual Culture. F

Overview of U.S. art and visual culture from the late 18th Century to the present. Examines art as evidence for understanding evolving beliefs and values of Americans. Explores the social and political meanings of art, and pays particular attention to how artists, patrons, and audiences have constructed nationalism, race, class, sexuality, and gender. (General Education Code(s): ER.) M. Berger, The Staff

50. Ancient Mediterranean Visual Cultures. *

The role that ancient art and visual culture play in constructing social identities, sustaining political agendas, and representing various cultural, ritual, and mythological practices in Mesopotamia, Egypt, Greece, and Rome, including the sociology of ancient cultures, mythology, religious studies, gender studies and history. (Formerly course 80E.) (General Education Code(s): IM, A.) The Staff

51. Greek Eyes: Visual Culture and Power in the Ancient Greek World. *

The central role of visual communication in ancient Greek civilization: examines the construction of cultural, social, political, religious, and gender identities through material objects and rituals. Includes discussions of images of the public and private sphere, athletic and theatrical performances, mythology, pilgrimage, and magic. (Formerly course 80X, Greek Eyes: Visual Culture and Power in the Ancient Greek.) (General Education Code(s): IM, A.) M. Evangelatou

58. Gardens of Delight: Fifteen Centuries of Islamic Visual Culture. S

Examines some of the most representative creations of Islamic visual culture from the 7th Century to the present in order to appreciate the richness of this tradition and its extensive influence on other cultures. Focuses on the social, political, and religious role of a variety of materials, from mosques, palaces, and gardens to visual narratives, ceremonies, dance, and contemporary films. (Formerly course 180.) (General Education Code(s): CC, A, E.) M.

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Evangelatou

60. Indigenous American Visual Culture. F

Selected aspects of art and architecture of the first peoples of the Americas, north, central, and south, from ca. 2000 B.C.E. to present. Societies to be considered may include Anasazi, Aztec, Inca, Northwest Coast, Maya, Navajo, Plains, and others. (Formerly course 80M.) (General Education Code(s): ER, A, E.) C. Dean

70. Visual Cultures of the Pacific Islands. F

Interdisciplinary course examines visual cultures of Australia, Melanesia, Micronesia, and Polynesia from the archaeological past through contemporary periods. (Formerly course 105P.) (General Education Code(s): CC, A, E.) S. Kamehiro, The Staff

80. Colonial Histories and Legacies: Africa, Oceania, and the Indigenous Americas. *

A comparative study of the arts of selected cultures which developed outside the spheres of influence of the major European and Asian civilizations. Emphasis is on the function of the arts in these disparate geographic regions. Students cannot receive credit for this course and course 100E. (Formerly course 10E, Africa, Oceania, and the Americas.) (General Education Code(s): CC, IH, A, E.) E. Cameron

99. Tutorial. F,W,S

Supervised study for undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

100A. Approaches to Visual Studies. W

Introduction to major issues of method and critique in study of art and visual culture. Focuses on understanding disciplinary and critical modes of scholarly inquiry in the visual arts, including role of historical research. Emphasizes intensive reading, discussion, and writing. Course 100A is a prerequisite for all History of Art and Visual Culture seminars. (Formerly Methods in History of Art and Visual Culture) Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to sophomore, junior, and senior History of Art and Visual Culture majors and minors. (General Education Code(s): W,A.) D. Hunter

110. Visual Cultures of West Africa. *

Explores visual cultures of West Africa through time (Nok to present). Attention paid to relationships between peoples and impact of European/Arab presence on visual cultures. Prerequisite(s): course 10 or 80 recommended. (Formerly course 107B, West Africa.) (General Education Code(s): CC, A, E.) E. Cameron

111. Visual Cultures of Central Africa. *

Examination of visual cultures of Central Africa within a historical sequence from the Sanga archaeological excavations to contemporary easel painting. (Formerly course 107A, Central Africa) Prerequisite(s): course 80 suggested. Enrollment restricted to sophomores, juniors and seniors (recommended). (General Education Code(s): CC, A, E.) E. Cameron

115. Gender in African Visual Culture. *

In Africa, relationships exist between gender and visual culture. Course examines where categories come from, differences in men's and women's visual cultures, and how visual cultures teach, reinforce, and negotiate gender definitions. When are male/female boundaries crossed, and why? (Formerly course 185B, Gender.) (General Education Code(s): A, E.) E. Cameron

116. African Architecture. F

Study of the built environment in Africa. Focusing in depth on 10 major architectural forms or sites, this course explores the diversity of architectural types and how gender, politics, religion, and culture shape and are shaped by architectural spaces. (General Education Code(s): PE-E.) E. Cameron

117. Contemporary Art of Africa. *

Examines contemporary arts in post-colonial Africa, 1960–present, including new popular cultural forms; arts resulting from new class and national structures; commodification of culture; Pan-Africanism; exhibitionism; and questions of destiny. (Formerly course 185D.) Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): IM,

A, E.) The Staff

118. Art of the Contemporary African Diaspora. *

Considers contemporary art by African artists operating in metropolitan centers, as well as Afro-British, Afro-Caribbean, and African-American production. Topics are organized thematically and address constructing and deconstructing the idea of Africa; cultural authenticity; diaspora; Creolité and creolization; hybridity; cosmopolitanism; post-black; and globalism in the arts. (Formerly course 189Y.) Recommended: background in art history. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): A.) D. Murray

122. Visual Cultures of China.

The Staff

122A. Sacred Geography of China. *

An examination of the close relationship of religious traditions and the natural world in China, and its expression in visual representation. Particular emphasis on the ways in which competing groups sought to define or re-envision an understanding of the terrain. (Formerly course 154A.) Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): CC, A.) R. Birnbaum

122B. Constructing Lives in China: Biographies and Portraits. *

Consideration of biographies and portraits in China as representations of human types and individuals, and the use of these representations as models for constructing lives. Attention to historical and social contexts, early times to present. Special focus on Chinese Buddhist traditions. A previous course that focuses on traditional China or Buddhist studies strongly recommended. (Formerly course 155.) (General Education Code(s): CC, A, E.) R. Birnbaum

122C. Writing in China. *

Examines material and conceptual phenomena of writing in Chinese visual culture. Focuses on the intersections of places and practices of writing through various inscribed sites, ranging from oracle bones, seals, and mountain facades to hand scrolls, architecture, and contemporary art. (Formerly course 159D.) (General Education Code(s): A.) The Staff

122D. Chinese Landscape Painting. *

Examines the history and significance of the subjects most prominent in Chinese painting during the past one thousand years, focusing on the cultural factors that made landscape a fundamental value in the Chinese tradition and the methods whereby painters created pictorial equivalents. (Formerly course 159B.) (General Education Code(s): IM, A.) The Staff

123. Visual Cultures of South Asia.

The Staff

123A. Modernity and Nationalism in the Arts in India. *

Deals with artistic responses to the forces of modernity, colonialism, industrialization and globalization in India during the 19th and 20th centuries. Addresses the complex and often painful climb toward re-establishing a truly Indian artistic identity. (Formerly course 189D.) (General Education Code(s): A, E.) K. Thangavelu

123B. Religions and Visual Culture of South Asia. F

South Asia is the home of many religions (Hinduism, Buddhism, Jainism, Islam, and Sikhism). Introduces the role images (painting, sculpture, architecture, photography, film) play in shaping these diverse religious traditions. (Formerly course 106A.) Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): CC, A, E.) B. Ly

124. Visual Cultures of Southeast Asia.

The Staff

124A. Arts of Ancient Southeast Asia. F

Focuses on Hindu and Buddhist arts of ancient Southeast Asia (Indonesia, Cambodia, Vietnam, and Thailand). Materials covered include indigenous megalithic arts, stone sculptures, and monumental temple architecture such as Angkor Wat, Borobudur, Prambanan, and the Bayon. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): CC.) B. Ly

124B. History of Photography in Southeast Asia. S

Examines how photography was used in Southeast Asia to document the racial difference

and the exotic "Others" under the regime of colonialism. Considers the role photography played in "documenting" the Vietnam–American War and how contemporary Southeast Asian–American artists challenge this photographic history in their art. Enrollment restricted to sophomores, juniors and seniors. (General Education Code(s): CC.) B. Ly

124C. Arts and Politics in Theravada Traditions. *

Consideration of the arts and architecture in Theravada Buddhist traditions in Sri Lanka and Southeast Asia. Topics and themes include ritual, relics, visual narrative, mural painting, contemporary art, mass–meditation movement, and political protest. (Formerly course 163B.) Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): CC, A.) B. Ly

124D. Contemporary Art of Southeast Asia and its Diaspora. *

Examines the respective national notions of modernity in the region through a comparative lens. How global capital flow and transnational cultural exchanges impact the production of arts of Southeast Asia and its diaspora. Themes and issues include: colonialism and art education; nationalism; identity politics; memory; trauma; gender; race; sexuality; and the body. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): CC.) B. Ly

127. Topics in Cross–Regional Studies in Visual Cultures of Asia.

The Staff

127A. Buddhist Visual Worlds. W

Introduction to the study of Buddhist visual traditions, from their beginnings to the present day. Case studies examined with careful attention to historical, social and cultural contexts; particular emphasis on the relation of visual traditions to Buddhist practices. (Formerly course 114.) Enrollment restricted to sophomore, junior, and senior students. (General Education Code(s): CC, A.) R. Birnbaum

127B. Buddhist Pure Lands. S

Conceptions of "pure lands" have engaged the imaginations of Mahayana Buddhists for more than two millennia. Course considers literary and visual representations of pure lands and their inhabitants, as well as related practice traditions. Special emphasis on Chinese traditions. Previous courses in Asian visual cultures and/or Buddhist studies recommended. (Formerly course 154D.) (General Education Code(s): CC, A.) R. Birnbaum

127C. Ritual in Asian Religious Art. *

Examination of interaction between image and ritual in Asian religious art. Case studies from different historical periods and geographical locations (e.g., China, Tibet, Japan, Indonesia, India). Examples include mandalas, ritual bronzes, tankas, sacred caves, temples, tea ceremonies, and calligraphy. (Formerly course 105E.) (General Education Code(s): IM, A, E.) The Staff

127D. Storytelling in Asian Art. *

Combination of theoretical perspectives on narrative from literary criticism, rhetoric, folklore, and film theory with art historical focus on images (cave temples, stone reliefs on stupas, scrolls, dance-drama, etc.) from India, Pakistan, China, Japan, Cambodia, and Indonesia. (Formerly course 160.) (General Education Code(s): A, E.) The Staff

127E. Modern/Contemporary Architecture of the Asia Pacific. *

Examines 20th– and 21st-century architecture in China, Japan, Korea, Australia, New Zealand, Papua New Guinea, Hawaii, Samoa, and the Philippines. Examines how aesthetic, socio-political, economic, and technological networks have contributed to Asia Pacific's dynamic and experimental approaches to contemporary architecture. (General Education Code(s): IM.) The Staff

133A. Themes in the Study of Medieval Visual Culture. *

Many issues associated with contemporary artistic production and visual culture originated in the Middle Ages. Themes to be considered: role of secular art; women as artists and patrons; aesthetic attitudes; relationship between cultures in holy war, crusade, and pilgrimage. (Formerly course 129.) (General Education Code(s): IM, A.) The Staff

135. History of Art and Visual Culture in Europe.

The Staff

135B. German Art, 1905–1945. *

Expressionism, agitprop, the Bauhaus, New Objectivity, attacks on modernism, National Socialist realism. Painting, sculpture, graphic art, and some architecture and film, studied in the context of political events from the eve of World War I to the end of World War II. (Formerly course 136.) (General Education Code(s): IM, A.) D. Hunter

135D. French Painting, 1780–1855. *

The art of David, Gros, Ingres, Gericault, Delacroix, the Barbizon School, and Courbet studied in relation to the changing status of the art and the political events from 1789 to 1848. (General Education Code(s): IM, A.) D. Hunter

135E. Jewish Identity and Visual Representation. *

An exploration of the theoretical and practical or experiential applications of Jewish identity in European visual representation. Brief background on pre-emancipation textual and cultural issues followed by study of the Jewish subject and Jewish subjectivities in modernity. (Formerly course 172.) Enrollment restricted to juniors and seniors. (General Education Code(s): IM, A, E.) The Staff

135F. History of the Book. *

History of book production and use in the West from antiquity to modern times. Development from roll to codex and from script to print. Emphasis on the relationship between text and image. Class conducted in Special Collections, McHenry. Exhibition as class project. (Formerly course 153.) (General Education Code(s): A.) E. Remak-Honnef

135H. Topics in European and Euro-American Visual Culture. *

Consideration of how and why Europeans in Europe and Europeans and European-Americans in North America blended nature and human response between 1600 and the present in a variety of media and practices (painting, maps, photography, tourism, film, scouting, artist colonies). May be repeated for credit. (General Education Code(s): IM.) D. Hunter

135P. Paris, "Capital of the 19th Century". *

Examines the places, spaces, practices, and representations of Paris in the 19th century. Tracing the changing face(s) of Paris by way of its literary and visual representations, students consider the experiences and constructions of the modern city. (General Education Code(s): IM.) The Staff

137. Renaissance.

The Staff

137A. Northern Renaissance Art. *

Considers the painting and prints produced in Northern Europe in the 15th and 16th centuries. Major issues include the status of realism and classicism, the role of religion and religious reform, and the rise of popular imagery. (Formerly course 105R.) (General Education Code(s): A.) The Staff

137B. Italian Renaissance: Art and Architecture. *

Lives of Italian Renaissance people from birth to death, examining the nature and roles of the institutions which defined human existence in this period. Uses visual arts both illustratively and to study how institutions fashioned their images through art and architecture. (Formerly "Italian Renaissance: Representation and Institutions.") (General Education Code(s): IM, A.) A. Langdale

137C. High Renaissance. *

An investigation of the High Renaissance as a period and stylistic concept, using the major artists and monuments of the period 1480–1525 to discuss issues of theory, history, and art. Artists considered include Leonardo da Vinci, Michelangelo, and Raphael. (Formerly course 168.) (General Education Code(s): IM, A.) The Staff

137D. Art of the Venetian Renaissance. W

Considers Venetian art in the 15th and 16th centuries. Topics include major artists (the Bellini, Carpaccio, Titian, Tintoretto, Veronese, Palladio) and the relationship of the city to outside forces (Byzantine Empire, Turkish Empires) and other Italian cities. (Formerly course 189V.) (General Education Code(s): IM, A.) A. Langdale

137E. Renaissance Prints. *

Examines the issues surrounding the technology and uses of printed images from the early Renaissance through the end of the early modern period. Topics may include the political, religious, and satirical uses of prints and the representation of women in prints. (General Education Code(s): IM, A.) The Staff

140. History of Art and Visual Culture in the U.S..

The Staff

140A. America in Art. *

Introduction to American visual arts: architecture, painting, photography, sculpture, and performance art, from the nineteenth through the twenty-first century. Explore social and political meanings of art and what art reveals about our nation's values and beliefs, in particular, gender and race. (Formerly course 126.) (General Education Code(s): IM, A.) M. Berger

140B. Victorian America. F

Examines how American writers and artists negotiated complexities of U.S. society during the 19th century. Emphasis on issues ranging from women's rights to laissez-faire capitalism, and from Reconstruction to manifest destiny. Considers how the era's cultural products provided artists, patrons, and audiences with metaphorical coping strategies to counteract what Victorians perceived to be the period's overwhelming social and political changes. (Formerly course 178A.) (General Education Code(s): ER, A.) M. Berger, The Staff

140C. Race and American Visual Arts. *

Investigation of the role played by visual arts in fashioning the racial identities of European-Americans, African Americans, Asian Americans, Native Americans, and Latinos in the United States. (General Education Code(s): ER, A, E.) M. Berger

140D. Chicano/Chicana Art: 1970–Present. *

Taking the terms "Chicano" and "Chicana" as a critical framework, addresses cultural and conceptual themes in visual art production since 1970. Questions concerning aesthetics, identity, gender, and activism in painting, photography, murals, and installation art explored. (Formerly course 182.) (General Education Code(s): ER, A, E.) J. Gonzalez

140P. Pop Culture as High Art. *

Examines how Pop Art and popular culture in the Untied States were (re)formulated into public icons that challenged the visual and ideological associations between "high" and "low" art. (Formerly Pop and Popular Culture.) (General Education Code(s): IM.) The Staff

141. Modern Art and Visual Culture in Europe and the Americas.

The Staff

141A. Modern Art: Realism to Cubism. F

Modern art in Europe and America, 1848–1914. Consideration of painting, graphic arts, and sculpture in Realism, Impressionism, Post-Impressionism (Symbolism) Art Nouveau, Fauvism, and Cubism as well as exploration of photography's changing status and influence. (General Education Code(s): IM, A.) D. Hunter, The Staff

141B. Modern Art: Cubism to Pop. W

From Paris to New York, cubism to conceptual art, an introduction to visual arts and theories of representation produced in the U.S. and Western Europe between 1910 and the 1960s, with attention to the social and political role of the art market, criticism, and censorship. Students cannot receive credit for this course and Digital Arts New Media 241B. (General Education Code(s): IM, A.) J. Gonzalez

141C. Modern Art: Pop to Present. S

Surveys major art forms and critical ideas that have shaped artistic practice from the 1950s to the present, including an overview of the socio-political, economic, and cultural forces that inspire artists to articulate human experience in visual form. (General Education Code(s): IM.) D. Murray, The Staff

141E. Histories of Photography. *

Introduction to the histories of photography and the critical debates around different photographic genres such as medical photography, art photography, and political photography. Students will develop a critical language in order to analyze photographs while considering the importance of social and institutional contexts. (Formerly course

149A.) (General Education Code(s): IM, A.) J. Gonzalez, The Staff

141F. The Camera and the Body. *

Through the study of historical and contemporary visual texts (from ethnography and portraiture to advertising and erotica), this course explores how photographic images of the body, while masquerading as "natural," "self-evident," or "scientific," participate in highly coded sign systems that influence who looks at whom, how, when, and why.

(Formerly course 180.) (General Education Code(s): IM, A.) J. Gonzalez

141H. Media History and Theory. *

An introductory examination of the writing about the issue of "medium" and media theory in visual culture. Technologies, discourses, and practices from all periods that use the comparison of media as a major approach to understanding the problems of the visual are highlighted. New media, film, television, video, traditional arts are also treated. (Formerly course 131.) (General Education Code(s): IM, A.) The Staff

141I. Environments, Installations, and Sites. *

A study of conceptual and formal issues that have informed the production of temporary, site-specific art works since 1960. Works that seek to transform the role of the audience, to escape or remake museum and gallery spaces, to introduce environmental concerns, or to situate art in "the land" or in "the street" serve as a focus. (Formerly course 181.)

Enrollment limited to 35. (General Education Code(s): IM, A.) J. Gonzalez

141J. Critical Issues in Contemporary Art and Visual Culture. W

Considers the relationship between art, cinema, and postmodernism. Specific, thematically oriented topics are considered including: the impact of cinema aesthetics on contemporary art; film and digital technology; cinematic structure as cultural critique; and filmic strategies as an ideological tool. (General Education Code(s): IM.) D. Murray

141K. Activist Art Since 1960: Art, Technology, Activism. *

Students explore art and technology produced for social change since 1960 within the context of major historical ruptures, such as the Vietnam War, the women's movement, environmental protection, AIDS activism, anti-capitalist, and international human rights movements. (Formerly course 141C.) (General Education Code(s): IM, A, E.) The Staff

143. Architecture.

The Staff

143A. Contemporary Architecture and Critical Debates. *

Examination of practitioners, projects, issues, and theories in contemporary architecture circa 1968 to the present. Topics include the architecture of aftermath, the ethics of memory and memorialization, the corporatization of museums, the role of criticism and exhibitions, and the cult of the brand-name architect. (Formerly course 124.) (General Education Code(s): IM, A.) The Staff

143B. History of Urban Design. *

Examines urban design from the Renaissance to the present, including Latin American colonial cities, Utopian plans, and sites such as Brasilia and Chandigarh. The course focuses on social justice, diversity, and the role of art and architecture. Enrollment restricted to juniors and seniors. (General Education Code(s): IM.) The Staff

143C. Latin American Modern Architecture. *

Presents Latin America's modern architecture with relation to colonization; the influence of immigrants from Europe, Africa, and Asia; the presence of indigenous cultures; and the search for autonomy. Case studies include Argentina, Brazil, Chile, Mexico, Venezuela, and Uruguay. (General Education Code(s): CC, A, E.) The Staff

143D. Architecture and the City in Modern and Contemporary Visual Culture. *

Examines the modern and contemporary depictions of cities in visual and material culture, from paintings and photographs to logotypes and souvenirs. Also examines the roles of narrative in spatial representations, including literature, film, and television productions. Enrollment restricted to juniors and seniors. (General Education Code(s): IM.) The Staff

143F. Constructing Memory and Place in Postwar Architecture. *

How have architects engaged memory and place in architectural projects and built landscapes since World War II? Examines memorializing, memory, and erasure of place in

reconstruction of cities, creation of memorials, and design of buildings. (Formerly course 174C.) Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 35. (General Education Code(s): A.) The Staff

151. Greek Myths Antiquity to the Present. *

Myths dominated the culture and visual production of the ancient Greek world, and their presence is still strong today. How did they codify social, political, and religious realities and needs? How were they perceived in different time periods? In addition to ancient Greek and Roman and later European sculptures and paintings, this course considers less conventional sources, such as modern films, comics, and advertisements. Course 51 recommended as preparation.. (Formerly course 106I, Myth in Greek and Roman Art.)

(General Education Code(s): IM, A.) M. Evangelatou

154. Byzantine Visual Culture: Politics and Religion in the Empire of Constantinople, 330–1453 A. C. W

Centered on the capital city of Constantinople (modern Istanbul), the Hellenized and Christianized Roman Empire of the Eastern Mediterranean today known as Byzantium played a major, yet often overlooked, role in European history for more than a millennium. This course examines its visual production and relation to politics and religion in court and church ceremonial, expressions of Christian faith, and cultural interactions with Western Europe, Islam, and the Slavic world. (Formerly course 104A, Byzantine Visual Culture: Politics and Religion in New Rome, 300–1453 A. D.) (General Education Code(s): IM, A.) M. Evangelatou

155. Constructing Cleopatra: Power, Sexuality, and Femininity Across the Ages. S

The construction of female identity and the "production" of history through the myth of Cleopatra. Critical analysis of archeological data and ancient sources, later sculptures and paintings, and contemporary films, movies posters, Internet sites, advertisements, comics, games, dolls, and household objects. (General Education Code(s): IM.) M. Evangelatou

160. Topics in Pre-Hispanic Visual Culture.

The Staff

160A. Pre-Hispanic Visual Culture: Mexico. W

Art and architecture of selected pre-Hispanic cultures from the gulf coast, central, western, and southern Mexico including the Olmec, Zapotec, Toltec, Mixtec, Mexica (Aztec), and others. (General Education Code(s): CC, A.) C. Dean, The Staff

160B. Pre-Hispanic Visual Culture: The Andes. *

The art of selected pre-hispanic cultures of Colombia, Ecuador, Peru, and Bolivia including the Nazca, Moche, Chimú, and Inca. (Formerly Pre-Hispanic Andes.) (General Education Code(s): IM, A.) C. Dean

162. Advanced Studies in Pre-Hispanic Visual Culture.

The Staff

162A. The Maya. *

The art and architecture of the Maya of southern Mesoamerica from the first century C.E. to ca. 1500. Courses 80, 60, or 160A recommended as preparation. (Formerly course 150A) (General Education Code(s): CC, A.) C. Dean

162B. The Inka. *

The visual culture of the Inka of the Andean region of western South America including textiles, metalwork, and the built environment. Courses 80 (formerly 10E) or 60 (formerly 80M) recommended as preparation. (General Education Code(s): CC.) C. Dean

163. The Native in Colonial Spanish America. *

Indigenous contributions to colonial Spanish American visual culture including architecture, manuscripts, sculpture, painting, textiles, feather-work, and metallurgy. Focus on colonial Mexico, the Andes, and California. (Formerly course 151A.) (General Education Code(s): ER.) C. Dean

170. Art of the Body in Oceania. S

Explores "art of the body," defined broadly, from various perspectives. Examines colonial representations of Oceanic bodies, self-representation through bodily adornment and display (including tattoo, scarification, body painting, ornament, and dress), and bodily

metaphors in Oceanic visual cultures. (General Education Code(s): ER, A, E.) S. Kamehiro

172. Textile Traditions of Oceania. *

Investigates how textiles contribute to cultural fabric of Oceania. Explores women's roles in socioeconomic exchanges and cultural production; gender issues regarding production and function of Oceanic textiles; and history of processes, functions, and aesthetics.

Prerequisite: Prior coursework related to Oceania recommended. (Formerly course 187A.) (General Education Code(s): CC, A, E.) S. Kamehiro

179. Topics in Oceanic Visual Culture. F

Examines selected and changing topics in the study of oceanic visual culture. The specific topic varies with each offering in order to keep up with recent directions in scholarship. Possible topics include: archaeological material and visual cultures; colonial-era images, objects, and spaces; architecture and environments; performance; gender; race and ethnicity; modern/contemporary art and visual culture; and/or a regional focus. May be repeated for credit. (General Education Code(s): CC.) S. Kamehiro, The Staff

180A. Global Contemporary Art. F

Examines selected and changing topics in the study of contemporary art in a globalized world but outside of Europe and Euro-America where contemporary arts forms move across discrete geographical areas along newly developing networks. The specific topic varies with each offering to keep up with recent directions in scholarship. May be repeated for credit. (General Education Code(s): CC.) The Staff

190. Seminars in the History of Art and Visual Culture.

The Staff

190A. African Art and Visual Culture. *

Advanced seminar requiring intensive research and writing on changing topics related to a specific area of African art and/or visual culture chosen to demonstrate critical mastery of this subject. (Formerly course 191O.) Prerequisite(s): courses 100A, and 80 or 10.

Enrollment restricted to history of art and visual culture majors or minors or by permission of instructor. May be repeated for credit. (General Education Code(s): A, E.) E. Cameron

190B. Play and Ritual in Visual Cultures. *

Compares how play and ritual construct worlds and regulate visual cultures—from dolls to "ritual" objects and performances. Attention given to areas where play and ritual overlap and the visual cultures that result. (Formerly course 191F.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A, E.) E. Cameron

190C. The Mediterranean from the Rise of Christianity to the Rise of Islam. *

Examines the visual culture of the Mediterranean from the 3rd to the 7th centuries A.D., focusing on the historical and cultural developments which led to the survival of the Eastern Roman Empire and its transformation to what we call Byzantium. (Formerly course 153.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): IM, A.) M. Evangelatou

190D. The World of the Lotus Sutra. *

Close study of the principal text of East Asian Buddhism as a self-enclosed vision of reality, with careful consideration of the forms and functions of the world of visual and aural representation that it has inspired. Prerequisite(s): course 100A and 127A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) R. Birnbaum

190E. Huayan Visions. *

Explores the distinctive conceptual world of the Buddhist Huayanjing (Avatamsaka-sutra) and its expression in visual forms. This long text, composed in Sanskrit and later translated into Chinese, is a principal scripture of the international Mahayana Buddhist traditions of Asia. (Formerly course 190I.) Prerequisite(s): course 100A; course 127A. An upper-division course in Buddhist studies is recommended. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) R. Birnbaum

190F. Chan Texts and Images. *

Examines selected issues in history of Chan (Zen) Buddhist traditions in China from medieval times to the present day. Concepts, methods, and visual expression of Chan practice situated through study of texts and visual materials. (Formerly course 191H.) Prerequisite(s): course 100A, and course 127A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) R. Birnbaum

190G. Buddhist Wisdom Traditions. *

Careful study of Mahayana Buddhist perfection-of-wisdom traditions--texts and related material culture, including visual imagery and illustrated books--with focus on the particular vision of reality that they aim to produce or reveal. (Formerly course 191Z.) Prerequisite(s): courses 100A and 127A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) R. Birnbaum

190J. Visual Cultures of the Vietnam-American War. S

Examines the visual culture of the Vietnam-American war and its legacy in contemporary art of Southeast Asia. Considers representations in different media: painting, drawing, photography, film, novels, and material cultures. Issues addressed include memory, trauma, identity politics, body, race, gender, pornography, and prostitution. (Formerly course 191A.) Prerequisite(s): course 100A or permission of the instructor. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor . (General Education Code(s): ER, A, E.) B. Ly

190K. Thematic Approach to Visual Cultures of Southeast Asia. *

Undergraduate seminar that takes topical and thematic approach to looking at ancient or modern and contemporary arts of Southeast Asia (e.g., textile, water in arts and architecture, comparative modernity, race, gender, and sexuality). The specific topic and theme varies from year to year. Prerequisite(s): course 100A, or by permission of instructor. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. Enrollment limited to 18. B. Ly

190M. Representations of Women in Indian Art. *

Deals with representations of the female divinity in Indian religious imagery, and of women in secular and courtly paintings. Also examines roles women play in the production of art in the Indian subcontinent. (Formerly course 190U.) Prerequisite(s): course 100A. Enrollment restricted to junior and senior history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A, E.) K. Thangavelu

190O. Berlin: History and the Built Environment. *

Explores Berlin's urban and architectural history through themes: the meaning of memory in architecture; the political and cultural implications of preservation, globalization, and tourism. Because these questions are relevant beyond Berlin, course draws comparisons with other cities. Prerequisite(s): course 100A. Enrollment restricted to junior and senior history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) The Staff

190P. Death and Patriotism: The Case of the French Revolution. *

What are the relations between the mortal body and politics in times of crisis? What purposes can death, or the threat of death, serve? Examines representations of executions, assassinations, and funerals during the French Revolution, with an emphasis on the Terror. Prerequisite(s): course 100A. Enrollment restricted to junior and senior history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) D. Hunter

190Q. Portraiture: Europe and America, 1400–1990. *

Western portraiture and self-portraiture at certain key moments (early modern Italy, 16th-century Germany, 17th-century Holland, France from the reign of Louis XIV to the Revolution, contemporary U.S.) are explored by reading 20th-century interpretations and some primary sources. This course can be taken for senior exit credit only by permission of the instructor. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) D. Hunter

190S. New Directions in Contemporary Art. *

Explores how critical theory illuminates forms of cultural production, from art and cinema to popular culture. Considers how scholars, artists, and filmmakers use critical theory both creatively and in the study of aesthetic objects and experiences. (Formerly Critical Issues in Contemporary Art and Visual Culture.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. D. Murray

190T. Topics in Pre- and Post-Columbian Visual Culture. W
 Seminar on changing topics related to the current scholarship on pre-Hispanic and colonial Spanish American visual culture. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors or by permission of instructor. May be repeated for credit. The Staff

190U. Word and Image in Illuminated Byzantine Manuscripts. *

Religious, scientific, and secular manuscripts of Byzantium: examines how words and images interacted to express and promote central concepts of Byzantine culture; serve liturgical needs of private devotion; reflect imperial ideals; diffuse moral values and knowledge; and proclaim social status and cultural affiliations. (Formerly course 190R.) Prerequisite(s): course 100A, and course 154 or permission of instructor. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) M. Evangelatou

190V. Cult of Mary in Byzantium. *

Why did the cult of the Virgin Mary become so important in Byzantine culture? Examines historical, cultural, theological, political, and social reasons for this development, seen through the interaction of Byzantine visual culture and literature. (Formerly course 191X.) Prerequisite(s): courses 100A and 154. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) M. Evangelatou

190W. Art and Culture Contact in Oceania. *

Examines impact of culture contact on Oceanic and Euro-American visual cultures in context of "discovery," colonialism, and "postcolonialism." Topics include 18th-century visual culture, colonial identities, primitivism, syncretism, impact of Christianity, contemporary art/market, media, tourism, transnationalism, and globalization. (Formerly course 190O.) Prerequisite(s): course 100A; prior course work related to Oceania recommended. Enrollment restricted to history of art and visual culture majors and minors, or by permission of instructor. (General Education Code(s): A, E.) S. Kamehiro

190X. Art and Identity in Oceania. S

Theoretical discussions and Pacific Basin case studies on 1) definitions of cultural, ethnic, and national identities; 2) relationship between art, museums, and construction of historical and cultural narratives; 3) ways "tradition" defined in art practices and used by groups to assert an identity in their present. Participants first develop a theoretical framework and vocabulary for analyzing artistic production in a variety of cultures. Through specific case studies, will explore how art, architecture, and museums actively contribute to define and challenge ethnic and national identities. (Formerly course 191P, Art and Identity in the Pacific: Creating and Challenging Ethnic and National Identities.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors, or by permission of instructor. (General Education Code(s): ER, A, E.) S. Kamehiro, The Staff

191. Seminars in the History of Art and Visual Culture.

The Staff

191A. Iconoclasm. *

What happens when, to control an object, it is destroyed? Examines destruction of art as a way of ending the object's life cycle, as a device of social tension/change, and as a colonial and post-colonial mechanism of religious/political control. (Formerly course 191C.) Prerequisite(s): course 100A; and course 80 or permission of instructor. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A, E.) E. Cameron

191B. The Virgin of Guadalupe: Images and Symbolism in Spain, Mexico, and the U.S. *

Focus on the histories of miraculous images of La Virgen de Guadalupe de Extremadura

(Spain) and La Virgen de Guadalupe de Tepeyac (Mexico). The foundations and growth of the cult of the Mexican Guadalupe during the colonial period is examined along with the multivalent symbolism of her image. Considers contemporary "appearances" of the Virgin of Guadalupe, from the miraculous images on a tree in central California and the compositions of Chicano artists, to mass-produced kitsch. (Formerly course 190B.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A, E.) C. Dean, The Staff

191C. Subalternatives: Representing Others. *

Explores how visual representation (in fine art, popular art, film, and television) encodes difference in selected cultural and historical contexts. Considers (post)colonial image-making both as a strategy of domination as well as resistance. (Formerly course 190C.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): ER, A, E.) C. Dean

191D. Semiotics and Visual Culture. *

How can visual culture be understood as the production, circulation, and recirculation of signs? This course offers a history of semiotics and its methodological application in the analysis of images in popular culture and within the discipline of art history. (Formerly course 190S.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) J. Gonzalez

191E. Feminist Theory and Art Production. *

A close reading of works of art and theoretical texts by feminists working from 1970 to the present. The course encourages debate around the past, present, and future relevance of feminist theories to visual cultural studies, paying particular attention to issues of cultural and ethnic difference. (Formerly course 190T.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. Enrollment limited to 18. (General Education Code(s): A.) J. Gonzalez

191F. Image and Gender. F

Examines what visual representations (feminine and masculine) reveal of gender in 19th- and 20th-century European and American culture; how images reflect norms of gender; and how we are conditioned to read images in gendered terms. Explores how femininity and masculinity were conceived during historical periods and how gender ideals changed in response to social, political, and economic pressures. Students encouraged to consider the fluid nature of 21st-century notions of ideal femininity and masculinity and possible alternatives. (Formerly course 190Y.) Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. (General Education Code(s): A.) M. Berger, The Staff

191G. Art, Cinema, and the Postmodern. F

Explores how theory can illuminate various forms of cultural production from art and cinema to popular and material cultures. Considers how scholars and visual producers utilize theory creatively and in the study of aesthetic objects and experiences. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. D. Murray

191H. History and Theories of Architectural Preservation. *

Examines the meanings of architectural preservation with relation to memory, identity, tourism, gentrification, and urban disasters. Combines the study of theories and concepts of preservation with examples of buildings and urban sites from the whole world. Prerequisite(s): course 100A; and one of the following or permission of instructor: course 43, 143B, 143C, or 143D. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. The Staff

191I. Topics in Architecture and Urban History. *

Focuses on selected topics in the history of art and visual culture. Topics vary depending on instructor. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. May be repeated for credit. The Staff

191M. Museum Exhibitions. *

Students create and install an exhibition. Students take the roles of museum departments, moving the project from concept to installation. The impact exhibitions make in culture and society is examined throughout each step of the process. Prerequisite(s): courses 100A and 141M. Enrollment restricted to History of Art and Visual Culture majors and minors.

Enrollment by instructor permission. E. Cameron

191N. Topics in Renaissance Art and Visual Culture. *

Seminar on changing topics related to the current scholarship on the art and visual culture of the Renaissance. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. May be repeated for credit. The Staff

191O. Seminar Topics in Oceanic Visual Culture. *

Seminar on current scholarship on Oceanic visual culture. Topics include pre-colonial, colonial, and post-colonial visualities; place and the built environment; performance; race; gender; travel and tourism; cultural institutions. Enrollment restricted to history of art and visual culture majors and minors. (General Education Code(s): CC.) S. Kamehiro

191P. Topics in Contemporary Art. *

Addresses changing topics in contemporary art. The specific topic varies with each offering to keep up with new directions in scholarship. Prerequisite(s): course 100A. Enrollment restricted to history of art and visual culture majors and minors or by permission of instructor. May be repeated for credit. (General Education Code(s): IM.) The Staff

195. Senior Thesis. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

Independent field study away from the campus. Students submit petition to sponsoring agency. The Staff

198F. Independent Field Study (2 credits). F,W,S

Independent field study away from the campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

201. Introduction to Visual Studies. F

Introduces the visual studies discipline and the History of Art and Visual Culture Department, providing students with an overview of the field's development, its issues of central concern, and its dominant research methods. Features intensive readings, student-led discussions, and exposure to some of the primary texts instrumental in the development of the field. Required seminar for all first-year visual studies graduate students. Enrollment restricted to graduate students. J. Gonzalez

202. Theories of the Visual. W

Offers detailed theoretical readings to familiarize students with the methodological frameworks and debates that laid the groundwork for the field as well as those that have proven productive for practitioners of visual studies. (Formerly Critical Theory.) Enrollment restricted to graduate students. E. Cameron

203. Theories and Histories of Seeing. S

Provides an in-depth case study of the visual practices and culture of a specific society. Builds on the foundation established by courses 201 and 202, offering sustained application of the general methods and theories to which students were previously introduced. The society under consideration rotates each year depending on the research interest of the faculty member teaching the course in any given spring. Prerequisite(s):

- courses 201 and 202. Enrollment restricted to graduate students. May be repeated for credit. D. Hunter
204. Grant Writing (2 credits). *
Devoted entirely to writing grant proposals. Students work on grants for educational support, their doctoral dissertation grants, or both. (Also offered as Film and Digital Media 204. Students cannot receive credit for both courses.) Enrollment restricted to visual studies and film and digital media graduate students. Enrollment limited to 15. May be repeated for credit. The Staff
212. Yoruba Visualities and Aesthetics. *
Yoruba conceptions of visuality are explored and compared to seeing through Western eyes. Critical reading focuses on Western and Yoruba scholars' work on visualities and complementary theoretical writings on Yoruba aesthetics and philosophy. Enrollment restricted to graduate students. E. Cameron
213. Theories and Visual Cultures of Iconoclasm. *
Examines theories that attempt to explain iconoclasm, the willful destruction of religious or political objects, by applying the theory to various case studies. The universal aspect of iconoclasm and the differences in understanding and practice are explored. Enrollment restricted to graduate students. E. Cameron
220. Topics in Asian Visual Studies. *
Examines selected and changing topics in the visual studies of Asia. The specific topic varies with each offering to keep up with recent directions in scholarship. Enrollment restricted to graduate students. May be repeated for credit. B. Ly
222. The Image of Arhat in China. *
Indian Buddhist sage-monks (arhats) are portrayed in China in ways that represent a remarkable variety of visual/historical/practice traditions. This seminar examines these depictions and explores the ranges of means and functions attached to this theme. Enrollment restricted to graduate students. R. Birnbaum
224. Engaged Buddhism and Visual Culture. *
Begins with an analysis of photography and films capturing the Gandhian and Dalit movement in India. Students then read key Buddhist texts on engaged Buddhism, and look at the rise of engaged Buddhism in Southeast Asia in the 1960s and how it impacted modern and contemporary art in Southeast Asia and its diaspora. Enrollment restricted to graduate students. B. Ly
232. The Monument Since 1750 in Relation to Nationhood and the Experience of War. *
Investigates modern monuments (1750 to present) and the creation or maintenance of a nation, especially in terms of war and its immediate aftermath. Destruction or alteration of monuments and production of anti- or counter-monuments are also examined. Enrollment restricted to graduate students. D. Hunter
233. Topics in Contemporary Art and Visual Culture. *
Examines selected and changing topics in the contemporary art and visual culture. The specific topic varies with each offering to keep up with recent directions in scholarship. Enrollment restricted to graduate students. May be repeated for credit. The Staff
235. Photography and History. *
Investigates the complex relationship between photography and history. Considers the evolving perceptions of photography's capacity to capture reality, the discursive means by which photographic "truths" are produced, and the utility of photographs as primary evidence. Enrollment restricted to graduate students. The Staff
240. Seeing Race. *
Investigates how discursive systems racialized the sight of various racial and ethnic groups in 19th- and 20th-century U.S. society. Focuses on the construction and maintenance of racial values systems and on the historically specific ways in which an eclectic assortment of visual artifacts have been read by groups over time. Considers the visual and material implications of race-based sight. Enrollment restricted to graduate students. M. Berger
243. Alternative Architecture. *
Focuses on what is commonly left out of architectural history: the ephemeral, informal,

illegal, and uncertain. Topics include: anonymous and collective architecture; temporary interventions; everyday urbanism; and vestigial urban spaces. These topics are understood through theories of space as socially produced (Henri Lefebvre, Michel de Certeau, among others), and through cultural movements and manifestoes (Situationist International, Aesthetics of Hunger, etc.) Enrollment restricted to graduate students. The Staff

245. Race and Representation. *

Explores how human subjects come to be visually defined and marked by "race" discourse. Covers diverse theoretical literatures on the topic, primarily in visual studies, but also in cultural studies, post-colonial studies, and psychoanalysis. (Also offered as Feminist Studies 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. J. Gonzalez

250. The Cult of Mary in Byzantium: Visualities of Political, Religious, and Gender Constructs. W

Through the study of the Byzantine cult of Mary, we examine diverse modalities in the construction and interaction of political, religious, and gender values, and we investigate the interrelated role of images, rituals, and text in human experience, expression, and communication. (Formerly The Cult of Mary in Byzantium.) Enrollment restricted to graduate students. M. Evangelatou

260. Visual Literacy in Spanish America, 1500–1800. *

Visual literacy is considered as a particular predicament of colonial societies. Students consider the legibility of artifacts in colonial Spanish American contexts given its culturally diverse audiences and examine specific instances of (mis)interpreted images and transcultured representations. Enrollment restricted to graduate students. C. Dean

270. Colonial Cultures of Collecting and Display. *

Examines collections and exhibitions of colonized people, places, and objects through primary sources, theoretical texts, and analytical case studies (with some emphasis on Oceania). Focuses on visual discourses of race, science, religious conversion, colonial settlement, nation-building, education, and entertainment. Enrollment restricted to graduate students. S. Kamehiro

280. Visual Studies Issues. S

Examines selected and changing issues in visual studies. The specific issue varies with each offering to keep pace with recent directions in scholarship. Enrollment restricted to graduate students. May be repeated for credit. C. Dean

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to course-sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent study or research for graduate students. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study (2 credits). F,W,S

Students submit petition to course-sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to course sponsoring agency. Enrollment restricted to graduate students. The Staff

* Not offered in 2014–15

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Lower-Division Courses

12. Historical Introduction to Philosophy. *

Focuses on moral, metaphysical, and epistemological issues using classical texts along with some contemporary readings on related philosophical problems. Plato, Kant, and Sartre provide the central readings on ethics, while Descartes, Hume, Kant (again), and Wittgenstein provide the central metaphysical and epistemological discussions. Issues of philosophy of language and method are highlighted throughout. (General Education Code(s): TA, IH.) J. Neu

80U. Modernity and Its Discontents. W

Offers an introduction to the idea of modernity from Kant to Freud, Nietzsche to Fanon. (General Education Code(s): T4–Humanities and Arts.) D. Marriott

85. Politics and Religion. F

Considers both the religious sources of political ideas and the political sources of religious ideas, addressing topics, such as sovereignty, justice, love, reason, revelation, sacrifice, victimhood, evil, racism, rebellion, reconciliation, and human rights. (Formerly course 114.) R. Meister

Upper-Division Courses

102. Philosophy and Poetics. *

Introduction to the relationship between philosophy and poetics in some major 19th- and 20th-century poets and thinkers. Enrollment restricted to juniors and seniors. Enrollment limited to 30. D. Marriott

111. States, War, Capitalism. *

Survey of seminal work on ancient origins of the state, diverse geo-political systems of war and diplomacy, and consequences of the formation of the world market on the evolution of geo-political systems up to and beyond the wars of today. Enrollment restricted to juniors and seniors. Enrollment limited to 35. G. Balakrishnan

112. Foundations in Critical Theory. *

Concentrates on the Marxist tradition of critical theory, centering on classical texts by Marx and by writers in the Marxist tradition up to the present. Enrollment limited to 150. (General Education Code(s): TA.) G. Balakrishnan

115. Comedy and the Question of the Comic. S

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
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■ Jewish Studies
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■ Latin American and Latino Studies
■ Legal Studies
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■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Introduces the concept of the comic; how the concept of the comic has been theorized at times, from antiquity to the 20th century; forms the comic has taken and how it structures our experiences; and theories of the comic. (General Education Code(s): TA.) M. Holohan

118. Jewish Social Movements. *

Jewish social movements of the late 19th and 20th centuries, in Europe (Eastern and Western) and the U.S.: the confrontation between Hasidism and Haskalah, tensions between socialism and Zionism, between religiosity and secularism, the mutual influences among these tendencies. (Also offered as History 185D. Students cannot receive credit for both courses.) Enrollment restricted to juniors and seniors. Enrollment limited to 20. (General Education Code(s): E.) The Staff

119. Politics of Recognition. *

Course touches on the philosophical roots of Hegel's text, starting from the pre-World War II rereading of Hegel's master/slave dialectic that became the kernel of postwar thought arising from struggles over capitalism, communism, fascism, racism, colonialism, and feminism. R. Meister

125. Queerness and Race. *

Gives students a grasp of different definitions and uses of the concept queerness in its relationship to race and how it's tied to the politics of lesbian, gay, bisexual, and transgender (LGBT) identity. Enrollment limited to 25. The Staff

139A. Market Crises and the Future of Capitalism. F

Examines the development and role of late 20th- and early 21st-century financial technologies in modern market crises. Enrollment limited to 40. The Staff

139B. Materialism and Financial Markets. S

Continuation of course 139A. Examines the development and role of late 20th- and early 21st-century financial technologies in modern market crises. Enrollment limited to 40. The Staff

146. Philosophy of Law. *

Exploration of selected problems in jurisprudence: "legal reasoning" and social policy, rules and individual cases, the mental element in the law, punishment and responsibility, causation and fault, liberty and paternalism, etc. (Formerly Philosophy 146.) (Also offered as Legal Studies 146. Students cannot receive credit for both courses.) J. Neu

180. The Emotions. *

Analysis of particular emotions (e.g., jealousy, boredom, regret) and exploration of general theoretical issues (e.g., expression, control) with emphasis on moral psychology. Admission by interview with instructor. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 23. J. Neu

185A. Special Topics: Modern Political-Economic Thought and the European Enlightenment. F

Examines the European Enlightenment alongside contemporary and 20th-Century scholarship that is concerned with reading texts as indices of the development of the "modern world" as a new political-economic landscape distinguished by the emergence of "civil society" as an imaginary political community of formally equal individuals under law. (General Education Code(s): TA.) P. Madden

190A. Jewish Socialism in Eastern Europe, 1880-1953. *

Looks at the ongoing debate in Jewish resistance during the Second World War and ends by addressing the status of Jews and Jewish movements in the Soviet Union and Poland after the war. (Also offered as Jewish Studies 190A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 25. B. Epstein

199. Tutorial. F,W,S

A program of individual study arranged between an undergraduate student and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

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Teaching and Administrative Staff[Appendices](#)[Archive of General Catalogs](#)[Nondiscrimination Statement](#)[Search the Catalog](#)**203A. Approaches to History of Consciousness. F**

An introduction to history of consciousness required of all incoming students. The seminar concentrates on theory, methods, and research techniques. Major interpretive approaches drawn from cultural and political analysis are discussed in their application to specific problems in the history of consciousness. Prerequisite(s): first-year standing in the program. See the department office for more information. (Formerly course 203.) G. Balakrishnan

203B. Approaches to History of Consciousness. S

Writing-intensive course based on readings in course 203A. Prerequisite(s): course 203A. Enrollment restricted to graduate students. Enrollment limited to 9. The Staff

210A. Cultural and Historical Studies of Race and Ethnicity. *

Explores the historical construction of racial and ethnic categories in the Americas, especially the U.S., in interaction with gender, sexuality, class, and nationality. Intended to introduce current work by UCSC faculty and Bay Area scholars and to stimulate graduate student research projects, the course is organized by intensive reading around key questions, followed by presentations by invited scholars. Emphasizes research resources and methodologies. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

210B. Cultural and Historical Studies of Race and Ethnicity. *

Writing intensive course based on readings in course 210A. Prerequisite(s): course 210A. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

211A. French Hegel. F

Introduces the "return to Hegel" in the work of some major 20th-century French thinkers. Enrollment restricted to graduate students. Enrollment limited to 15. D. Marriott

216. Critical Race/Ethnic Studies. *

Explores foundational and emergent theoretical and methodological approaches to the study of race. Issues examined include the production of race within and across various spheres of human activity and how race has shaped notions of difference and commonality in the past and present. Enrollment restricted to graduate students. Enrollment limited to 15. E. Porter

222B. Theories of Late Capitalism. *

Writing intensive course based on readings in course 222A. (Formerly Theories of Late Capitalism, Nationalism, and the Politics of Identity.) Prerequisite(s): course 222A. Enrollment restricted to graduate students. Enrollment limited to 15. B. Epstein

230A. Poetry, Language, Thought. W

Introduces the relation between philosophy and poetics in some major 20th-century poets and thinkers. Enrollment restricted to graduate students. Enrollment limited to 15. D. Marriott

230B. Poetry, Language, Thought. F

Writing-intensive course based on readings in course 230A. Prerequisite(s): course 230A, or permission of instructor. Enrollment limited to 15. D. Marriott

236. On Insults. *

What is the role of insult in social and legal life (from play to jokes to ritual to war and from blasphemy to defamation to hate speech)? Emphasizes philosophical, anthropological, psychoanalytic, and legal approaches to the issues. Enrollment restricted to graduate students and by permission of instructor. (Formerly Philosophy 290Y.) (Also offered as Anthropology 236. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. J. Neu

237A. Historical Materialism. F

Students read landmark works of classical and contemporary Marxism. Writings from Marx, Lenin, Trotsky, Lukacs, Gramsci, Adorno, Benjamin, Sartre, Althusser, Anderson, Jameson, and Zizek are addressed. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. G. Balakrishnan

237B. Historical Materialism. *

Writing-intensive seminar based on course 237A. Students read landmark works of

classical and contemporary Marxism. Writings from Marx, Lenin, Trotsky, Lukacs, Gramsci, Adorno, Benjamin, Sartre, Althusser, Anderson, Jameson, and Zizek are discussed.

Enrollment restricted to graduate students. Enrollment limited to 10. May be repeated for credit. G. Balakrishnan

240. Basic Principles of University-Level Pedagogy (1 credit). F

Provides training for graduate students in university-level pedagogy in general. Under the supervision of the department chair, coordinated by a graduate student with substantial experience as a teaching assistant. Enrollment restricted to graduate students. May be repeated for credit. The Staff

242A. Violence and Phenomenology: Fanon/Hegel/Sartre. *

Study of the work and influence of Frantz Fanon from a range of viewpoints: existential, phenomenological, psychoanalytic, and political; a variety of genres: film, literature, case history, and critique; and a set of institutional histories: clinical, cultural, and intellectual. Enrollment restricted to graduate students. Enrollment limited to 15. D. Marriott

242B. Violence and Phenomenology: Fanon/Hegel/Sartre. *

Writing intensive course based on readings in course 242A. Prerequisite: course 242A. Enrollment restricted to graduate students. Enrollment limited to 15. D. Marriott

243A. Nationalism, Anti-Semitism, and Jewish Resistance in World War II. *

Jewish resistance to Nazism during World War II, in Eastern Europe, and its historical context. Includes the pre-war rise in nationalism and anti-Semitism in Poland and Lithuania, Jewish integration in the Soviet Union, and the consequences for wartime resistance. (Also offered as History 256. Students cannot receive credit for both courses.) Enrollment restricted to seniors and graduate students. Enrollment limited to 15. B. Epstein

245. Race and Representation. *

Explores how human subjects come to be visually defined and marked by "race" discourse. Covers diverse theoretical literatures on the topic, primarily in visual studies, but also in cultural studies, post-colonial studies, and psychoanalysis. (Also offered as Feminist Studies 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. J. Gonzalez

252. Poststructuralism. *

French poststructuralism, with particular attention to the main philosophical texts of Jacques Derrida and Michel Foucault. Other representative theorists as well as critics of poststructuralism are studied as time permits. (Also offered as Philosophy 252. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. May be repeated for credit. The Staff

256A. Theories of the Visual. *

Study of psychoanalytic theories of the visual including the emergence of psychoanalysis and cinema as parallel discourses and the mobilization of key psychoanalytic concepts—scopophilia, voyeurism, fetishism—in Freudian and Lacanian understandings of the gaze so central to film and photographic theory. Enrollment restricted to graduate students.

Enrollment limited to 15. D. Marriott

256B. Theories of the Visual. *

Writing intensive course based on readings in course 256A. Prerequisite: course 256A. Enrollment restricted to graduate students. Enrollment limited to 15. D. Marriott

261. Modern Intellectual History. W

Survey of 19th- and 20th-century intellectual history that focuses on a cross-section of major works from Hegel to Levi-Strauss. Enrollment restricted to graduate students.

Enrollment limited to 15. G. Balakrishnan

262. Critical Theory After Habermas. S

Examines key works of Frankfurt School theorist Jurgen Habermas, his followers, and critics, on topics such as the public sphere, the theory of communicative action, power and domination, and religion and secularism. Prerequisite(s): Enrollment restricted to graduate students. T. Miller

264. The Idea of Africa. *

Examines the position of Africa in cultural studies and the simultaneous processes of over-

and under-representation of the continent that mark enunciations of the global and the local. Themes include defining diaspora, the West as philosophy, and Africa in the global economy. (Also offered as Feminist Studies 264. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. G. Dent

268A. Rethinking Capitalism. F

Readings include works by speakers at UCSC's "Rethinking Capitalism Initiative." Topics are: (1) financialization versus commodification (how options-theory has changed capitalism); (2) material markets (how this theory performs); and (3) valuation and contingency (how economies make worlds). (Also offered as Anthropology 268A. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. R. Meister

268B. Rethinking Capitalism. W

Course 268A addressed changes in the theory and practice of capitalism as derivatives markets have become increasingly central to it. This course, which can be regarded as either background or sequel, concerns questions that surround recent debates about derivatives from the standpoint of broader developments in law, culture, politics, ethics, ontology, and theology. What would it mean to see questions of contingency and value as a challenge to late-modern understandings of these modes of thought? (Also offered as Anthropology 268B. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. R. Meister

291. Advising (2 credits). F,W,S

Independent study formalizing the advisee-adviser relationship. Regular meetings to plan, assess and monitor academic progress, and to evaluate course work as necessary. May be used to develop general bibliography of background reading and trajectory of study in preparation for the qualifying examination. May be repeated for credit. The Staff

292. Practicum in Composition. *

A practicum in the genres of scholarly writing, for graduate students working on the composition of their qualifying essay or doctoral dissertation. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

293. Field Study. F,W,S

Research carried out in field settings, based on a project approved by the responsible faculty. The student must file a prospectus with the department office before undertaking the research and a final report of activities upon return. May be repeated for credit. The Staff

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. The Staff

295. Directed Reading. F,W,S

Systematic working through a prearranged bibliography which is filed as a final report at the end of the quarter with the signature of the instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

A seminar study group for graduate students focusing each quarter on various problems in the history of consciousness. A statement and evaluation of the work done in the course will be provided each quarter by the students who have participated in the course for that quarter, and reviewed by the responsible faculty. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent study and research under faculty supervision. Students submit petition to sponsoring agency. The Staff

298. Doctoral Colloquium. S

Under the supervision of a History of Consciousness faculty member, students finishing their dissertation meet weekly or bi-weekly to read and discuss selected draft chapters, design difficulties and composition problems. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Prerequisite(s): advancement to candidacy. May be repeated for credit. The Staff * Not offered in 2014-15

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Department of Languages and Applied Linguistics
218 Cowell College
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Lower-Division Courses

1. First-Year Italian. F

During the first quarter of this first-year sequence, students learn to introduce themselves, to talk about their daily activities and hobbies, to describe themselves and their friends/families, and to recount past events. The first-year sequence (1–2–3) begins in fall quarter. (Formerly Instruction in the Italian Language.) The Staff

1A. Accelerated Italian. W

The first quarter of accelerated instruction in elementary Italian language. The accelerated pace allows a rapid mastery of grammar and vocabulary, giving students a basic knowledge of Italian in only two quarters. Completion of the sequence is equivalent to the completion of the 1–2–3 sequence. This sequence starts once a year in the winter quarter. (Formerly Intensive Elementary Italian.) The Staff

1B. Accelerated Italian. S

The second quarter of accelerated instruction in elementary Italian language. The accelerated pace allows a rapid mastery of grammar and vocabulary, giving students a basic knowledge of Italian in only two quarters. Completion of the sequence is equivalent to the completion of the 1–2–3 sequence. (Formerly Intensive Elementary Italian.) Prerequisite(s): course 1A or 2 or placement by examination. For students completing course 2, course 3 is preferable. The Staff

2. First-Year Italian. W

During the second quarter of this first-year sequence, students learn to tell a story in the past, to make plans about their future, and to express commands and requests. The sequence starts once a year in the fall quarter. (Formerly Instruction in the Italian Language.) Prerequisite(s): course 1 or placement by examination. The Staff

3. First-Year Italian. S

During the third quarter of this first-year sequence, students learn to talk about historical events, to formulate hypothetical scenarios, to express wishes, desires, doubts, and opinions, and to discuss more abstract topics (e.g., immigration, work, politics). (Formerly Instruction in the Italian Language.) Prerequisite(s): course 2 or placement by examination. The Staff

4. Second-Year Italian. F

Short stories, articles, films, and newsclips are used as the basis for studying intermediate-

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■ Stevenson College
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level conversation and composition. Laboratory assignments involve use of the World Wide Web, conversations with native speakers, films and video clips. Students interested in this course who have not taken the prerequisite at UCSC should meet with the instructor, preferably prior to the first class meeting, and take the placement examination. (Formerly Intermediate Italian.) Prerequisite(s): course 1B or 3 or placement by examination. (General Education Code(s): CC, IH.) The Staff

5. Second-Year Italian. W

Reading of Italian short stories and a play are used as basis for further study and refinement of oral and written skills at the intermediate level. Particular emphasis is placed on oral/written discussion of abstract ideas and topics, and on the study of different language registers/contexts. Laboratory work is regularly assigned. Students interested in this course who have not taken the prerequisite at UCSC should meet with the instructor, preferably prior to the first class meeting and take the placement examination. (Formerly Intermediate Italian.) Prerequisite(s): course 4 or placement by examination. (General Education Code(s): CC, IH.) The Staff

6. Second-Year Italian. S

Reading of first novel in the language and weekly viewing of Italian films serve as basis for oral reports and discussions on various aspects of Italian culture and civilization. Weekly assignments, three essays, and a paper on topics derived from or related to the text. Students interested in this course who have not taken the prerequisite at UCSC should meet with the instructor, preferably prior to the first class meeting, and take the placement examination. (Formerly Intermediate-Advanced Italian.) Prerequisite(s): course 5 or placement by examination. (General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

106. Italian Culture Through Film. S

Film is used as a medium through which images of Italians and their culture are disseminated, perpetuated, and crystallized. Students focus on pivotal issues in Italian culture, society, history, and politics, and develop an informed opinion on relevant issues in Italian studies. The course is taught in English with a mandatory enhancement section in Italian. The enhancement section meets once a week and is designed to give students who are already familiar with the language the opportunity to discuss the films in Italian and to read/view additional material in the language. Students cannot receive credit for this course and Languages 80D. Prerequisite(s): course 6. May be repeated for credit. (General Education Code(s): CC.) G. Centineo

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Japanese

[2014-15 General Catalog](#)

Department of Languages and Applied Linguistics

218 Cowell College

(831) 459-2054

<http://language.ucsc.edu>[Faculty | Program Statement](#)

Lower-Division Courses

1. First-Year Japanese. F

Students carry out beginning-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write Japanese scripts (hiragana, katakana, and about 40 kanji). (Formerly Instruction in the Japanese Language.) The Staff

2. First-Year Japanese. W

Students carry out beginning-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 70 additional kanji. (Formerly Instruction in the Japanese Language.) Prerequisite(s): course 1 or by consent of instructor. The Staff

3. First-Year Japanese. S

Students carry out beginning-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 70 additional kanji. (Formerly Instruction in the Japanese Language.) Prerequisite(s): course 2 or by consent of instructor. The Staff

4. Second-Year Japanese. F

Students carry out intermediate-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 70 additional kanji. (Formerly Intermediate Japanese.) Prerequisite(s): course 3 or by consent of instructor. (General Education Code(s): IH.) The Staff

5. Second-Year Japanese. W

Students carry out intermediate-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 70 additional kanji. (Formerly Intermediate Japanese.) Prerequisite(s): course 4 or by consent of instructor. (General Education Code(s): IH.) The Staff

6. Second-Year Japanese. S

Students carry out intermediate-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 100 additional kanji. Emphasis is placed on developing the student's cultural knowledge relevant to inter-cultural communication. (Formerly Intermediate Japanese.) Prerequisite(s): course 5 or by consent of instructor. (General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation

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with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

103. Advanced Japanese. F

Students carry out advanced-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 100 additional kanji. Emphasis placed on developing the student's cultural knowledge about Japan as well as knowledge relevant to inter-cultural communication. Prerequisite(s): course 6 or by consent of instructor. The Staff

104. Advanced Japanese. W

Students carry out advanced-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 100 additional kanji. Emphasis placed on developing the student's cultural knowledge about Japan as well as knowledge relevant to inter-cultural communication. Prerequisite(s): course 103 or by consent of instructor. The Staff

105. Advanced Japanese. S

Students carry out advanced-level tasks that involve listening, speaking, reading, and/or writing, and learn how to read and write 100 additional kanji. Further development of cultural knowledge and understanding through critical examination of authentic Japanese materials in a variety of genres, including literary work, expository writing, and films. May be repeated for credit with consent of instructor. Prerequisite(s): course 104 or by consent of instructor. (General Education Code(s): TA.) The Staff

109. Japanese Language, Culture, and Society. *

Studies the social and cultural aspects of the Japanese language. Topics include language planning; writing-system reform; standard Japanese; regional variation; honorifics; gender norms and practices; age variation; communication styles; loanwords and English; and minority languages and their speakers. Readings are in Japanese. Prerequisite(s): Japanese 6 or by consent of instructor. Enrollment limited to 25. S. Okamoto

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Jewish Studies

[2014-15 General Catalog](#)[Department of History](#)[201 Humanities](#)[\(831\) 459-2982](#)<http://jewishstudies.ucsc.edu>[Faculty | Program Statement](#)

Lower-Division Courses

[99. Tutorial. F,W,S](#)

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

[101. Jewish Studies: Methods and Approaches. *](#)

Examines scholarship about Jewish cultures, communities, and intellectual through the prisms of a variety of disciplines: history, anthropology, literature, feminist studies, biblical commentary, art history, philosophy, and music. Seeks to equipment students with a sophisticated understanding of the methods scholars have used to illuminate both the coherence and the diversity of Jewish experience from antiquity through the 20th Century. Enrollment limited to 20. (General Education Code(s): CC.) The Staff

[190A. Jewish Socialism in Eastern Europe, 1880–1953. *](#)

Looks at the ongoing debate in Jewish resistance during the Second World War and ends by addressing the status of Jews and Jewish movements in the Soviet Union and Poland after the war. (Also offered as History of Consciousness 190A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 25. The Staff

[195A. Thesis Research. S](#)

Devoted to independent research under the guidance of a primary thesis adviser. Students are expected to meet with their thesis adviser every two weeks to report on research progress and receive advice and criticism. Enrollment restricted to junior and senior Jewish studies majors. Students submit petition to sponsoring agency. The Staff

[195B. Thesis Writing. S](#)

Devoted to independent writing under the guidance of the primary and secondary thesis faculty advisers. Completed theses must be a minimum of 40 pages in length. Student are required to meet regular with their faculty advisers and to submit at least two drafts for detailed criticism. Prerequisite(s): Satisfaction of the Entry Level Writing and Composition requirement. Enrollment restricted to junior and senior Jewish studies majors. The Staff

[199. Tutorial. F,W,S](#)

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Kresge College

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College Office

(831) 459-2071

<http://kresge.ucsc.edu/>

For college description and list of faculty, see [Colleges](#).

Lower-Division Courses

12A. Service Learning (3 credits). F

Students find a volunteer position with the instructor's assistance and perform community service in non-profit organizations, schools, unions, or local government agencies.

Students meet weekly, keep a journal, and write a "social action witnessing" report of their experience. Enrollment restricted to college members. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): PR-S.) F. Williams

12B. Service Learning (2 credits). S

Students find a volunteer position with the instructor's assistance and perform community service in non-profit organizations, schools, unions, or local government agencies.

Students meet weekly, keep a journal, and write a "social action witnessing" report of their experience. Enrollment restricted to college members. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): PR-S.) F. Williams

12C. Service Learning: Introduction to National Service/Introduction to Grant Writing (3 credits). W

A fast-paced and academically rigorous exercise in four main sections. First and foremost, participants must locate and support a community-service site for three hours each week. Each student's service commitment requires the student to attend class regularly and share community-service experience with classmates. Students are introduced to the basic requirements of a variety of national service agencies including AmeriCorp, the Peace Corp, City Year, Teach for America, and City Service. Students are required to do community-service work with a member of one of these agencies locally for four hours during the quarter. The last major section of this course teaches students the basics of grant writing and research. (Also offered as Porter College 13C. Students cannot receive credit for both courses.) Enrollment restricted to college members. (General Education Code(s): PR-S.) F. Williams

15A. The Writer as Witness (3 credits). *

Students are involved in a community service project to produce a portfolio of social-action writing that situates the writer as witness in the community. Enrollment restricted to college members. Enrollment limited to 20. W. Cooper

15B. The Writer as Witness (2 credits). W

Students are involved in a community-service project to produce a portfolio of social-action writing that situates the writer as witness in the community. Enrollment restricted to

■ Community Studies
■ Computer Engineering
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- college members. Enrollment limited to 20. W. Cooper
16. The Rise of Capitalism and Its Consequences. *
Explores the rise and consequences of capitalism. How has capitalism affected how humans understand and act in the world? How do oppressions along lines of race, gender, sexuality, and nation intersect with capitalism? Is resistance desirable and/or possible? Enrollment restricted to Kresge, Cowell, or Crown honors students. (General Education Code(s): TA.) D. Gould
24. Imagining Utopias (3 credits). *
Explores possible futures by studying several utopian visions, projects, and manifestos. Students imagine a future by writing a manifesto and other creative non-fiction pieces that embrace a utopian imagination. Enrollment restricted to college members. Enrollment limited to 20. W. Cooper
25. Successful Transfer to the Research University (2 credits). F
Provides first-quarter, community college transfers with an understanding of the workings of a research university with emphasis on advanced academic expectations. Encourages development of educational plans reflecting effective academic strategies, short- and long-term goals, research and/or internship experiences, and graduate programs. Enrollment restricted to first-quarter transfer students. Enrollment limited to 25. The Staff
42. Student-Directed Seminar (no credit). F,W,S
Seminar taught by upper-division Kresge students under Kresge faculty supervision. (See course 192.) Students submit petition to sponsoring agency. The Staff
- 60C. Prison Narratives (3 credits). *
Seeks to ask hard questions about the role of the prison, its increasing use in our nation, and the use of torture by the U.S. government in Guantanamo, Abu Ghraib, and other prisons. Readings include J. James's Imprisoned Intellectuals , Alexander Berkman's Prison Memoirs of an Anarchist , and other writings by American prisoners. Eve Ensler's What I Want My Words to Do to You is shown. Course is primarily reading and discussion; students are asked to keep a reading journal and to write a critical/creative essay at the end of the quarter. (Formerly Language of the Prison House .) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to college members. Enrollment limited to 20. W. Cooper
- 60F. Writer's Read (2 credits). *
Students attend weekly creative writing readings by fiction writers and poets, read excerpts from the writers' works, participate in question and answer sessions, and write short, creative and/or analytical responses to the readings and writings. Enrollment restricted to Kresge and Porter college members. Enrollment limited to 35. May be repeated for credit. M. Perks
- 60K. The Art of Comedy: Literature and Performance (3 credits). *
Students analyze comedic writing and practice writing comedy. Students develop pieces to be delivered in a performance at the end of the quarter. Enrollment restricted to college members. Enrollment limited to 22. E. McKenzie
62. Transformative Action. W
Introduces key skills for effective transformation agents including: creativity and innovation; transformative communication; servant leadership; optimism and resilience, risk taking, initiative; luck; failure; and relationship building. Students create their own portfolio and commit to weekly civic engagement projects. Enrollment limited to 75. C. King
- 62A. Transformative Action (2 credits). *
Addresses the most effective methods of social change. Examines principles and strategies of transformative action and case studies of leaders solving world problems. Empowers students to be innovators in real-life community projects. Integrates nonviolence, psychology, sustainability, and social justice. The Staff
- 62B. Transformative Action Seminar (2 credits). *
For students who enrolled in the winter quarter Transformative Action course, to further investigate, research, and refine their Big Idea. Opportunity given to deepen and integrate Transformative Action principles into projects. Enrollment by instructor permission only. C.

Management UCDC Program Writing Program Theater Arts Yiddish	<p>King</p> <p>63. Kresge Garden Cooperative (2 credits). *</p> <p>Offers hands-on gardening skills within a student-run space. Focuses on developing a strong cooperative garden on campus, with special attention to the documentation of this process. Enrollment by instructor approval through application (available in the Kresge College office). Enrollment limited to college members. Enrollment limited to 24. May be repeated for credit. D. Shaw</p>
Teaching and Administrative Staff Appendices Archive of General Catalogs Nondiscrimination Statement Search the Catalog	<p>64. Tools for World Changers (2 credits). *</p> <p>Develops life skills that support you and help you support others. Implement effective methods for personal productivity (managing your to-dos, calendar, and inbox), interpersonal communication, meeting facilitation, event hosting, collaboration, and regenerative community design. D. Shaw</p> <p>65. Power and Representation Lab. *</p> <p>Enrollment limited to 20. The Staff</p> <p>65A. Power and Representation: Food and Community (2 credits). *</p> <p>Explores core themes of power and representation through the mediums of food, nature awareness, community, personal empowerment and sustainable living. Students will develop meaningful final projects in collaboration with Kresge Food Co-op, Kresge Garden Co-op, Kresge World Cafe, and projects of their own design. (Formerly Power and Representations: Food Systems.) Concurrent enrollment in course 80A or 80B is required. Enrollment limited to 20. D. Shaw</p> <p>65B. Power and Representation: Photography (2 credits). *</p> <p>Focuses on creating a final project individually, or in collaboration with others, that engages issues of power and representation through the medium of photography. Concurrent enrollment in course 80A or 80B is required. Enrollment limited to 20. S. Graham</p> <p>65C. Power and Representation: Creative Writing (2 credits). *</p> <p>For students who wish to supplement their core experience with creative writing. Students do in-class and out-of-class writing assignments; read and discuss texts; and work to develop their final project. Concurrent enrollment in course 80A or 80B is required. Enrollment limited to 20. The Staff</p> <p>65D. Power and Representation: Art and Visual Performance (2 credits). *</p> <p>Students investigate the themes presented in the core course to arrive at a final creative project in pairs, groups, or individually. Concurrent enrollment in course 80A or 80B is required. Enrollment limited to 20. The Staff</p> <p>67. Transformative Justice Seminar (3 credits). S</p> <p>Examines the principles and processes of restorative justice juxtaposed to current practices in the judicial and educational systems of contemporary society. Students study leading restorative justice practices and their implication for individual and community transformation. This seminar is a continuation of the concepts taught in course 62, Transformative Action. Enrollment by instructor consent. Priority given to students who have taken course 62. Enrollment restricted to frosh, sophomores, and juniors. Enrollment limited to 25. C. King</p> <p>68. Transformative Communication (2 credits). S</p> <p>Based on Nonviolent Communication (NVC), this experiential course offers skills in intra- and inter-personal conflict transformation by aligning with core values; understanding what motivates self and others; cultivating compassion, even under difficult circumstances; and bringing greater peace into our world. Enrollment restricted to frosh, sophomores, and juniors by permission of instructor. Priority given to students enrolled in course 67, Transformative Justice. Enrollment limited to 25. C. King</p> <p>69. Practical Application of Restorative Practices (2 credits). F</p> <p>This second seminar supports students in deepening and fine-tuning their Restorative Circle facilitation along with exploring the question "What are the components of a restorative life?" Students participate in the Kresge College Restorative Justice Initiative, and, during the fall quarter, offer Restorative Circles to student groups in conflict.</p> <p>Prerequisite(s): course 67. Enrollment restricted to sophomores, juniors, and seniors. May</p>

be repeated for credit. C. King

72. Collaborative Learning: The Great Turning(2 credits). F

Collaborative learning in service of transitioning from industrial growth society to a life-sustaining society. Students deepen their connection with nature, themselves, and community through guest lectures, intergenerational dialogue to discover collective and wise action, and engagement with long-term projects. (General Education Code(s): PR-E.)

D. Shaw

75. Sustainable Food Systems. *

Introduces students to fundamental food-system issues and opportunities. Topics include: hunger, environmental sustainability, race and gender, food and agricultural policy, local food systems, gardening and farming models, social movements, and approaches for analysis and change. Enrollment limited to 55. S. Gillon

76. Social Documentary Photography. *

History of social documentary photography with its practice. Includes analysis of historical and contemporary images from social documentary work; camera, darkroom, and digital skill development; an individual student documentary project; and collective project discussion. Enrollment restricted to Kresge College members. Enrollment limited to 20. The Staff

77. Food Memoir (2 credits). *

Workshop in writing memoir that connects to issues of multiculturalism, gender, and environment. Designed to hone skills in creative writing through stories that students will unify into a larger memoir. Enrollment restricted to Kresge and College Eight members or by permission of instructor. R. Somers

80A. Introduction to University Discourse: Power and Representation. F

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Explores relationships between individuals and their communities—communities as small as families and friends, colleges and cities; communities as large as nations and the world. Examines ways we constitute ourselves as individuals in relation to communities, focusing on representations of class, ethnicity, sexual orientation, gender, and race in several genres—critical theory, film, art, fiction, non-fiction, and theater. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. (General Education Code(s): T5-Humanities and Arts or Social Sciences, C1.) The Staff

80B. Rhetoric and Inquiry: Power and Representation. F

Explores the intersections of investigations, interpretation, and persuasion, and hones strategies for writing and research. Explores relationships between individuals and their communities—communities as small as families and friends, colleges and cities; communities as large as nations and the world. Examines ways we constitute ourselves as individuals in relation to communities, focusing on representations of class, ethnicity, sexual orientation, gender, and race in several genres—critical theory, film, art, fiction, non-fiction, and theater. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. (General Education Code(s): T5-Humanities and Arts or Social Sciences, C2.) The Staff

80C. Introduction to University Discourse: Power and Representation--Writing Intensive 1. F

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Explores relationships between individuals and their communities—communities as small as families and friends, colleges, and cities; communities as large as nations and the world. Examines ways we constitute ourselves as individuals in relation to communities, focusing on representations of class, ethnicity, sexual orientation, gender, and race in several genres—critical theory, film, art, fiction, non-fiction, and theater. More writing intensive than course 80A; prerequisite to course 80D. Enrollment restricted to first-year college members who have not satisfied the Entry Level Writing and C1 requirement and who scored a 5 or lower on the AWPE (Analytical Writing and Placement Exam). Enrollment limited to 22. The Staff

80D. Introduction to University Discourse: Power and Representation--Writing Intensive 2.

W

Continues to provide practice in analytical writing, critical reading, and speaking, and to examine power and representation issues. Pre-requisite(s): Course 80C. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): C1.) The Staff

80H. Reading Chinese Paintings. *

Introduces significant currents in Chinese cultural history and their visual expression through close examination of selected paintings. Readings focus on a rich variety of primary sources in translation. Course intended for honors students by permission of instructor. Enrollment limited to 20. (General Education Code(s): T5–Humanities and Arts or Social Sciences, A.) R. Birnbaum

80T. Power and Representation (Kresge Core Course for Transfer Students). *

Explores the intersections of investigations, interpretation, and persuasion, and hones strategies for writing and research. Explores relationships between individuals and their communities—communities as small as families and friends, colleges and cities; communities as large as nations and the world. Examines ways we constitute ourselves as individuals in relation to communities, focusing on representations of class, ethnicity, sexual orientation, gender, and race in several genres—critical theory, film, art, fiction, non-fiction, and theater. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to sophomore, junior, and senior college members. (General Education Code(s): T5–Humanities and Arts or Social Sciences, W.) The Staff

99. Tutorial. F,W,S

A program of directed study arranged between a first-year or sophomore student and a Kresge faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Independent Study (2 credits). F,W,S

A program of directed study arranged between a student and a Kresge faculty member. Class time is less proportional to credit given. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99G. Independent Study (3 credits). F,W,S

A program of directed study arranged between a student and a Kresge faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

161. Permaculture and Whole Systems Design. *

Focuses on concepts, principles, and practices of permaculture and whole systems design. Permaculture education is transdisciplinary and provides practical experience with design, ecological horticulture, regional planning, natural building, architecture, appropriate technology, aquaponics, animal husbandry, ecopsychology, and community resilience. Enrollment by application. Priority given to Kresge College students. Enrollment limited to 23. May be repeated for credit. D. Shaw

171. Kresge Challenge Seminar. S

For first-year students, by invitation only. This class is part of the Challenge Program which provides high-achieving students with the opportunity to participate in a rigorous program emphasizing individual attention and dynamic interaction with UCSC faculty and academically motivated peers in classes, social settings, and collaborative research projects. Enrollment restricted to Kresge, Merrill, and Stevenson students enrolled in the College Challenge Programs. Enrollment limited to 25. The Staff

172. Collaborative Learning: The Great Turning. F

Collaborative learning in service of transitioning from industrial growth society to a life-sustaining society. Students deepen their connection with nature, themselves, and community through guest lectures, intergenerational dialogue to discover collective and wise action, and engagement with long-term projects. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): PR-E.) D. Shaw

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under Kresge faculty supervision. (See course 42.)
Prerequisite(s): upper-division standing in Kresge, a proposal supported by a Kresge faculty member willing to supervise, and college approval. The Staff

193. Field Study. F,W,S

Supervised off-campus study conducted under the immediate and direct guidance of a Kresge faculty supervisor. To be used primarily by upper-division students doing part-time, off-campus study. Prerequisite(s): approval of student's adviser and the college. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

A program of independent study arranged between a group of students and a Kresge faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195. Senior Thesis. F,W,S

Senior thesis or project for student doing individual major program. May be repeated twice for credit. Prerequisite(s): permission of sponsoring committee and college approval. The Staff

198. Independent Field Study. F,W,S

Provides for college-sponsored individual study programs off campus, for which Kresge faculty supervision is not in person (e.g., supervision is by correspondence.) Prerequisite(s): approval of the student's faculty sponsor and college approval. May be repeated for credit. The Staff

199. Tutorial. F,W,S

A program of individual study arranged between an upper-division student and a Kresge faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Lower-Division Courses

80D. Italian Culture Through Cinema. S

Film is used as a medium through which images of Italians and their culture are disseminated, perpetuated, and crystallized. Whether these representations offer historical perspectives or stereotypes, they are important documents for the study of Italian culture, society, history, and politics. Students cannot receive credit for this course and Italian 106. May be repeated for credit. (General Education Code(s): CC, T4-Humanities and Arts.) G. Centineo

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

210. Oral Communication in the U.S. Classroom: Strategies for International T.A.s (2 credits). F

Seminar for international graduate students who speak English as a second or foreign language. Focuses on oral competency and serves to qualify students as graduate teaching assistants in UCSC classrooms or laboratories. Enrollment restricted to international graduate students; language assessment administered by the Graduate Division. The Staff

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Upper-Division Courses

112. Language and Gender. S

Examines the relationship between language and gender. Topics include: gender differences in speech; linguistic gender norms and stereotypes; gender and the construction of identity in discourse; sexuality and language; sexism in language; social, educational, and political implications. (Formerly Languages 112.) S. Okamoto

113. Inter-Cultural Communication. *

Examines intercultural communication and miscommunication between individuals and speech communities, both within North American and global contexts. Through discourse and analytic approaches, students explore cultural stereotypes and interactional expectations, among other issues, that influence the outcome of intercultural communication. (Formerly Languages 113, Cross-Cultural Communication and Miscommunication.) Enrollment restricted to juniors and seniors. Enrollment limited to 25. (General Education Code(s): CC.) Z. Abrams

116. Discourse Analysis: Language Use and Context. W

Familiarizes students with the methods and theoretical assumptions behind discourse analytic approaches to the study of language. Examines language used in specific contexts. Topics include: genres, registers; discourse organization; discourse grammar; interaction; conversation; pragmatics; and social practice. Prerequisite(s): Linguistics 50 or by consent of the instructor. Enrollment restricted to juniors and seniors. The Staff

135. Second Language Teaching. S

Introduces the theories of second-language acquisition and their connection to second-language teaching. Students develop cutting-edge teaching and testing materials, and engage with current scholarship on language instruction. Prerequisite(s): at least one year of college-level study of a foreign language, or its equivalent. Enrollment restricted to juniors and seniors, and by permission of instructor. Students cannot receive credit for this course and course 235. Enrollment limited to 20. The Staff

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235. Second Language Teaching. S

Helps novice instructors learn about the theory and practice of language teaching and learning. Focuses on current methods used in communicatively oriented classrooms. Topics include: listening comprehension, grammar, vocabulary, reading, writing, and testing/assessment. Students cannot receive credit for this course and course 135. (Formerly Language Studies 201.) Enrollment restricted to graduate students. Enrollment limited to 20. The Staff, Z. Abrams, E. Zyzik

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Upper-Division Courses

110A. Advanced Academic English 1.

Students develop an academic vocabulary and successful reading strategies in English in order to understand high-level academic texts. Students also practice pronunciation and apply the rules of grammar to written and spoken academic language through weekly oral presentations and written assignments. Enrollment by instructor consent only. Enrollment restricted to international students. The Staff

110B. Advanced Academic English 2. F

Students continue to develop an academic vocabulary (e.g., collocations, idiomatic expressions), which is a significant contributor to successful academic reading and writing. Students also practice complex sentence structures in written and spoken language through weekly oral presentations and written assignments. Enrollment by instructor consent only. Enrollment restricted to international students. The Staff

110C. Advanced Academic English 3. W

Students continue to develop an academic vocabulary, and practice reading and writing complex sentences in English with a high level of grammatical and stylistic accuracy. Students also increase their oral fluency and pragmatic skills and their awareness of second-language learning. Enrollment by instructor consent only. Enrollment restricted to international students. The Staff

110D. Advanced Academic English 4. S

Students continue to develop an academic vocabulary, and practice reading and writing complex essays in English with a high level of grammatical and stylistic accuracy. Students also continue to increase their oral fluency, pragmatic skills, and awareness of second-language learning. Enrollment by instructor consent only. Enrollment restricted to international students. The Staff

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History Department

201 Humanities

(831) 459-2982

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Lower-Division Courses

1. Elementary Latin. F

Instruction in Latin grammar, using a modern Latin method, designed to prepare for the study of classical literature. The sequence begins in the fall quarter only. The Staff

2. Elementary Latin. W

Instruction in Latin grammar, using a modern Latin method, designed to prepare for the study of classical literature. Prerequisite(s): course 1. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

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32 Merrill College

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Lower-Division Courses

1. Introduction to Latin American and Latino Studies. F,W

Interdisciplinary introduction presenting the elements for studying Latin American politics and economics, culture, and society as well as the dynamics of Latino communities in the U.S. Special attention paid to issues of colonialism, human rights, U.S. foreign policy toward Latin America, racism, capitalist globalization, migration, to emerging political and economic shifts in the Americas, and to new local and transnational efforts for social change on the part of Latin America's peoples and Latinos in the U.S. (General Education Code(s): ER, IS, E.) F. Leiva, H. Perla

20. Latino Politics. S

Offers a domestic (U.S.) and transnational approach to Latino politics, focusing on the five largest Latino groups: Mexicans, Puerto Ricans, Cubans, Salvadorans, and Guatemalans. Issues addressed include Latino electoral participation, Latino public opinion, migrant political incorporation, and transnationalism among others. (General Education Code(s): ER.) A. Felix

30. Social Movements in Latin America. *

Examines contemporary social movements in Latin America, especially those that arose from popular response to different forms of social exclusion and to authoritarian political systems. Explores a variety of popular movements, their successes and setbacks, including rural and urban uprisings, native nations and their descendants, women, labor, human rights, and transnational movements. (Formerly course 80B.) Enrollment limited to 60. (General Education Code(s): CC, T3-Social Sciences, E.) H. Perla

40. Latinos, Work, and Organizing. *

Students learn about the role of Latinos in different forms of U.S. organized labor (including, but not limited to, traditional unions). Focus is on organizing in several low-wage and immigrant-dense industries. (Formerly course 80K.) (General Education Code(s): ER, T3-Social Sciences, E.) The Staff

42. Student-Directed Seminar.

Seminar taught by upper-division student under faculty supervision. Requires prior approval by Latin American and Latino Studies Department and two quarters (fall, winter) of supervised preparation prior to teaching in spring quarter. (See course 192.) The Staff

45. Race, Class, and Gender. *

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■ Crown College
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■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
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Examines the economic, social, political, and cultural experience of communities of color (Latinas/os, African Americans, Asian Americans, and Native Americans) and women in the U.S., through a sociological perspective. Using quantitative and qualitative methods, the relationship among individual actions, social institutions, societal forces, and social change are analyzed. (Formerly course 80G.) (General Education Code(s): ER, T3-Social Sciences, E.) The Staff

50. Transnational Feminist Organizing in the Americas. W

Explores key aspects of transnational feminist organizing in the Americas, including transnational feminist theories and feminist activism in Latin America and the Caribbean. Discusses how women from throughout the Americas region organize politically and socially across gender, race, ethnicity, sexuality, and nationality. (Formerly course 80W.) (General Education Code(s): CC.) S. Falcon

70. Cinema and Social Change in Cuba. *

Examines selected feature-length films and documentaries produced after the Revolution of 1959 as a venue to study social change in Cuba. Cinema is used as artifact to document and critique social change. Topics include: the role of art and artist in Revolution, literacy campaign, changing gender relations, dissident sexualities, racial politics, and others. (General Education Code(s): IM.) L. Martinez-Echazabal

80D. Political Change in Mexico. F

Reviews broad trends in contemporary Mexican politics against the backdrop of long-term historical, social, and economic change throughout the 20th century, analyzing how power is both wielded from above and created from below. The course covers national politics, grassroots movements for social change and democratization, environmental challenges, indigenous movements, the media, and the politics of immigration and North American integration. (General Education Code(s): CC, T3-Social Sciences, E.) A. Felix

80E. Latin American Philosophy. *

Is there a general school of philosophy endemic to Latin America? Would it have to appeal to quintessential Western philosophical questions regarding knowledge, values, and reality? If not, why not, and would it then still count as philosophy? What difference do ethnic and national diversity, as well as strong political and social inequality, make to the development of philosophical questions and frameworks? Course explores a variety of historically situated Latin American thinkers who investigate ethnic identity, gender, and socio-political inequality and liberation, and historical memory, and who have also made important contributions to mainstream analytical and continental philosophy. (Also offered as Philosophy 80E. Students cannot receive credit for both courses.) (General Education Code(s): T4-Humanities and Arts, E.) R. Winther

80F. Latinos in the U.S.: A Comparative Perspective. *

Analyzes the Latino experience in the U.S. with a special focus on strategies for economic and social empowerment. Stresses the multiplicity of the U.S. Latino community, drawing comparative lessons from Cuban-American, Puerto Rican, Chicano/Mexicano, and Central American patterns of economic participation and political mobilization. (General Education Code(s): ER, T3-Social Sciences, E.) A. Felix

80H. Comparative Latina/o Histories. *

Designed to survey recent works in the field of Latina and Latino histories, with particular emphasis on historiographical approaches and topics in the field. Readings are chosen to expose a selection of the varied histories and cultures of Latina/os in the U.S., and focus primarily on Mexicans, Puerto Ricans, and Cubans. (General Education Code(s): CC, T3-Social Sciences, E.) G. Arredondo

80I. Gender and Global Cinema. *

Applies critical and historical approaches to the study of gender in global cinema. Introduces students to different aesthetic and cross-cultural approaches to representing gender in contemporary film. Focuses on films, documentaries, and video works from the Americas as well as from other regions of the global South. Enrollment limited to 80. (General Education Code(s): CC, T3-Social Sciences, E.) R. Fregoso

80J. Race, Nation, and War. *

Evaluates the relationship between processes of racial formation, war, and nationalism in Latin America. Case studies range from the wars of independence to more recent forms of

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transnational violence. Students engage historical and anthropological perspectives and critiques of modernity. Enrollment limited to 80. (General Education Code(s): ER, T3–Social Sciences, E.) C. Rivas

80P. Energy, Society, and Environment in Latin America. *

From petroleum extraction to hydroelectric power to ethanol production, Latin America is an important provider of the world's energy. Course examines the implications of this process for economic growth, climate change, environmental degradation, social inequality, and poverty. (Formerly Energy, Society, and Ecology in Latin America.) Enrollment limited to 80. (General Education Code(s): PE–E, T3–Social Sciences, E.) The Staff

80Q. Musica Latina: Music of Latin America and the Caribbean. *

Surveys various musical forms and styles that have developed in Latin America and Latino communities in the U.S. Discusses concept of hybridity and grapples with this as a central issue in the evolution of Latin American/Latino music. Addresses migration of music, which not only contributes to its distribution but also to the evolution of musical practices of forms, styles and genres across borders. (Formerly Musica Latina.) (General Education Code(s): CC, T3–Social Sciences, E.) The Staff

80R. Organizing Across the Americas. *

Analyzes the range of theory and practice that emerged from and shaped significant social movements during the rise and fall of United States hegemony. Focuses on social struggles and revolutions in five distinct locations across the Americas: the United States (United Farm Workers--UFW), Cuba (Movimiento 26 de Julio--M26J), Nicaragua (Frente Sandinista de Liberacion Nacional--F.S.L.N.), Mexico (Zapatistas), and Brazil (Movimento dos Trabalhadores Rurais Sem Terra--MST). Enrollment limited to 80. (General Education Code(s): T3–Social Sciences, E.) J. Borrego, The Staff

80S. Sexualities and Genders in Latin American and Latina/o Studies. *

Introduction to issues and themes surrounding sexualities and genders within Latin American and Latina/o studies. Provides background in the basic theoretical and historical frameworks of gender and its relationship to sexuality. In addition to cross-border perspectives, course also examines how gender and sexuality are structured and experienced through other social categories. Enrollment limited to 80. (General Education Code(s): CC, T3–Social Sciences, E.) The Staff

80X. Central American Peoples and Cultures. F

Examines contemporary societies and peoples of Central America considering how, in recent decades, media, history, war, cultural production, and migration have shaped Guatemala, Honduras, El Salvador, Nicaragua, and Costa Rica both as individual nations and as a region. Enrollment limited to 80. (General Education Code(s): CC, T5–Humanities and Arts or Social Sciences, E.) C. Rivas

81A. Mexican Folklorico Dance (2 credits). *

Provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklorico dance. Students taught choreographed dances from various regions of Mexico and also learn dance techniques (tecnica) and stage make-up application. Additional workshops and lectures offered to supplement class. Open to all students; no previous experience required. (Also offered as Anthropology 81A. Students cannot receive credit for both courses.) May be repeated for credit. (General Education Code(s): PR–C, A.) O. Najera Ramirez

81B. Mexican Folklorico Dance (2 credits). *

Second course in series. Provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklorico dance. (Also offered as Anthropology 81B. Students cannot receive credit for both courses.) May be repeated for credit. (General Education Code(s): PR–C, A.) O. Najera Ramirez

81C. Mexican Folklorico Dance (2 credits). *

Third course in series. Provides instruction in the aesthetic, cultural, and historical dimensions of Mexican folklorico dance. (Also offered as Anthropology 81C. Students cannot receive credit for both courses.) Prerequisite(s): course 81A or 81B. May be repeated for credit. (General Education Code(s): PR–C, A.) O. Najera Ramirez

Upper-Division Courses

100. Concepts and Theories Latin American and Latina/o Studies. F
 Interdisciplinary exploration of transnational migrations; social inequalities; collective action and social movements; and cultural productions, products, or imaginaries. Examines how transnational migration and hemispheric integration are transforming Latin American studies and Chicana/o-Latina/o studies. Explores the influence of neoliberalism and globalization, especially the intersection of critical analysis and social-justice praxis. Completion of course 1 highly recommended. (Formerly course 10, Bridging Latin American and Latina/o Studies) Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): ER, E.) G. Arredondo

100A. Social Science Analytics. W
 Compares diverse analytical strategies and builds practical research skills in the field of Latin American and Latino studies. (Formerly Politics and Society: Concepts and Methods.) Two-credit course 100L writing lab highly recommended. Prerequisite(s): course 100 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to sophomore, junior, and senior Latin American and Latino studies majors, minors, and combined majors or by permission. (General Education Code(s): E.) A. Felix

100B. Cultural Theory in the Americas. S
 Focuses on transnational, regional, and local features of Latina/o and Latin American cultural production and artistic expression: how culture is shaped by historical, social, and political forces; how cultural and artistic practices shape the social world; and how culture is produced in an interconnected, postindustrial, and globalized economy. (Formerly Culture and Society: Culture in a Global Context.) Prerequisite(s): courses 100 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to sophomore, junior, and senior Latin American and Latino studies majors, minors, and combined majors. (General Education Code(s): E.) C. Ramirez

100L. Writing Lab (2 credits). W
 This course accompanies course 100A. Participants receive feedback and guidance on their written exercises required for course 100A. Students submit drafts in advance and receive feedback from course 100A writing tutors as well as engage in peer-to-peer learning. Consistent attendance is required. Prerequisite(s): concurrent enrollment in course 100A required. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 60. A. Felix

101. Using Media. *
 Hands-on survey of print, broadcast, audiovisual, and electronic media. Students complete and present a dozen different media production assignments as part of permanent portfolio. Assignments have Latino/Latin American focus. Peer critique of media projects. Prerequisite(s): concurrent enrollment in course 101L. (General Education Code(s): E.) The Staff

101L. Using Media: Video Laboratory (2 credits). *
 Trains students in the fundamentals of video preparation, production and post-production through Social Sciences Media Laboratory. Prerequisite(s): concurrent enrollment in course 101. The Staff

102. Writing for Latin America and Latino Studies Majors and Minors. F
 For Latin American and Latino studies students who wish to gain greater awareness of rhetorical modes and the academic essay. Students write several academic essays, each with a different purpose, and master the conventions of revising and editing. (Formerly Advanced Expository Writing Workshop.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. The Staff

111. The U.S.-Mexican Border Region. *
 Global and national forces have transformed the 2,000-mile United States/Mexico border region into a site for world market factories. Analyzes how this transformation has affected workers and communities and systematically reviews subjective responses. (General Education Code(s): E.) J. Borrego, The Staff

112. Immigration and Assimilation. *
 Examines immigration to U.S. from colonial era to present with special emphasis on issues of citizenship, social identities, and social membership. (Formerly American Studies 112.)

(General Education Code(s): ER.) C. Ramirez

115. Mexico–United States Migration. S

Overview of Mexico–United States migration in historical and contemporary context. Focuses on Mexican experiences of racialization, deportability, second-class citizenship, and transnationalism—the cross-border networks, institutions, activities, loyalties, and identities by which Mexican migrants orchestrate their lives across international borders. Enrollment restricted to sophomores, juniors and seniors. A. Felix

121. Antropologia de las juventudes. *

Taught in Spanish. Overview of the social construction of youth identities represented by intertwined liminal processes linked to the history of migration and ethnicity. Explores theoretical approaches on border youth and methodological strategies. Enrollment restricted to Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): CC.) The Staff

122. Media and Nationalism. F

Evaluates the links between media and the production of national identities in Latin America. Focuses on theories of nationalism, media, and globalization to examine the production of national histories and representations. Enrollment restricted to juniors and seniors. Enrollment limited to 40. (General Education Code(s): E.) C. Rivas

124. Brazilian Cinema. *

Surveys films by and/or about women from Brazil, drawing a picture of contemporary Brazilian cinema through the angle of gender in its articulation with sexuality, race, class, ethnicity, national identity, and other key concepts, while offering a visual and critical introduction to Brazilian culture. (Formerly course 80T.) Enrollment limited to 80. (General Education Code(s): IM.) The Staff

127. Genero, Nacion Y Modernidad En El Cine. S

Taught in Spanish. Examines the relationship between cinema, gender, the nation, and modernity. Focusing on films by key women filmmakers in Latino and Latin America, the seminar examines their engagement with identity, cultural imaginaries, coloniality, sexuality, and gender. Enrollment restricted to Latin American and Latino studies majors, minors and combined majors. R. Fregoso

128. Latino Media in the U.S. *

Explores the history and practice of Latino media in the U.S. with an emphasis on work created by, for, with, and about Latino constituencies. Course highlights the role that media plays in struggles for social change, political enfranchisement, creative self-expression, and cultural development. Course content varies with instructor. (Also offered as Oakes College 128. Students cannot receive credit for both courses.) Enrollment limited to 39. (General Education Code(s): IM, E.) The Staff

129. Women Filmmakers: Latin American and Latina. *

Focuses on the work of a dozen major Latin American and Latina filmmakers from Argentina, Brazil, Venezuela, Mexico, and the U.S., including Maria Luisa Bemberg, Maria Navaro, Matilde Landeta, Lourdes Portillo. Examines contemporary films, from 1960 to present. (General Education Code(s): IM, E.) R. Fregoso

131. Latino Literatures: Assimilation and Assimilability. W

Explores assimilation and assimilability in the United States, especially as related to the education and languages of Latinos, via literary forms, such as the memoir, novel, essay, short fiction, film, and/or poetry. (Meets the methods requirement in Latin America and Latino studies.) (General Education Code(s): TA.) C. Ramirez

132. Citizens, Denizens, and Aliens. W

Explores the theories and practices of citizenship and the roles citizens and non-citizens play in the state, civil society, and market, with a focus on the ways historical legacies and social forces produce inclusion, exclusion, sameness, and difference. (Formerly American Studies 113C) Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 40. (General Education Code(s): ER.) C. Ramirez

140. Rural Mexico in Crisis. *

Focuses on political, social, economic, and environmental changes in rural Mexico from the 1910 revolution through the Zapatista rebellion. Emphasizes the interaction between the

state, markets, and rural civil society, covering agrarian reform, agricultural policy, grassroots development initiatives, democratization, indigenous movements, natural resource management, and migration. Prerequisite(s): Previous completion of course 80D recommended. Enrollment restricted to juniors and seniors. Sophomores may enroll with permission from instructor. (General Education Code(s): CC, E.) J. Fox

143. Race and Ethnicity. *

Race and ethnicity have been--and continue to be--powerful forces shaping the U.S. experience. This course examines a range of conceptual approaches and monographic studies grounded in the history of the U.S. The readings provide various criteria for studying and understanding these phenomena. The course problematizes "race" by asking what the readings tell us about "race-making" and the reproduction of racial ideologies in specific historical contexts. Similarly, "ethnicity" is treated as a historically specific social construct. (Meets the methods requirement in Latin America and Latino studies.) (General Education Code(s): ER, E.) G. Arredondo

143J. Global Political Economy. *

Analyzes the global, social, economic, and political forces that shape transnational, national, and regional societal formations and consequently the entire environment for social change. Examines the evolution of revolutionary struggle and its origins within and impact upon the evolving capitalist system. J. Borrego, The Staff

144. Mexicana/Chicana Histories. W

Explores current historical and theoretical writings on the lived experiences of Chicanas and Mexicana women in U.S. history. Themes include domination/resistance politics, (re)presentations, contestation, social reproduction, identity and difference. Meets the methods requirement in Latin America and Latino studies. (General Education Code(s): TA, E.) G. Arredondo

145. Grassroots Social Change in Latin America. *

Focuses on the analysis of collective action by underrepresented groups in Latin America. Concepts and issues include political participation and impact, gender, ethnicity and race, class, the environment, religion, non-governmental organizations, and social capital. Prerequisite(s): any two Latin American and Latino studies courses or permission of instructor; open to graduate students. Enrollment limited to 40. (General Education Code(s): CC, E.) H. Perla

148. Action Research in the Americas. *

This interdisciplinary course analyzes applied social science research strategies, focusing on diverse "evidence-based," public-interest advocacy initiatives. Issues include: voter participation, environmental justice, human rights, fair trade, the World Bank, the North American Free Trade Agreement (NAFTA), and immigrant rights. (Meets the methods requirement in Latin America and Latino studies.) Prerequisite(s): course 100A or equivalent, or by permission of instructor. J. Fox

149. U.S. Foreign Policy Toward Latin America. F

Examines how domestic political considerations and transnational forces influence the formation of U.S. foreign policy, specifically in the context of relations with Latin America. Explores the impact of institutional, electoral, and psychological pressures, public opinion, interest groups, non-state actors, and the media on decision-making regarding U.S. foreign policy toward Latin America, specifically on support for military intervention. (Meets the methods requirement in Latin America and Latino studies.) (General Education Code(s): PE-H.) H. Perla

150. Afro-Latinos/as: Social, Cultural, and Political Dimensions. W

Explores the lives of African descendants in the Americas, including the Caribbean. Students learn about the settlement patterns of Afro-Latinos/as and Afro-Latin Americans in the region and the ways in which African descendants negotiate their multiple identities and broaden racial frameworks in the United States and Latin America. (General Education Code(s): ER.) S. Falcon

152. Consumer Cultures Between the Americas. W

Examines the circuits of media, commodities, and migration connecting the Americas in an age of globalization. Issues of states, transnational markets, social relations, and cultural representations addressed. Relationship between consumption, nationalism, and

globalization is considered critically. (Meets the methods requirement in Latin America and Latino studies.) (General Education Code(s): CC, E.) C. Rivas

155. Latin American and Latino Youth Movements. F

Examines the histories, structures, and practices of Latin American and Latino youth movements. Analyzes the patterns, themes, and differences of social movements using primary documents. Addresses the dynamics of age, generation, race, ethnicity, and nation. Uses youth activism to explore questions relevant to the study of contemporary social movements in the Americas. J. Taft

159. Latinos and Population Change. *

Examines key theories of demographics change (fertility, mortality, and migration) in important policy issues, such as the aging of America, racial categorization, and immigration. Explores political and economic factors that have led to the changing face of the U.S. over the last century and key legislative changes that have changed the experience of immigrants. Students use primary demographic data from the U.S. Census Bureau and learn basic tools for demographic data access and presentation. (Formerly Latin American and Latino Studies 163.) (Also offered as Sociology 159. Students cannot receive credit for both courses.) Prerequisite(s): course 100A or Sociology 103A or Sociology 105A, or by permission of instructor. Enrollment restricted to sophomores, juniors, and seniors.

(General Education Code(s): PE-H, E.) The Staff

161P. Theater in the "Chicano Power" Movement.

Covers the rise of Teatro Chicano as a cultural-political force within the 1960's "Chicano Power" Movement starting with founding playwright Luis Valdez and El Teatro Campesino and covering Chicana/o playwrights inspired by the movement, e.g. Cherrie Moraga, Luis Alfaro, and Josefina Lopez. (Also offered as Theater Arts 161P. Students cannot receive credit for both courses.) (General Education Code(s): ER, A, E.) The Staff

164. Environmental Justice. *

Introduces students to participatory-action research, which both creates positive social-environmental change and contributes to scientific knowledge. Through collaboration with environmental justice organizations, students develop research skills, hone critical reflection abilities, and understand the connections between race, ethnicity, power, poverty, and environmental problems. (Formerly Action-Research for Social Change, Environmental Quality: Lessons Learned from Latin America, U.S. .) Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 35. (General Education Code(s): PE-E, E.) F. Lu

165. Contemporary Peru. *

Explores contemporary issues facing Peru by addressing the formation of the state and the country's troubled history with political and state violence. Students learn about Peru's multicultural/racial population and about ongoing conflicts and hopes for the country today. (General Education Code(s): CC.) S. Falcon

166. Latino Families in Transition. W

Explores the complex nature of Latino families in the U.S., which like other American families are undergoing profound changes. Placing families within a historical context of post-1960s social transformations, such as feminism, immigration, and multiple-earner households, course examines how family members adapt, resist, and/or construct alternative visions and practices of family life. (Meets the methods requirement in Latin America and Latino studies.) Prerequisite(s): course 1. (General Education Code(s): ER, E.) P. Zavella

168. Economic History of Latin America. *

Sheds light on Latin America's contemporary social and economic developments by providing an appreciation of their historical roots. Focusing on the period from independence until WWII, evaluates contesting explanations for Latin America's relatively poor economic performance and divergent policy implications. Prerequisite(s): course 1. (General Education Code(s): E.) H. Shapiro

169. Latin American Industrialization in a Global Perspective: Past, Present, and Future. *

Analyzes the economic, political, and social aspects of the industrialization process in Latin America. Evaluates import substitution policies, the changing roles of the state and foreign and domestic capital, and the impact of recent trade liberalization. Compares Latin

America's development with that of the East Asian newly-industrialized countries (NICs) and looks at the implications of globalization. (General Education Code(s): CC, E.) H. Shapiro

170. Indigenous Struggles in the Americas. *

Focuses on the way Natives of First Peoples have interacted voluntarily and involuntarily with nonindigenous cultures. Examines their perspectives, thoughts, frustrations, and successes. Touches on land issues and examines the way current indigenous cultures of Latin America face and adapt to social change. Focuses mainly on the Andes, lowland Amazon, Mesoamerica, and other areas. (General Education Code(s): CC, E.) The Staff

171. Talleres de Poesía. *

Taught in Spanish. Develops creative writing skills through reading, discussion, and a progression of hands-on group poetry-writing sessions. Enrollment restricted to juniors and seniors. Enrollment limited to 25. (General Education Code(s): A.) D. Zamora-Evans

172. Visualizing Human Rights. W

Explores how visual artists take up the subject of human rights in response to urgent challenges facing Latina/o and Latin American communities across the Americas. Examines the imprint of film and media arts reshaping human-rights discourse. Considers persistent themes in Latina/o representation, including colonialism and state terrorism; self-representation and the rights of collectives (racial, ethnic, and sexual groups); social and economic rights. (Meets the methods requirement in Latin America and Latino studies.) R. Fregoso

174. Immigration and Citizenship: A Global Perspective. W

Examines U.S. immigration policy in comparison to other major destinations. Class discusses relevant socio-economic and political factors and the various citizenship paradigms in place throughout the world. Readings draw on disciplinary foci, including quantitative and qualitative analysis. (General Education Code(s): PE-H.) The Staff

175. Migration, Gender, and Health. F

Through an interdisciplinary, cross-border approach, examines complex nature of Latino health in relation to migration and how women and men experience health problems differently. Examines how health problems are created by economic and social conditions, how migrants experience access to care, and how agencies can design culturally sensitive programs. (General Education Code(s): ER, E.) P. Zavella

176. Gender, the Nation, and Latina Cinema. *

Applies critical and cultural theories of interculturality, coloniality of power and transnational feminism to the study of Latina cinematic imaginaries in the Americas. Explores images and self-representations of race, sexuality, and the nation; citizenship, diaspora, and belonging; gender violence and state violence; militarization, human rights, and gender justice. (General Education Code(s): IM, E.) R. Fregoso, The Staff

178. Gender, Transnationalism, and Globalization. *

Focuses on the impact of globalization and transnationalism on gender relations in the Americas. Examines gender and power in the context of neoliberalism, modernity, the nation, social movements, and activism. Explores local and transnational constructions of gender, and the intersection of gender with race, ethnicity, class, and sexuality. Enrollment limited to 40. (General Education Code(s): ER, E.) R. Fregoso, The Staff

180. Borders: Real and Imagined. *

Situates "The Border" historically and within the context of U.S. imperialism. Examines the formalization of political "borders," methods of enforcement, and intra-group conflicts. Examines the varied experiences of colonialism and immigration between Mexicans, Puerto Ricans, Native Americans, and Cubans. Explores how the tools of "The Border" and "Borderlands" are being used to untangle the roles of race prejudice and sexual and gender discrimination. (Meets the methods requirement in Latin America and Latino studies.) (General Education Code(s): TA, E.) G. Arredondo

186. Field Research Methods. S

Introduction to field research methods that consider theory, methodological challenges, and epistemology in conducting research. Explains the research process, including designing research questions, interview instruments, concepts maps, and methods of data

collection, and data analysis. (Meets the methods requirement in Latin America and Latino studies.) Prerequisite(s): course 100, and 100A or 100W. Enrollment restricted to junior and senior Latin American and Latino studies majors, and combined majors. S. Falcon

190. Internship. F,W,S

Internships with campus or community organizations sponsored and evaluated by a Latin American and Latino studies faculty member. Students write an analytical paper or produce another major work agreed upon by student, faculty supervisor, and internship sponsor; sponsor must also provide review of experience. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

190F. Internship (2 credits). F,W,S

Internships with campus or community organizations sponsored and evaluated by a faculty member from Latin American and Latino studies. Students write a short (8-page) descriptive paper or produce another work agreed upon by student and faculty supervisor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

191. Latin American Studies Teaching Apprenticeship. F,W,S

Advanced students serve as facilitators for small discussion groups or aid in reading of papers related to Latin American Studies courses. Students are expected to read all course assignments and meet with instructors to discuss the teaching process. May not be counted toward major requirements. The Staff

192. Directed Student Teaching. F,W,S

Teaching under faculty supervision of a lower-division course in Latin American and Latino studies, normally done by majors in the final quarter of study as the senior project. (See course 42.) Students submit petition to sponsoring agency. The Staff

193. Field Study. F,W,S

Supervised off-campus (domestic or international) study that entails working closely with faculty. Typically undertaken as part of fulfilling the senior exit requirement. Students need to be in good to excellent standing and show preparation to undertake field study (e.g., relevant coursework, appropriate language skills, etc.). May be repeated for credit. The Staff

194C. Criminalizing the Poor. *

Examines neoliberal discourses related to poverty that have become more critical of the poor over time, including reforms to social welfare, criminal justice, and immigration, and the ways in which the poor struggle to survive and contest neoliberalism. Enrollment restricted to junior and senior Latin American and Latino studies majors and minors; and combined majors with global economics, sociology, literature, and politics. Enrollment limited to 25. (General Education Code(s): ER.) P. Zavella

194F. Latinos and Socio-Political Change. *

Explores the role of Latinos in civic and political life in the U.S., focusing on specific avenues for participation such as religion, work, and transnational experiences. Examines barriers to participation experienced by Latinos in the U.S. as well as relationships between civic engagement and political incorporation and the ramifications for inequality for Latinos and other ethnic/racial groups in cities across America. (Formerly Latino Civic Engagement in Comparative Perspective.) Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): PE-H, E.) S. Gleeson

194G. Chile: Social and Political Change. *

Analysis of Chilean politics and society from the election of Salvador Allende in 1970 to the present. Particular emphasis is given to understanding the different forces, internal as well as external, that broke the Chilean tradition of democratic rule in 1973, and to the current configuration. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): CC, E.) W. Goldfrank

194H. Central American Political Relations with the U.S. S

Writing- and research-intensive senior seminar on U.S.-Central American relations. Students gain understanding of Central American political history; the region's relations with the United States; and the problems arising from this relationship. Prerequisite(s):

satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): W, E.) H. Perla

194I. Contemporary Ecuador. *

The Andean nation of Ecuador exemplifies cultural and biological diversity, rapid economic and social change, and increasing geopolitical influence as one of the current South American left-leaning countries. Course looks at Ecuador's recent history and future challenges. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): CC.) F. Lu

194M. Twentieth-Century Revolutions. *

Treatment of 20th-century Latin American revolutions from Zapata to the Zapatistas. Focuses on the causes and consequences of revolutions rather than on their narrative histories. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): CC, E.) G. Arredondo, W. Goldfrank

194Q. Globalization in the Américas. F

Introduces multiple dimensions of globalization by reviewing key theories and frameworks in order to understand development, social inequalities, trade agreements, multilateral institutions, and the future of globalization studies. Enrollment restricted to junior, and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): CC.) S. Falcon

194R. Violencia Cotidiana en las Americas. W

Senior seminar taught in Spanish. Engages a critical study of violence, social relations, and everyday life in contemporary Latin America. Focuses on the relationship between narratives and acts of violence, and the constitution and social effects of these representations. Requires proficiency in Spanish (written and spoken), and advanced reading knowledge of Spanish. Enrollment restricted to junior and senior Latin American and Latino studies majors, minors, and combined majors. Enrollment limited to 25. (General Education Code(s): E.) C. Rivas

194S. La Crisis del Campo Mexicano. *

Taught in Spanish. Analyzes both the causes and possible solutions to the challenges of rural poverty and democratization. Focuses on agrarian reform; agricultural development; protest movements; electoral change; local government; grassroots development initiatives; natural resources; the social construction of ethnicity, gender, and class; and the dynamics of migration. Mexico's regional diversity is highlighted as well, and students are encouraged to study a particular region in depth to accompany the course's national overview. (Formerly El Campo Mexicano en Crisis.) Enrollment restricted to junior, and senior Latin American and Latino studies majors, minors, and combined majors with global economics, sociology, literature, and politics. Enrollment limited to 25. J. Fox

195B. Senior Project. F,W,S

Senior thesis writing under direction of major adviser. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195C. Senior Project. F,W,S

Senior thesis writing under direction of major adviser. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

196. Field Study Seminar. *

Emphasizes ethnographic strategies of fieldwork. Primarily oriented to students interested in understanding the daily life of societies and cultures. Prepares students both to conduct fieldwork, and to process their fieldwork experience. Covers complexities related to the experience of "stepping out of" one's own culture. Prerequisite(s): concurrent enrollment in course 196L. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. J. Borrego

196L. Field Study Seminar Lab (2 credits). *

Media lab trains students in the use of electronic and photographic media for the acquisition of field data. Through lectures, demonstrations, hands-on field exercises and

review of students' media exercises, students will learn the fundamentals of photography, video production, and audio recording in the field. Prerequisite(s): concurrent enrollment in course 196. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 25. J. Borrego

198. Field Study. F,W,S

Off-campus study in Latin America, the Caribbean, or nonlocal Spanish-speaking community in the U.S. Nature of proposed study/project to be discussed with sponsoring instructor(s) before undertaking field study; credit toward major (maximum of three courses per quarter) conferred upon completion of all stipulated requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Individual studies undertaken off-campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Supervised directed reading; weekly or biweekly meetings with instructor. Final paper or examination required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Supervised research and writing of an expanded paper, completed in conjunction with requisite writing for an upper-division course taken for credit in the major. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Bridging Latin American and Latina/o Studies. F

Explores social, cultural, economic, and political changes that connect Latin America and U.S. Latina/o communities. The objective of this interdisciplinary team-taught course is to bridge previously distinct research approaches of Latin American and Latina/o studies to better understand processes that link peoples and ideas across borders as well as help students to conceptually and methodologically identify and design new objects of study and revisit traditional approaches. Core requirement for students pursuing the Parenthetical Notation in Latin American and Latino studies. Enrollment restricted to graduate students. G. Arredondo

210. Latina Feminisms: Theory and Practice. *

Through an interdisciplinary approach, explores Latina feminist social theory and scholarly practice—especially in representation and interpretation of Latina experiences. Examining key texts at different historical junctures, charts how Latinas of varied ethnic, class, sexual, or racialized social locations have constructed oppositional and/or relational theories and alternative epistemologies or political scholarly interventions and, in the process, have problematized borders, identities, cultural expressions, and coalitions. Enrollment restricted to graduate students. P. Zavella

212. Latina/o Ethnographic Practice. F

Explores the social construction of Latino cultures in their varied regional, national–ethnic, and gendered contexts. Examines how culture, as a dynamic process constructed with a historical context of hierarchical relations of group power, is interrelated to the structural subordination of Latinos. Focuses on how power relations create a context for the creation of specific Latino cultural expressions and processes. Enrollment restricted to graduate students. P. Zavella

215. Latina Cultural Studies: Culture, Power, and Coloniality. *

Examines the theories and practices informing the field of Latina cultural studies in the Americas. For students pursuing the Designated Emphasis in Latin American and Latino studies and students with interest in theories of coloniality of power, decolonialism, intercultural and transnational feminist methodologies. (Formerly Latina Cultural Studies: Transborder Feminist Imaginaries.) Enrollment restricted to graduate students. R. Fregoso

220. Transnational Civil Society: Limits and Possibilities. *

Analyzes social, civic, and political actors that come together across borders to constitute transnational civil society, drawing from political sociology, political economy, comparative

politics, and anthropology to address collective identity formation, collective action, institutional impacts, and political cultures. Enrollment restricted to graduate students. J. Fox

225. Race in the Americas. *

Considers historical moments in the development of "race" in the Americas to understand how "race" is given meaning and actualized through practices, beliefs, and behaviors. Interrogates theories and racial dynamics in the 19th through 21st centuries to reveal interconnections with constructions of gender and nation. Enrollment restricted to graduate students. Enrollment limited to 15. G. Arredondo

230. Political Ecology in Latin America. *

Examines the foundations and current literature on political ecology, with emphasis on issues in Latin America. Topics include the appropriation of "Nature;" degradation and deforestation; conservation policies and politics; land distribution and property; and indigenous resistance. Enrollment restricted to graduate students. F. Lu

240. Culture and Politics of Human Rights. W

Examines cultural, philosophical, and political foundations for human rights and provides students with critical grounding in the major theoretical debates over conceptualizations of human rights in the Americas. Addresses the role of feminist activism and jurisprudence in the expansion of human rights since the Universal Declaration of Human Rights. Addresses challenges of accommodating gender rights, collective rights, and social and economic rights within international human rights framework. (Also offered as Feminist Studies 240. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. R. Fregoso

242. Globalization, Transnationalism, and Gender in the Américas. *

Explores how globalization, transnationalism, and the social construction of gender are interrelated, contingent, and subject to human agency and resistance. Examines particular configurations of globalization, transnationalism, and gender through the Américas and their implications for race, space, work, social movements, migration, and construction of collective memory. Enrollment restricted to graduate students. P. Zavella, R. Fregoso

243. Comparative Methods. *

Introduces the comparative method in social science. Trains students in the use of this method by examining how scholars have used it to compare across national governments, subnational units, public policies, organizations, social movements, and transnational collective action. (Also offered as Politics 243. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. K. Eaton, J. Fox

244. U.S. Political Relations with Latin America. *

Examines relations between the U.S. and Latin America. Emphasizes the domestic and global contexts within which U.S. leaders defined national economic, strategic, and ideological interests, and their regional policy objectives. Explores the impact of Latin Americans' nationalistic, anti-imperialist, class, racial, and gender struggles that often shaped policy outcomes in ways unanticipated by the U.S. Special focus on sharpening graduate students' research design. Enrollment restricted to graduate students. H. Perla

297. Independent Study. F,W,S

Students submit a reading course proposal to a department faculty member who supervises independent study in the field. Faculty and student jointly agree upon reading list. Students expected to meet regularly with faculty to discuss readings. This independent study must focus on a subject not covered by current UCSC graduate curriculum. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Enrollment restricted to graduate students and permission of instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

[10. Introduction to Legal Process. W](#)

Introduction to U.S. and comparative legal institutions and practices. Examines diverse areas of law from torts to civil rights to international human rights. Why is America portrayed as having an activist legal culture; why is law used to decide so many questions from presidential elections to auto accidents; can law resolve disputes that, historically, have led to war and violence; is the legal system fair and/or effective, and, if so, for whom and under what conditions? (General Education Code(s): IS.) The Staff

Upper-Division Courses

[105A. Ancient Political Thought. F](#)

Ancient political ideas in context of tension between democracy and empire, emergence of the psyche, and shift from oral to written culture. Emphasis on Athens, with Hebrew, Roman, and Christian departures and interventions. Includes Sophocles, Thucydides, Socrates, Plato, Aristotle, Stoics, the Bible, and Augustine. (Also offered as Politics 105A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. D. Mathiowetz

[105B. Early Modern Political Thought. W](#)

Studies republican and liberal traditions of political thought and politics. Authors studied include Hobbes, Locke, and Rousseau. Examination of issues such as authorship, individuality, gender, state, and cultural difference. (Also offered as Politics 105B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. V. Seth

[105C. Modern Political Thought. S](#)

Studies in 19th- and early 20th-century theory, centering on the themes of capitalism, labor, alienation, culture, freedom, and morality. Authors studied include J. S. Mill, Marx, Nietzsche, Foucault, Hegel, Fanon, and Weber. (Also offered as Politics 105C. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. M. Thomas

[106. Marxism as a Method. *](#)

Examines Marx's use of his sources in political philosophy and political economy to develop a method for analyzing the variable ways in which social change is experienced as a basis for social action. Provides a similar analysis of contemporary materials. Contrasts and compares Marxian critiques of these materials and readings based on Nietzsche,

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■ Ecology and Evolutionary Biology
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■ Education
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■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

psychoanalysis, cultural studies, and rational choice materialism. (Also offered as Politics 106. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. The Staff

109. Legal Theory. *

Offers systematic exploration of alternative conceptions of the nature of law, including positivism, natural law, formalism, realism, pragmatism, and theories of justice. Additional focus on the nature of law; relation of law and morality, rights and other legal concepts; and philosophical debates such as critical legal studies and critical race theory. Enrollment restricted to legal studies majors during priority enrollment only. The Staff

110. Law and Social Issues. F

Examines current problems in law as it intersects with politics and society. Readings are drawn from legal and political philosophy, social science, and judicial opinions. (Also offered as Politics 110. Students cannot receive credit for both courses.) Enrollment restricted to politics, legal studies, and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

111A. Constitutional Law. W

An introduction to constitutional law, emphasizing equal protection and fundamental rights as defined by common law decisions interpreting the 14th Amendment, and also exploring issues of federalism and separation of powers. Readings are primarily court decisions; special attention given to teaching how to interpret, understand, and write about common law. (Also offered as Politics 111A. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. The Staff

111B. Civil Liberties. *

Explores the status of American civil liberties as provided by the Bill of Rights. Particular attention will be given to issues of concern relating to the aftermath of 9/11, including issues relating to detainees, freedom of information requests, wiretapping authority, watch lists, profiling, and creation of a domestic intelligence agency. Enrollment restricted to legal studies majors during priority enrollment only. The Staff

111C. Issues in Constitutional Law. S

Examines variety of topics in constitutional law that are not covered in courses 111A and 111B. Focuses primarily on Supreme Court decisions and common-law debates. Enrollment restricted to legal studies majors during priority enrollment. R. Coonerty

113. Gay Rights and the Law. *

Examines relevant court cases as well as local, state, and federal laws that define boundaries for legal recognition of sexual orientation and personal sexuality. Explores legal assumptions behind current and historical cases defining personal sexuality and sexual orientation and considers the social and political impetus in each era that drove the courts and legislatures to make such decisions. The Staff

114. Jews, Anti-Semitism, and the American Legal System. *

Explores how Jews have influenced and been impacted by the American legal system. Students explore significant cases, debates, and trends in the law as it relates to Jewish identity, religious freedom, and conceptions of justice. Enrollment restricted to legal studies majors during priority enrollment only. The Staff

115. Law and the Holocaust. *

Examines the Nazi philosophy of law, and how it was used to pervert Germany's legal system in order to discriminate against, ostracize, dehumanize, and ultimately eliminate certain classes of human beings, and the role of international law in rectifying the damage. Enrollment restricted to legal studies majors during priority enrollment only. Enrollment restricted to legal studies majors during priority enrollment only. The Staff

116. Comparative Law. *

Explores legal systems and legal rules around the world, for a better understanding of the factors that have shaped both legal growth and legal change. Particular attention given to differences between common and civil law systems, changes brought about by the European Union, and expansion of legal norms around the globe. (Also offered as Politics 116. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. The Staff

Management UCDC Program Writing Program Theater Arts Yiddish	<p>118. Law and Literature. * Explores variety of texts including novels, short stories, and essays as a source for reflection about the nature of law and legal practice. Readings include such writers as Herman Melville, Harper Lee, Richard Wright, Arthur Miller, Nadine Gordimer, and James Alan McPherson, among others. (Formerly course 138.) Enrollment restricted to legal studies majors during priority period. The Staff</p> <p>120A. Congress, President, and the Court in American Politics. * Study of political development, behavior, performance, and significance of central governmental institutions of the U.S. Emphasizes the historical development of each branch and their relationship to each other, including changes in relative power and constitutional responsibilities. (Also offered as Politics 120A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. D. Wirls</p> <p>120B. Society and Democracy in American Political Development. F Examines the role of social forces in the development of the American democratic processes and in the changing relationship between citizen and state. Course materials address the ideas, the social tensions, and the economic pressures bearing on social movements, interest groups, and political parties. (Also offered as Politics 120B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. M. Springer</p> <p>120C. State and Capitalism in American Political Development. W Examines the relationship between state and economy in the U.S. from the 1880s to the present, and provides a theoretical and historical introduction to the study of politics and markets. Focus is on moments of crisis and choice in U.S. political economy, with an emphasis on the rise of regulation, the development of the welfare state, and changes in employment policies. (Also offered as Politics 120C. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. E. Bertram</p> <p>121. Black Politics and Federal Social Policy. * Examination of changes in the political and economic status of African Americans in the 20th century; particular focus on the role of national policies since 1933 and the significance of racism in 20th-century U.S. political development. (Also offered as Politics 121. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment. (General Education Code(s): E.) M. Brown</p> <p>122. The Sociology of Law. * Explores the social forces that shape legal outcomes and the ways law, in turn, influences social life. Traces the history and political economy of American law; the relation between law and social change; how this relation is shaped by capitalism and democracy; and how class, race, and gender are expressed in welfare and regulatory law. (Also offered as Sociology 122. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors and minors. C. Reinarman</p> <p>123. Law, Crime, and Social Justice. * Blends the latest research in criminology with that from social stratification, inequality, and social welfare policy with the objective of exploring the relationship between levels of general social justice and specific patterns of crime and punishment. The focus is primarily on the U.S. although many other industrialized democracies are compared. An introductory course in sociology is recommended as preparation. (Also offered as Sociology 123. Students cannot receive credit for both courses.) The Staff</p> <p>125. History of the U.S. Penal Culture. * Explores the history and theory of U.S. state punishment from its 17th-century beginnings to the present and notes evolving models of criminal deviance, focusing on how punishment systems legitimate particular models of criminal deviance, crime, and its "correction." Enrollment restricted to legal studies majors during priority enrollment only. The Staff</p> <p>126. Law and Politics in Contemporary Japan and East Asian Societies. * Introduction to contemporary analysis of Japan's race relations, ethnic conflicts, and a</p>
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government's failure to restore remedial justice for war victims in Japan, Asia, and the U.S. Specific issues include comfort women, national or state narratives on Hiroshima, forced labor during World War II, and Haydon legislation that allows war victims to sue Japanese government and corporations in California. (Also offered as Sociology 128. Students cannot receive credit for both courses.) Enrollment limited to 30. H. Fukurai

127. Drugs in Society. W

Explores the history of the use and abuse of consciousness-altering substances like alcohol and other drugs. Social-psychological theories of addiction are reviewed in tandem with political-economic analyses to identify the social conditions under which the cultural practices involved in drug use come to be defined as public problems. An introductory sociology course is recommended prior to taking this course. (Also offered as Sociology 127. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors and minors. C. Reinarman

128. Poverty and Public Policy. S

Studies the causes, consequences, and governmental response to urban poverty in the U.S. Topics include how public policy, the macroeconomy, race, gender, discrimination, marriage, fertility, child support, and crime affect and are affected by urban poverty. Emphasizes class discussion and research. (Also offered as Economics 128. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; ECON 100A & 113 or consent of instructor. Enrollment restricted to economics, business management economics, global economics, legal studies, or economics combined major Enrollment limited to 35. (General Education Code(s): W, E.) L. Kletzer, R. Fairlie

128I. Race and Law. F

An introduction to comparative and historical analyses of the relation between race and law in the U.S. Emphasis on examinations of continuous colonial policies and structural mechanisms that help maintain and perpetuate racial inequality in law, criminal justice, and jury trials. (Formerly Race and Justice) (Also offered as Sociology 128I. Students cannot receive credit for both courses.) Enrollment restricted to sophomores, juniors, and seniors. H. Fukurai

128J. The World Jury on Trial. *

Adoption of the jury and its varied forms in different nations provides ideal opportunities to examine differences between systems of popular legal participation. Course considers reasons why the right to jury trial is currently established in Japan or Asian societies, but abandoned or severely curtailed in others. American jury contrasted with other forms of lay participation in the legal process. (Also offered as Sociology 128J. Students cannot receive credit for both courses.) Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 30. H. Fukurai

128M. International Law and Global Justice. *

Examines war crimes, crimes against humanity, and the evolution and role of the International Criminal Court (ICC). Examines the evolution of the concept of international law, the rationale for its birth and existence, roots of international conflicts and genocides, possible remedies available to victims, mechanisms for the creation and enforcement of international legal order, as well as the role of colonialism, migration, poverty, race/ethnic conflicts, gender, and international corporations in creating and maintaining conflicts and wars. (Also offered as Sociology 128M. Students cannot receive credit for both courses.) Enrollment restricted to juniors and seniors. Enrollment limited to 30. H. Fukurai

130. Race and the Law. *

Explores the complex relationship between race and the law in American society. Included subjects are critical race theory, civil rights and voting rights law, issues of the criminal justice system, intersections with issues of class and gender, and the social construction of race through law and legal decisions. Enrollment restricted to legal studies majors during priority enrollment. The Staff

131. Wildlife, Wilderness, and the Law. *

Introduction to wildlife, wilderness, and natural resources law, policy, and management. Examines rules governing resource allocation and use including discussion of fundamental legal concepts. Explores laws and management policies affecting wildlife and wilderness,

including their origins and impacts. Examines how conflicts over natural resources are being negotiated today. Enrollment restricted to sophomore, junior, and senior legal studies majors during the priority period. R. Langridge

132. California Water Law and Policy. W

Explores the rich history and fundamental legal concepts surrounding water in California. Students identify, evaluate, and debate some critical water policy questions faced by Californians today and in the future. (Also offered as Politics 132. Students cannot receive credit for both courses.) R. Langridge

133. Law of Democracy. W

Explores the role of law in both enabling and constraining the actions of elected politicians in the U.S. Among issues examined are voting rights, redistricting, and campaign finance. Course asks how the law shapes and limits our ability to choose our elected leaders, and in turn, how the law is shaped by political forces. (Also offered as Politics 133. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment. R. Coonerty

134. Congress: Representation and Legislation. *

Examines the United States Congress and the nature of the representative and legislative processes. Topics include: districting and elections; bicameralism; party organization; institutional and behavioral influences on legislative action; and the efficacy of Congress as a legislative body. Focuses on the contemporary Congress with comparisons to other legislative and representative institutions. (Formerly Congress: Representation and Legislation in Comparative Perspective.) (Also offered as Politics 134. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. D. Wirls

135. Native Peoples Law. S

Explores the legal relationship between native peoples and the state. Examines the development of that relationship and several of the key legal issues currently confronting native peoples as they attempt to redress the injustices of the past. Enrollment restricted to legal studies majors during priority enrollment only. (General Education Code(s): E.) The Staff

136. Federal Indian Law and International Comparative Indigenous Peoples' Law. *

Indian law refers to the body of law dealing with the status of Indian tribes, their inherent powers of self-government, their special relationship to the federal government, and the actual or potential conflicts of governmental power. Primary objective will be to address tribal reassertion of aboriginal sovereignty over culture and land in the context of increasing world recognition of indigenous rights. Enrollment restricted to legal studies majors during priority period. (General Education Code(s): E.) The Staff

137. International Environmental Law and Policy. *

International environmental law (IEL) endeavors to control pollution and depletion of natural resources within a framework of sustainable development and is formally a branch of public international law—a body of law created by nation states for nation states, to govern problems between nation states. Examines landmark developments of IEL since 1972 within a historical continuum to better understand their strengths and weaknesses. Enrollment restricted to legal studies majors during priority period. The Staff

138. Political Anthropology. *

The ideas, in selected non-Western societies, about the nature of power, order, social cohesion, and the political organization of these societies. (Also offered as Anthropology 138. Students cannot receive credit for both courses.) Offered in alternate academic years. T. Pandey

139. War Crimes. *

Explores complex international human rights/humanitarian law issues surrounding genocide and other mass violence, beginning with the Nuremberg trials following World War II up to recent atrocities in Rwanda, Bosnia, and elsewhere. Covers basic legal framework of human rights law, examines specific situations on a case by case basis, and discusses what options the international community, the nations themselves, and individuals have in the wake of such catastrophes. Enrollment restricted to legal studies majors during priority period. The Staff

142. Anthropology of Law. *

An ethnographically informed consideration of law, dispute management, and social control in a range of societies including the contemporary U.S. Topics include conflict management processes, theories of justice, legal discourse, and relations among local, national, and transnational legal systems. (Also offered as Anthropology 142. Students cannot receive credit for both courses.) Enrollment restricted to anthropology and legal studies majors. D. Brenneis

144. Social and Political Philosophy. *

A study of selected classical and contemporary writings dealing with topics such as the nature and legitimacy of the liberal state, the limits of political obligation, and theories of distributive justice and rights. (Also offered as Philosophy 144. Students cannot receive credit for both courses.) Prerequisite(s): one course in philosophy. Offered in alternate academic years. D. Guevara

146. Philosophy of Law. *

Exploration of selected problems in jurisprudence: "legal reasoning" and social policy, rules and individual cases, the mental element in the law, punishment and responsibility, causation and fault, liberty and paternalism, etc. (Formerly Philosophy 146.) (Also offered as History of Consciousness 146. Students cannot receive credit for both courses.) J. Neu

147A. Psychology and Law. W

Current and future relationships between law and psychology, paying special attention to gaps between legal fictions and psychological realities in the legal system. Topics include an introduction to social science and law, the nature of legal and criminal responsibility, the relationship between the social and legal concepts of discrimination, and the nature of legal punishment. (Also offered as Psychology 147A. Students cannot receive credit for both courses.) Psychology 3 or 100 and 40 are recommended prior to taking this course. Enrollment restricted to psychology, pre-psychology, and legal studies majors. C. Haney

147B. Psychology and Law. S

Continuing discussion of current and future relationships between law and psychology and to contrasting psychological realities with legal fictions. Special attention is given to the criminal justice system including crime causation, the psychology of policing and interrogation, plea bargaining, jury selection and decision making, eyewitness identification, and the psychology of imprisonment. (Also offered as Psychology 147B. Students cannot receive credit for both courses.) Prerequisite(s): course 147A. C. Haney

149. Environmental Law and Policy. S

Surveys a wide range of topics in environmental law, including state and federal jurisdiction, administrative law, separation of powers, state and local land use regulation, public land and resource management, pollution control, and private rights and remedies. Students read a large number of judicial cases and other legal documents. (Also offered as Environmental Studies 149. Students cannot receive credit for both courses.) Enrollment restricted to junior and senior legal studies majors. T. Duane

150. Children and the Law. *

Explores the legal rights of children. Topics may include juvenile justice, gang offenses, free speech and Internet censorship, religious rights, child custody and support, adoption, foster care, abuse and sexual harassment, special needs, public benefits, and medical care. Enrollment restricted to legal studies majors during priority period. The Staff

151. Politics of Law. *

Uncovers the important debates in politics and law around the functions of courts, litigation, and rights--and the political nature of law itself. Course is interdisciplinary, and draws from literature in political science, law, and sociology. (Also offered as Politics 151. Students cannot receive credit for both courses.) Enrollment restricted to politics, legal studies, and Latin American and Latino studies/politics combined majors during priority period. M. Massoud

152. Courts and Litigation. *

A study of the role of courts in society and the uses of litigation to address and deflect social problems. Focus is on recent developments in American litigation, but comparative materials may be considered. Enrollment restricted to legal studies majors during priority period. The Staff

154. The Legal Profession. *

Lawyers stand between the legal system and those who are affected by it. Examines this relationship descriptively and normatively, and from the point of view of sociological theory. Concentrates on the U.S. profession, with some comparative material. Enrollment restricted to legal studies majors during priority period. The Staff

155. Topics in American Legal History: Making of American Constitutionalism.

Explores some aspects of early American constitutional thought, particularly immediately preceding the American Revolution situating early colonial constitutional thought within some of the larger themes and controversies of the 17th-century English constitutionalism, then considering some aspects of American constitutional thought in the founding period against the background of the colonial experience. Prerequisite(s): permission of instructor: selection based on the ability to do very advanced work. Enrollment restricted to legal studies majors during priority period. Enrollment limited to 20. The Staff

156. Administrative Jurisprudence. *

The rise of the regulatory state brings with it a host of questions regarding the exercise of state power and separation of powers. Takes up some of these questions; in particular, questions about administrative agencies and their relationship to the judiciary, the legislature and private individuals and groups. Enrollment restricted to legal studies majors during priority period. The Staff

157. Political Jurisprudence. *

Explores some themes in legal and political theory, especially on the relationship of theories of justice, law, and ethics. Enrollment restricted to legal studies majors during priority period. The Staff

159. Property and the Law. F

Beginning with an examination of the concept of property, the class covers how different cultures characterize property and determine "ownership" and the laws and policies that define property in modern society. Topics include theories of property law, common property, property and natural resources, zoning, regulatory takings, and property on the Internet. Enrollment restricted to legal studies majors during priority period. R. Langridge

160A. Industrial Organization. W

The structure and conduct of American industry with strong emphasis on the role of government, regulation, anti-trust, etc. The evolution of present-day industrial structure. The problems of overall concentration of industry and of monopoly power of firms. Pricing, output decisions, profits, and waste. Approaches include case study, theory, and statistics. (Also offered as Economics 160A. Students cannot receive credit for both courses.) Prerequisite(s): Economics 100A or 100M. The Staff

160B. International Law. S

Origins and development of international law: international law is examined both as a reflection of the present world order and as a basis for transformation. Topics include state and non-state actors and sovereignty, treaties, the use of force, and human rights. (Formerly course 173.) (Also offered as Politics 160B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. M. Massoud

162. Legal Environment of Business. *

A study of law and the legal process, emphasizing the nature and function of law within the U.S. federal system. Attention is given to the legal problems pertaining to contracts and related topics, business association, and the impact of law on business enterprise. (Also offered as Economics 162. Students cannot receive credit for both courses.) Prerequisite(s): Economics 100A. R. Bosso

167. Politics of International Trade. *

Examines key issues in international trade, including the distribution of gains, fair trading practices, and preferential trade agreements. Focuses on the political dimensions of trade, the rules of the international trade system, and conflicts within countries that international trade generates. (Also offered as Politics 167. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. The Staff

169. Economic Analysis of the Law. S

The application of the theories and methods of neoclassical economics to the central institutions of the legal system, including the common law doctrines of negligence, contract, and property; bankruptcy and corporate law; and civil, criminal, and administrative procedure. (Also offered as Economics 169. Students cannot receive credit for both courses.) Prerequisite(s): Economics 100A or 100M or permission of instructor. D. Wittman

171. Law of War. *

Examines legal regulation of international violent conflict. Students examine development of normative standards within international law and creation of institutions to both adjudicate violations and regulate conduct. (Also offered as Politics 171. Students cannot receive credit for both courses.) Enrollment restricted to legal studies majors during priority enrollment only. The Staff

175. Human Rights. S

Embraces an interdisciplinary approach to the study of human rights. Captures the malleable nature of human rights and the contours of its dual role as both law and discourse. (Also offered as Politics 175. Students cannot receive credit for both courses.) Prerequisite(s): course 160B. Enrollment restricted to legal studies majors during priority enrollment. M. Massoud

183. Women in the Economy. *

Study of gender roles in economic life, past and present. Topics include occupational structure, human capital acquisition, income distribution, poverty, and wage differentials. The role of government in addressing economic gender differentials is examined. (Also offered as Economics 183. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; Economics 1, 2, and 100A; Economics 113 strongly recommended. (General Education Code(s): W.) J. Poole

190R. Comparative Law and Society. *

Interdisciplinary investigation into functions of law across political, historical, and cultural contexts. Examines the international and comparative turn in public law scholarship and the role of law-based strategies in state building. Reviews literature in law, political science and legal anthropology. (Also offered as Politics 190R. Students cannot receive credit for both courses.) Prerequisite(s): course 160B. Enrollment restricted to senior legal studies majors. Enrollment limited to 20. M. Massoud

193. Field Study. F,W,S

Field research performed off-campus, under the supervision of a member of the legal studies faculty. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195A. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

195B. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

195C. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

196. Senior Capstone. W,S

Examines related legal topics from an interdisciplinary perspective. Each focuses broadly on the relationship between law as a distinct system and law as an attempt to achieve justice, which requires that law remain open to claims of political morality generally. To what extent are legal norms internal to a separate system called "law" and to what extent are claims of political right in general relevant to question of what law is? Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior legal studies majors. (General Education Code(s): W.) The Staff

198. Independent Field Study. F,W,S

Individual studies undertaken off-campus for which faculty supervision is not in person, but by correspondence. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Individual studies undertaken off-campus for which faculty supervision is not in person, but by correspondence. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

A student normally approaches a faculty member and proposes a course 199 on a subject he or she has chosen. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

A student normally approaches a faculty member and proposes a course 199 on a subject he or she has chosen. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Linguistics

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241 and 243 Stevenson College

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Lower-Division Courses

50. Introduction to Linguistics. F

An introduction to the major areas, problems, and techniques of modern linguistics.

(General Education Code(s): SI, IH.) R. Mester

53. Semantics I. F,W

Introduction to the logical foundations of natural language semantics. Logical and semantic relations, simple set theory, logical representations (propositional and predicate calculi, modal and tense logics) and their interpretations. A basic literacy course in the language of logical representation. (General Education Code(s): IH.) P. Anand, D. Farkas

80C. Language, Society, and Culture. S

The study of language from a sociological perspective. Multilingualism, language change and variation, pidgins and creoles, the origin and diversification of dialects. (General Education Code(s): CC, T5–Humanities and Arts or Social Sciences.) J. Padgett

80D. Language and Mind. W

A critical overview of the research program initiated by Noam Chomsky and its implications for theories of the human mind and brain. (Formerly Language and Mind: Chomsky's Program.) (General Education Code(s): T5–Humanities and Arts or Social Sciences.) M. Wagers

80V. Structure of the English Vocabulary. *

A systematic study of the elements of English words: besides the practical goal of vocabulary consolidation and expansion, explores the historical origin and development of word elements, as well as their sound, meaning, and function in the contemporary language. (General Education Code(s): T4–Humanities and Arts.) The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

101. Phonology I. W,S

Introduction to how sounds pattern in grammars—why they vary, how they combine, etc. Emphasis is on developing theories to explain the patterns. Topics include distinctive feature theory, phonemic analysis, autosegmental phonology, and principles of

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■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
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■ Education
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■ Environmental Studies
■ Feminist Studies
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■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
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■ Molecular, Cell, and Developmental Biology
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syllabification and stress. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 50. (General Education Code(s): W.) J. Ito, R. Mester

102. Phonology II. F

Advanced phonological theory. Topics include markedness; underspecification theories; advanced topics in feature geometry, syllable theory, and stress theory; and optimality theory. Readings include published articles. Emphasis on theory construction and argumentation based on data. Prerequisite(s): course 101. J. Ito

105. Morphology. F

Study of the principles of word formation: derivation, inflection, and compounding; cross-linguistic study of morphological processes, morphological investigation and analysis. Prerequisite(s): course 111 or 112, and course 101. Offered in alternate academic years. J. Hankamer

108. Poetry and Language. W

An introduction to the linguistic aspects of poetry, e.g., rhyme, meter, and larger-scale organization of poetic form. The emphasis is on English poetry, complemented by brief sketches of other poetic traditions. Prerequisite(s): course 101, and course 111 or 112. Offered in alternate academic years. (General Education Code(s): TA.) S. Chung

111. Syntactic Structures. S

Provides a basic introduction to the methods and results of generative grammar. It simultaneously provides an overview of the major syntactic constructions of English. (Formerly course 55.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): IH.) A. Deal

112. Syntax I. F,W

An introduction to syntactic investigation, developed through the study of central aspects of English syntax. A major purpose is to introduce students to the study of language as an empirical science. (Formerly course 52.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): IH.) S. Chung, M. Toosarvandani, J. Hankamer

113. Syntax II. S

Further aspects of English syntax; universal and language-particular constraints on syntactic structures and rules. Further developments and extensions of generative theory. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 53 and 112. (General Education Code(s): W.) J. McCloskey

114A. Syntax III. F

Advanced topics in syntax and semantics. Prerequisite(s): course 113, satisfaction of the Entry Level Writing and Composition requirements and permission of instructor. (General Education Code(s): W.) J. McCloskey

114B. Readings in Syntax. *

Introduces reading the primary literature in syntax. Readings will vary. Emphasis is on how to read technically difficult works, evaluate arguments, and appreciate competing views. Coursework includes readings, presentations, and short response papers. Enrollment by permission of instructor. Prerequisite: course 113. The Staff

114C. Topics in Syntax. *

Advanced undergraduate course devoted to a topic in syntax. Topics vary and may include ellipsis, binding, agreement phenomena, alternative frameworks. Coursework includes problem sets, readings, presentations, and a term paper. Enrollment by permission of instructor. Prerequisite: course 113. The Staff

116. Semantics II. W

Major issues in natural language semantics: nature of lexical entries, thematic relations, propositional representation or "logical form"; relation between semantic interpretation and syntactic representations, quantification and scope relations, reference and presupposition, coreference and anaphoric relations. Prerequisite(s): course 53, and either course 111 or 112. P. Anand

117. Pragmatics. F

Covers topics central in the study of pragmatics, the interpretation of language use. Topics

Management UCDC Program Writing Program Theater Arts Yiddish	<p>include conversational implicature, speech acts and discourse understanding, and social deixis. Prerequisite(s): course 53. D. Farkas</p> <p>118. Semantics III. S Uses the tools learned in courses 53 and 116 (Semantics I and Semantics II), giving students the opportunity to explore important topics with heavy emphasis placed on reading primary-source literature. Readings form the basis for weekly lectures and the discussion section. Prerequisite(s): course 116 and permission of instructor. Enrollment limited to 25. D. Farkas</p> <p>120. Structure of English. * Survey of grammatical structure of English and terminology of grammatical description. Covers phonological, morphological, and syntactic structure of English and contrasts it with other languages. Prerequisite(s): course 111 or 112, and 101. The Staff</p> <p>124. Language Typology. S Introduces the branch of linguistics whose goal is to describe and explain the structural diversity of the world's languages. Focuses on what is known about variation in particular domains (e.g., syllable structure, word order, evidentiality), and how it might be explained. Prerequisite(s): course 111 or 112, and course 101. Enrollment limited to 40. M. Toosarvandani</p> <p>125. Foundations of Linguistic Theory. * Survey of some of the history and foundational assumptions of generative grammar; also looks at some of the influence of generative linguistic theorizing on disciplines outside linguistics, notably psychology and philosophy. Prerequisite(s): course 113 or 116. Enrollment limited to 25. The Staff</p> <p>140. Language Change. S Methods and problems in the study of change in linguistic systems. Reconstruction of proto-languages; the comparative method. Theories of change and implications for the theory of grammar. Prerequisite(s): course 102. Enrollment limited to 25. R. Mester</p> <p>141. Ellipsis. W An introduction to and survey of the ellipsis in natural language, including the typology of ellipsis processes, cross-linguistic uniformity and variation in ellipsis, and theoretical approaches and issues. Prerequisite(s): courses 53 and 101, and 111 or 112 The Staff</p> <p>144. Computational Methods for Linguists. * Practical introduction to computational methods for linguists. Topics covered include: database development; indexation and search; morphological and syntactic parsing; modern annotation methodologies. Students concurrently learn Python and Javascript. No background in programming required. Prerequisite(s): courses 50, 53, and either 111 or 112. Enrollment restricted to linguistics and language studies majors. The Staff</p> <p>145. Native Languages of North America. * Selective survey of the indigenous languages of North America, including a formal/structural component and an historical/social component. Topics include typological properties of these languages, current status, and revitalization efforts. Prerequisite(s): course 101, and either course 111 or 112. The Staff</p> <p>147. Quantitative Methods in Linguistics. W Introduces quantitative methods for linguistics. Focuses on categorical data and continuous data, and using R. Students learn the basics of probability, statistics, and experimental design, and use R to apply them to linguistic data sets. Prerequisite(s): courses 53 and 101, and either course 111 or 112. (General Education Code(s): SR.) A. Brasoveanu</p> <p>151. Phonetic Analysis. W Introduction to instrumental phonetic analysis—analysis using experimental methods. Emphasis is on the acoustics and perception of speech. Prerequisite(s): course 101. G. McGuire</p> <p>152. Applied Phonetics. * Examines areas in which phonetic analysis and experimentation are used in practice. Emphasizes problem-solving, experiments, and analytical tasks. Prerequisite(s): course 151. Enrollment limited to 25. The Staff</p>
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154. Language and Social Identity. S
Introduction to sociolinguistics exploring the relationship between language and such social parameters as social status, ethnicity, race, gender, etc., including the role of language differences in the creation of social stereotypes. Emphasis on gathering, examining, and reporting data. Prerequisite(s): course 101, and either course 111 or 112. Enrollment limited to 25. G. McGuire
155. Language and Cognition. *
Introduces and examines some of the foundational assumptions, practices, and methods of generative grammar in comparison to those of other areas of cognitive science, notably psychology and philosophy. Prerequisite(s): course 111 or 112, 53, and 101. The Staff
157. Psycholinguistics and Linguistic Theory. F
Theory and methods in psycholinguistics, covering perception, production, and acquisition of language and linguistic structure. A hands-on, laboratory-style introduction to the topic, focusing on the relation between experimental findings and linguistic theory. Students cannot receive credit for this course and course 257. Prerequisite(s): course 102 or 105 or 113 or 116. Enrollment restricted to linguistics and language studies majors. (General Education Code(s): SR.) M. Wagers
158. Advanced Psycholinguistics. *
Advanced topics in psycholinguistics and experimental linguistics, contemporary memory models, computational models of comprehension and production, and neurolinguistic findings and methodologies. Student work revolves around an extended research project in which students learn to apply advanced analytical techniques. Prerequisite(s): course 157. Enrollment restricted to linguistics and language studies majors. Enrollment limited to 12. The Staff
160. Language Engineering. *
Addresses a particular problem in language engineering, chosen for its practical and theoretical interest and its tractability. The entire course focuses on a team project to design a solution to the problem. Permission of instructor required. The Staff
181. Structure of Romance Languages. *
Discusses topics in the phonology, syntax, and semantics of Romance languages, with emphasis left to the discretion of the instructor. Students read original research articles and pursue empirical investigation of Romance languages by collecting data from scholarly publications, fieldwork, and/or corpus analysis. Some knowledge of Italian, French, or Spanish is required. Prerequisite(s): course 111 or 112, and course 101. The Staff
182. Structure of Spanish. *
The phonology and syntax of Spanish, studied from a modern linguistic perspective. Some knowledge of Spanish is required. Prerequisite(s): course 111 or 112, and course 101. The Staff
183. Structure of French. *
The phonology, morphology, and syntax aspects of French. Some knowledge of French is helpful. Prerequisite(s): course 111 or 112, and 101. The Staff
185. Structure of Russian. *
The phonology, morphology, and syntax of Russian. Some knowledge of Russian is helpful. Prerequisite(s): course 111 or 112, and course 101. Enrollment limited to 30. Offered in alternate academic years. The Staff
186. Structure of German. *
Phonological, morphological, and syntactic aspects of the structure of the German language. Some knowledge of German is required. Prerequisite(s): course 111 or 112, and course 101. The Staff
187. Structure of Japanese. *
The phonology, morphology, and syntax of Japanese. Some knowledge of Japanese is required. Prerequisite(s): course 111 or 112, and course 101. Offered in alternate academic years. The Staff
188. Structure of Turkish. *
The phonology, morphology, and syntax of Turkish. Prerequisite(s): course 111 or 112, and

	course 101. The Staff 189. Structure of Arabic. * The phonology, morphology, and syntax of Arabic. (Mainly modern standard, but also some regional dialects.) No knowledge of Arabic is required. Pre-requisite(s): course 101, and course 111 or 112. The Staff
	193. Field Study. * Students submit petition to sponsoring agency. The Staff
	195. Senior Thesis. F,W,S Deadline for submission of thesis proposal is one year in advance of proposed completion. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
	198. Independent Field Study. F,W,S Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision by correspondence). Preparation and approval must be completed by the fifth day of instruction of any given quarter. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
	199. Tutorial. F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff
	199F. Tutorial (2 credits). F,W,S Students submit petition to sponsoring agency. May be repeated for credit. The Staff
<h2>Graduate Courses</h2>	
	211. Phonology A. F First part of a three quarter introduction to phonology. Topics of the sequence include fundamentals of acoustic phonetics; introduction to optimality theory; theories of syllabification, stress, and prosodic organization; prosodic morphology; advanced issues in faithfulness and correspondence; segmental and suprasegmental processes. Enrollment restricted to graduate standing or consent of instructor. J. Padgett
	212. Phonology B. W Second part of a three quarter introduction to phonology. Topics of the sequence include fundamentals of acoustic phonetics; introduction to optimality theory; theories of syllabification, stress, and prosodic organization; prosodic morphology; advanced issues in faithfulness and correspondence; segmental and suprasegmental processes. Prerequisite(s): course 211. Enrollment restricted to graduate standing or consent of instructor. J. Ito
	214. Phonetics. S Introduction to phonetic theory concentrating on acoustic phonetics and speech perception along with common experimental methods, the role of phonetic principles in explaining phonological patterns and markedness. Enrollment restricted to graduate students, or by permission of instructor. Enrollment limited to 12. G. McGuire
	216. Phonology Proseminar. * One or more topics in phonological theory. Topics vary from year to year, covering literature and current research in phonology. Prerequisite(s): course 212. Enrollment restricted to graduate standing or consent of instructor. May be repeated for credit. The Staff
	219. Phonology Seminar. W Advanced topics in phonology drawn from the current research interests of the instructor. Prerequisite(s): course 212. Enrollment restricted to graduate standing or consent of instructor. May be repeated for credit. R. Mester
	219G. Phonology Seminar (3 credits). W Advanced topics in phonology drawn from the current research interests of the instructor. Three-credit version of course 219. Does not require a final paper. Prerequisite(s): course 212. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. R. Mester
	221. Syntax A. F Introduction to syntactic theory. Phrase structure; subcategorization; lexical entries;

passive; infinitival constructions. Enrollment restricted to graduate standing or consent of instructor. A. Deal

222. Syntax B. W

Continuation of Syntax A. The syntax of unbounded dependencies, including constituent questions, relative clauses, clefts, topicalization. Constraints on extraction; unbounded versus successive cyclic movement; the licensing of gaps. Prerequisite(s): course 221. Enrollment restricted to graduate standing or consent of instructor. M. Toosarvandani

226. Proseminar in Syntax. W

In-depth investigation of some topic in syntactic theory. Topics vary from year to year, covering literature and current research in grammatical structure from varying theoretical perspectives. Prerequisite(s): course 222. J. McCloskey

226G. Proseminar in Syntax (3 credits). W

In-depth investigation of some topic in syntactic theory. Topics vary from year to year, covering literature and current research in grammatical structure from varying theoretical perspectives. Three-credit version of course 226. Does not require a final paper.

Prerequisite(s): course 222. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. J. McCloskey

229. Syntax Seminar. F,S

Advanced topics in syntax drawn from the current research interests of the instructor.

Prerequisite(s): course 222. Enrollment restricted to graduate standing or consent of instructor. May be repeated for credit. M. Toosarvandani, A. Deal

229G. Syntax Seminar (3 credits). F,W

Advanced topics in syntax drawn from the current research interests of the instructor.

Three-credit version of course 229. Does not require a final paper. Prerequisite(s): course 222. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. M. Toosarvandani, J. McCloskey

231. Semantics A. W

Introduction to linguistic semantics: nature of lexical entries, thematic relations, representation of logical form; relation between semantic interpretation and syntactic representation, quantification and scope relations, reference and presupposition.

Enrollment restricted to graduate standing or consent of instructor. A. Brasoveanu

232. Semantics B. S

Model-theoretic semantics for natural language. Truth-conditional, compositional semantics. Various logical ontologies and their application to natural language categories. Dynamic interpretation of discourse and anaphoric relations. Treatment of illocutionary force. Prerequisite(s): course 231. Enrollment restricted to graduate standing or consent of instructor. D. Farkas

236. Proseminar in Semantics. *

In-depth investigation of some topic in semantics and pragmatics. Topics vary from year to year, covering literature and current research in linguistic semantics and pragmatics.

Prerequisite(s): course 231. Enrollment restricted to graduate standing or consent of instructor. The Staff

236G. Semantics Proseminar (3 credits). *

In-depth investigation of some topic in semantics and pragmatics. Topics vary from year to year, covering literature and current research in linguistic semantics and pragmatics.

Three-credit version of course 236. Does not require a final paper. Prerequisite(s): course 231. Enrollment restricted to graduate students, or by consent of instructor. Enrollment limited to 12. May be repeated for credit. The Staff

239. Semantics Seminar. F,S

Advanced topics in semantics drawn from the current research interests of the instructor.

Prerequisite(s): course 232. Enrollment restricted to graduate standing or consent of instructor. May be repeated for credit. A. Brasoveanu, P. Anand

239G. Semantics Seminar (3 credits). F,S

Advanced topics in semantics drawn from the current research interests of the instructor.

Three-credit version of course 239. Does not require a final paper. Prerequisite(s): course

232. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. A. Brasoveanu, P. Anand

240. The Pedagogy of Linguistics (1 credit). F,W

Provides training for graduate students in university-level pedagogy in general and in the pedagogy of linguistics specifically. Under the supervision of a faculty member, coordinated by a graduate student with substantial experience as a teaching assistant. May be repeated for credit. P. Anand

244. Computational Methods for Linguists. *

Practical introduction to computational methods for linguists. Topics covered: database development; indexation and search; morphological and syntactic parsing; and modern annotation methodologies. Students concurrently learn Python and JavaScript. No background in programming is required. Enrollment restricted to graduate students, or by consent of the instructor. Enrollment limited to 12. The Staff

245. Computational Models of Discourse and Dialogue. W

Focuses on classic and current theories and research topics in the computational modeling of discourse and dialogue, with applications to human-computer dialogue interactions; dialogue interaction in computer games and interactive story systems; and processing of human-to-human conversational and dialogue-like language such as e-mails. Topics vary depending on the current research of the instructor(s) and the interests of the students. Students read theoretical and technical papers from journals and conference proceedings and present class lectures. A research project is required. (Also offered as Psychology 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. May be repeated for credit. The Staff

249. Morphology Seminar. *

Presents theoretical and descriptive issues, particularly those raised by the framework of distributed morphology and its current competitors. Course work consists of readings, squibs, and a term paper. Enrollment restricted to graduate students. The Staff

249G. Morphology Seminar (3 credits). *

Presents theoretical and descriptive issues, particularly those raised by the framework of distributed morphology and its current competitors. Coursework consists of readings and squibs. Three-credit version of course 249. Does not require a final paper. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. The Staff

257. Psycholinguistics and Linguistic Theory. S

Theory and methods in psycholinguistics, covering perception, production, and acquisition of language and linguistic structure. A hands-on, laboratory-style introduction to the topic, focusing on the relation between experimental findings and linguistic theory. Students cannot receive credit for this course and course 157 or 257G. Enrollment restricted to graduate students. M. Wagers

258. Advanced Psycholinguistics. *

Advanced topics in psycholinguistics and experimental linguistics. Contemporary memory models. Computational models of comprehension and production. Neurolinguistic findings and methodologies. Student work revolves around an extended research project in which students learn to apply advanced analytical techniques. Graduate students have separate evaluation criteria. Students cannot receive credit for this course and course 258G. Prerequisite(s): course 257. Enrollment restricted to graduate students. The Staff

258G. Advanced Psycholinguistics (3 credits). *

Advanced topics in psycholinguistics and experimental linguistics. Contemporary memory models. Computational models of comprehension and production. Neurolinguistic findings and methodologies. Student work revolves around an extended research project in which students apply advanced analytical techniques. Graduate students have separate evaluation criteria. Three-credit version of course 258. Does not require a final paper. Students cannot receive credit for this course and course 258. Prerequisite(s): course 257. Enrollment restricted to graduate students. Enrollment limited to 12. The Staff

259. Phonetics Seminar. F

Advanced topics in acoustic and articulatory phonetics. Prerequisite(s): course 214.

Enrollment restricted to graduate students. G. McGuire

259G. Phonetics Seminar (3 credits). F

Advanced topics in acoustic and articulatory phonetics. Three-credit version of course 259.

Does not require a final paper. Prerequisite(s): course 214. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. G. McGuire

279. Research Seminar in Psycholinguistics. *

Contemporary research in psycholinguistic theory models, and methods. Topics vary with research interests of faculty and graduate students. Enrollment restricted to graduate students, or by consent of instructor. Enrollment limited to 12. May be repeated for credit. The Staff

280. Proseminar in Experimental Linguistics. F

Examines experimental design and analysis for gathering linguistic data; the advantages and disadvantages of major response measures, including reaction times; interaction with extra-grammatical factors; and statistics on categorical and continuous measures. Students present results in research papers. Students cannot receive credit for this course and course 280G. Enrollment restricted to graduate students. M. Wagers

280G. Proseminar in Experimental Linguistics (3 credits). F

Examines experimental design and analysis for gathering linguistic data: the advantages and disadvantages of major response measures, including reaction times; interaction with extra-grammatical factors; and statistics on categorical and continuous measures. Three-credit version of course 280. Does not require a final paper. Enrollment restricted to graduate students. Enrollment limited to 12. M. Wagers

282. Field Methods. *

Exploration of a language previously unfamiliar to students through elicitation from a native speaker. Discussion of elicitation techniques. Students investigate selected aspects of the language in depth. Enrollment restricted to graduate students. The Staff

290. Research Seminar. W

A research seminar for undergraduate and graduate students to develop the skills of the profession. Critical reading, reviewing, teaching, presentation, and writing. Students submit petition to sponsoring agency. Enrollment restricted to graduate standing or consent of instructor. Enrollment limited to 10. J. Ito

295. Directed Reading. F,W,S

Directed reading which does not involve a term paper. Enrollment restricted to graduate standing or consent of instructor. The Staff

296. Linguistics Colloquium (2 credits). F,W,S

Independent graduate-level activities and assignments relating to professionalism; organizing and attending colloquium and conferences; participation in discussion at such events; and preparation of commentaries on academic papers. Students submit petition to sponsoring agency. Enrollment restricted to linguistics graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Enrollment restricted to graduate standing or consent of instructor. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

The Staff

* Not offered in 2014-15

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Literature

Lower-Division Courses

1. Literary Interpretation. F,S

Close reading and analysis of literary texts, including representative examples of several different genres and periods. An introduction to practical criticism required of all literature majors; should be completed prior to upper-division work in literature. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to first-year students and sophomores, or literature and proposed literature majors and literature minors. (General Education Code(s): TA, IH, W.) (F) S. Gillman, (S) K. Bassi

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division students under faculty supervision. (See course 192.)
The Staff

61. Introduction to Literary Genres.

61F. Introduction to Reading Fiction. W

Close reading of short stories and some novels with the aim of developing critical methods for the analysis and interpretation of prose fiction. Topics include character, plot, narrative structure, and the poetics of prose. (General Education Code(s): TA, IH.) J. Fazzino

61H. Introduction to Film Analysis. W

Introduces techniques for the close reading of film, with particular attention to film form (shot-by-shot analysis), cinematic codes, narrative structure, and the ideological burdens of the basic cinematic apparatus. Case studies of select works by major directors from the Hollywood studio period. (General Education Code(s): IM, IH.) D. Bell

61J. Introduction to Jewish Literature and Culture. *

Surveys 3,000 years of Jewish literature and culture. Themes include origins of the Jews in the ancient world; formation and persistence of the Jewish diaspora; coherence and diversity of Jewish experience; Jewish narrative and textual traditions; interaction

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between Jews and other cultures; tensions between tradition and modernity. (General Education Code(s): ER, IH, E.) M. Baumgarten

61K. Introduction to the Fairy Tale. *

Introduces the fairy tale as a genre, including historical, cultural, and political contexts; relation to identity, performance, transnationalism; contemporary transformations of tales and their expression in other media (e.g., film, art, theater); and current scholarship. (General Education Code(s): TA.) K. Lau

61M. Approaches to Classical Myth. *

Introduction to Greek myths, including selected ancient texts and visual artifacts, historical and cultural context of their creation and reception, modern theoretical approaches such as structuralism and psychoanalysis, and interpretations in various media. (General Education Code(s): TA, IH.) M. Gamel

61P. Introduction to Reading Poetry. F

An introduction to selected modes and forms of poetry with an emphasis on close textual analysis. Examples will be taken from different historical periods and poetic traditions. Course topics changes; please see the Schedule of Classes for the current topic. (General Education Code(s): TA, IH.) C. Chen

61R. Race in Literature. *

An investigation into the various uses and abuses of "race" in literature. Course topic changes; see the Schedule of Classes for current topic. (General Education Code(s): ER, IH, E.) C. Hong

61W. Writing and Research Methods. F

Intensive training in the practice of literary analysis and the writing of polished research papers. Topics include manuscript sources, variant editions, reading techniques, publication technologies, web research. Workshop format. Strongly recommended for majors and/or transfer students who have completed course 1 or its equivalent. (General Education Code(s): IH, W.) S. Vesco

80. Topics in Literature.

80E. Animals and Literature. S

Examines the copresence in literary works (fiction and non-fiction prose and poetry) of nonhuman and human animals from antiquity to the present across a variety of cultures. (General Education Code(s): TA.) C. Freccero

80I. Topics in American Culture. *

A history of one or more cultural genres in written, visual, and/or musical forms. Course topic changes; please see the Schedule of Classes for the current topic. (General Education Code(s): T4–Humanities and Arts.) M. Gamel

80L. The Holocaust: The Destruction of European Jewry. W

Focus is on the destruction of the Jews of Europe by Nazi Germany. Issues are historically grounded, and include works of literature, social sciences, philosophy, and film. (General Education Code(s): ER, T4–Humanities and Arts, E.) M. Baumgarten, P. Kenez

80N. Latino Expressions in the U.S. F

An introduction to Latino literature and culture in the U.S. A study of the creative expressions of Chicanos/as, Nuyoricans, Cuban Americans, and other Latin Americans in the U.S. (General Education Code(s): ER, T4–Humanities and Arts, E.) K. Gruesz

80V. Literature and History. S

Examines literature's relationship to the past and to the experience of history. Course topic changes; please see the Schedule of Classes for current topic. (General Education Code(s): TA, T4–Humanities and Arts.) A. Bivens

80Z. Introduction to Shakespeare. F

Study of representative plays. No previous experience with Shakespeare is assumed. (General Education Code(s): TA, T4–Humanities and Arts.) A. Heald

99. Tutorial. F,W,S

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99F. Tutorial (2 credits). F,W,S
Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

101. Theory and Interpretation. W,S

Contemporary approaches to literary and cultural theory, with emphasis on how theoretical perspectives advance and broaden the reading of literary texts. Introduction to important new theoretical developments and their antecedents. Literature majors should complete this course as early as possible. Course topic changes; see the Schedule of Classes for current topic. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to literature and proposed literature majors and literature minors. May be repeated for credit. (General Education Code(s): W.) (W) W. Godzich, (S) C. Connery

102. Translation Theory. W

Promotes the understanding of translation and its role in redefining meanings across epochs and cultures, in establishing common norms, and in advancing mutual intelligibility; but also providing encounters with absolute alterity. Actual translations are used as case studies. Prerequisite(s): one year of college-level, non-English language study or the equivalent reading ability in a non-English language. (General Education Code(s): TA.) G. Sahota

191. Methodologies of Teaching (3 credits). F

This 3-credit course provides students with the theoretical and practical knowledge to help others become more careful, sensitive, and sophisticated readers of complex texts. Enrollment by permission of the instructor. (General Education Code(s): PR-S.) K. Gruesz

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Graduate Courses

200. Proseminar. F

The proseminal provides a common experience for entering students, facilitates exchange of ideas and approaches to literary and extra-literary texts, critical issues, and theoretical problems. It focuses on broad aspects of the history of theory and criticism, on the students' critical writing, and on aspects of professional development. Enrollment restricted to graduate students. S. Gillman

201. The Pedagogy of Literature (1 credit). F

Provides training for graduate students in university-level pedagogy in general and in the pedagogy of literature specifically. Coordinated by a graduate student who has had substantial experience as a teaching assistant, under the supervision of a faculty member. Enrollment restricted to graduate students. May be repeated for credit. S. Gillman

202. Colloquium (2 credits). F,W,S

Student receives credit for attending a designated number of freestanding lectures, colloquia, symposia, or conferences during the term and reports orally, or in writing, to instructor. Enrollment restricted to graduate students. May be repeated for credit. The Staff

204. Readings in Literature (2 credits). *

Focuses on selected texts or authors in literature and/or theory. Students meet with instructor to discuss readings and deepen their knowledge on a particular author, critic, theorist, or text. Enrollment restricted to graduate students. May be repeated for credit. The Staff

291F. Advising (2 credits). F,W,S

Independent study formalizing the advisee-adviser relationship. Regular meetings to plan, assess, and monitor academic progress and to evaluate course work as necessary. May be used to develop general bibliography of background reading and trajectory of study. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent Study. The Staff

297F. Independent Study (2 credits). F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.

May be repeated for credit. The Staff

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Creative Writing

Lower-Division Courses

10. Introduction to Creative Writing. F,W,S

Introduction to the crafts and techniques of poetry, fiction, and creative non-fiction, identifying and exploring traditional and non-traditional literary forms and genres while working on individual creative writing projects. An author reading and two workshop sections per week. Prerequisite: satisfaction of the Entry Level Writing requirement.

Enrollment restricted to first-year students, sophomores, and juniors. May be repeated for credit. (General Education Code(s): PR-C, A.) The Staff

52. Intermediate Fiction Writing. F,W,S

An intermediate-level course in fiction designed for prospective creative writing majors.

Prerequisite(s): submission of writing at first class meeting. May be repeated for credit.

(General Education Code(s): PR-C, A.) (F) M. Perks, (W) The Staff, (S) K. Yamashita

53. Intermediate Poetry Writing. F,W,S

An intermediate-level course in poetry designed for prospective creative writing majors.

Prerequisite(s): submission of writing at first class meeting. May be repeated for credit.

(General Education Code(s): PR-C, A.) (FS) G. Young,(W) C. Chen

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

170. Methods and Materials. W

Focuses on a particular process or subject used in the production of a literary text. Course is intended to work as a bridge between invention and scholarship. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the Creative Writing Literature concentration. Enrollment restricted to creative writing literature majors. May be repeated for credit. (General Education Code(s): PR-C, A.) The Staff

180. Advanced Writing: Fiction. F,W,S

Intensive work in writing fiction. Satisfies the Creative Writing Literature concentration.

Enrollment restricted to creative writing literature majors. May be repeated for credit.

(General Education Code(s): PR-C, A.) (F) M. Perks, (W) K. Yamashita, (S) The Staff

183. Advanced Writing: Poetry. F,W,S

Intensive work in writing poetry. Satisfies the Creative Writing Literature concentration.

Enrollment restricted to creative writing literature majors. May be repeated for credit.

(General Education Code(s): A.) (F) G. Young, (W) R.V. Wilson, (S) R.J. Wilson

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) The Staff

194. Creative Project Seminar.

Seminar offered to senior literature majors in the Creative Writing Literature concentration as a way to satisfy the senior exit requirement. All students are required to complete a creative writing project of significant length as part of the seminar course work. Attention is given to focusing of creative topics, review of work in progress, work rhythms, and revision. Prerequisite(s): Literature 101.

194A. Poetry Senior Seminar. S

Satisfies the Creative Writing Literature concentration; also satisfies the senior seminar distribution requirement. Prerequisite(s): Literature 101. Enrollment restricted to senior creative writing literature majors. R. Wilson

- 194B. Fiction Senior Seminar. S
Satisfies the Creative Writing Literature concentration; also satisfies the senior seminar distribution requirement. Prerequisite(s): Literature 101. Enrollment restricted to senior creative writing literature majors. K. Yamashita
195. Senior Essay. F,W,S
Satisfies the Creative Writing Literature concentration; also satisfies the Creative Writing senior exit distribution requirement. Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. Enrollment restricted to senior creative writing literature majors. The Staff
198. Group Tutorial. F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff
199. Tutorial. F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 199F. Tutorial (2 credits). F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

270. Methods and Materials. F
A combined seminar and creative-writing workshop with a concentrated focus on a particular problem, aspect, or genre of poetry or prose writing, this course includes reading and analysis of selected texts with critical responses and creative writing. The course topic changes; please see the Schedule of Classes for the current topic. Enrollment is restricted to graduate students. May be repeated for credit. K. Yamashita
271. Writing Workshop. W
In this graduate-level, multi-genre, workshop-based course, students develop their own creative projects of publishable quality under the guidance of the instructor. Enrollment is restricted to graduate students in the creative writing concentration or by permission of the instructor. May be repeated for credit. M. Perks

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English–Language Literature Upper-Division Courses

102. Canons.

- 102A. The Traditional British Canon, Part I. F
The constitution of the "canon" of English literature from Chaucer to Cowper. Satisfies the English and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. (General Education Code(s): TA.) J. Greene

- 102B. The Traditional British Canon, Part II. W
Explores poetry and prose from 1800 to 1950 through extensive reading in the Romantics, Victorians, Moderns, articulating the connections among them, connecting their work to key social, political, scientific, and technological moments defining these eras. Satisfies the English and Modern Literary Studies concentrations; also satisfies the Poetry distribution requirement. J. Kuskey

- 102D. The Traditional U.S. Canon, 1900 to the Present. *
Major works from 1900 to the present, with attention to their social and cultural context. Satisfies the English and Modern Literature concentrations. C. Chen

103. Periods and Movements.

- 103E. Studies in Romanticism. *
A survey of major Romantic themes and authors between 1780 and 1820. Explores relationships to pre-Romantic and post-Romantic authors. The main goal is to achieve familiarity with a wide range of individual poems in the general context of

Romanticism. Satisfies the English and Modern Literary Studies concentrations; also satisfies the Poetry distribution requirement. (General Education Code(s): TA.) H. Leicester

103J. Contemporary American Literature. *

A selective examination of major writings since WWII, with attention to both literary issues and historical context. Satisfies the English and Modern Literary Studies concentrations. May be repeated for credit. The Staff

110. Prose.

110A. Studies in the English Novel. *

From the 18th to the 20th century. Texts include work by Fielding, Austen, Bronte, Dickens, Conrad, and Woolf. Satisfies the English and Modern Literary Studies concentrations. (General Education Code(s): TA.) J. Kuskey

110B. The 18th-Century English Novel. *

The 18th-century novel from Defoe to Austen. Satisfies the English and Pre- and Early Modern Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. J. Greene

110C. The 19th-Century English Novel. S

The 19th-century novel: Austen to Bronte. Satisfies the English and Modern Literary Studies concentrations. J. Kuskey

110D. The 19th- and 20th-Century English Novel. F

The 19th- and 20th-century novel: Hardy to Joyce. The course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Modern Literature concentrations. J. Kuskey

110E. Victorian Prose. *

Victorian prophecy, Victorian criticism: an examination of some major writings of 19th-century nonfiction prose by Carlyle, Mill, Ruskin, Newman, Arnold, Pater, and Wilde, with a glance at the social context and the minor fictional forms of the era. Satisfies the English and Modern Literary Studies concentrations. J. Kuskey

110F. Nineteenth-Century American Fiction. *

Examination of selected fiction written between the end of the 18th century and the Civil War, with attention to historical and cultural as well as literary issues. Satisfies the English and Modern Literary Studies concentrations. (General Education Code(s): TA.) K. Gruesz

120. Poetry.

120A. Poetry of the 17th Century. S

Readings in the works of Donne, Jonson, Herbert, Herrick, Marvell, and others. Satisfies the English and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. (General Education Code(s): TA.) J. Greene

120B. Victorian Poetry. *

A reading of the major Victorian poets from Tennyson to early Yeats. Satisfies the English and Modern Literary Studies concentrations; also satisfies the Poetry distribution requirement. (General Education Code(s): TA.) The Staff

120C. Nineteenth-Century American Poetry. *

The major figures and important movements from Poe to Emerson through Whitman and Dickinson. Satisfies the English and Modern Literary Studies concentrations; also satisfies the Poetry distribution requirement. K. Gruesz

120F. American Poetry Since World War II. *

Major poets since World War II, with attention to leading movements and critical issues. Satisfies the English and Modern Literary Studies concentrations; also satisfies the Poetry distribution requirement. C. Chen

120H. Beat Literature and the World. *

Explores the sources and context of Beat writing, emphasizing the Beats' intense

interest in and engagement with the world at large. Includes works by major and minor Beat writers. Satisfies the English and Modern Literary Studies concentration; also satisfies the Poetry distribution requirement. (General Education Code(s): TA.) R. Wilson

120L. Topics in Poetry. S

Close reading--critical and creative--of poetry. Examines how poets teach, through their writing, to radically attend to reading. The course topics changes; please see the Schedule of Classes for the current topic. Satisfies the English concentration; also satisfies the Poetry distribution requirement. May be repeated for credit. (General Education Code(s): TA.) L. Shufran

140. Visual Media/Popular Culture.

140C. The Films of John Carpenter. *

Study of development and central themes of preeminent genre director of the "post-Hollywood" era, concentrating on central core of major works in horror/science fiction genres from *Halloween* to *In the Mouth of Madness*, with attention to the comedies and action films. Satisfies the English and Modern Literature concentrations. H. Leicester

150. Ethnic Writing.

150A. Afro-American Literature. W

Examination of Afro-American writing and cultural representations, with attention to the historical, cultural, and general literary contexts out of which they emerged and upon which they commented. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Modern Literary Studies concentrations. May be repeated for credit. (General Education Code(s): ER, E.) C. Chen

150C. Asian American Literature. *

Examination of Asian American literary works (fiction, poetry, dramatic essays) in the context of the historical presence of Asian Americans in the United States since the 1850s. Emphasis on comparison of select works from ethnic Asian writings. Satisfies the English and Modern Literature concentrations. (General Education Code(s): ER, E.) K. Yamashita

150E. American Indian Literature. *

Explores works of fiction, creative non-fiction, drama, and poetry written by American Indians. Focuses on historical and political issues within the text as well as on formal and thematic structures. Satisfies the English and Modern Literature concentrations. (Formerly Native American Literature: Inscribing the Native Self) (General Education Code(s): E.) The Staff

150F. African-American Women Writers. *

Explores the cultural, aesthetic, political, and feminist issues in select works by African-American women. Through close analysis of the works, students develop an understanding of the intersections that race, gender, and class play in the literary imaginations of these writers. Satisfies the English Language and Modern Literary Studies concentrations. (General Education Code(s): ER, E.) C. Chen

155. Regional Writing.

155B. Regions in American Literature. S

Examines development of regional writing in the U.S. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English and Modern Literary Studies concentrations. May be repeated for credit. R. J. Wilson

160. Transnational Writing.

160B. Empire and After in the Anglophone Novel. *

Examines fiction written in English, 1883 to 1948, in order to consider the complex relations--complicit, resistant, both--between literary and imperialist discourses. Likely novelists for study are Schreiner, Haggard, Conrad, Kipling, Forster, Hilton, Paton. Satisfies the English and Modern Literary Studies concentrations. (Formerly Empire and After in the British Novel.) May be repeated for credit. V. Cooppan

160C. Postcolonial Writing. W

Introduces students to a selection of postcolonial theory and texts. Satisfies the English and Modern Literature concentrations. May be repeated for credit. C. Hong

160F. Contemporary Transnational Literatures. *

Examines contemporary cultural production, including literature, music, and film, with close attention to social and political issues. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the English, Modern, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): CC.) The Staff

170. Individual Authors.

170A. Geoffrey Chaucer. *

Close study of Chaucer's poetry, with some attention to relevant cultural, philosophical, and historical issues in the context of the late medieval period. Particular emphasis on *The Canterbury Tales*. Satisfies the English and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. (General Education Code(s): TA.) H. Leicester

170B. Edmund Spenser. W

Studies in Spenser's major poetry: *Faerie Queene*, Book I; *Epithalamion*; *Mutabilitie Cantos*. Satisfies the English and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. H. Leicester

170C. William Shakespeare. W

Study of representative works by William Shakespeare. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirement. May be repeated for credit. (General Education Code(s): TA.) S. Keilen

170F. Charles Dickens. *

Study of representative work by Charles Dickens. Satisfies the English and Modern Literary Studies concentrations. May be repeated for credit. (General Education Code(s): TA.) The Staff

170G. Herman Melville. *

Study of representative work by Herman Melville, including novels and short stories. Satisfies the English and Modern Literary Studies concentrations. The Staff

170M. William Faulkner. *

A survey of Faulkner's early fiction; focus on development of theme and technique. Also considers Faulkner as a Southern historian, stressing the relationship between personal and regional experience in time. Satisfies the English and Modern Literary Studies concentrations. The Staff

180. Topics.

180B. The Gothic Imagination in Fiction, Film, and Theory. *

Readings include theoretical essays by Freud and Lacan and such fictions as "The Monk," "Frankenstein," "Dracula," "Maus," "The Yellow Wallpaper," and "Beloved." Films change each year, but may include "Alien" and "Blue Velvet." Satisfies the English and Modern Literary Studies concentrations. (General Education Code(s): TA.) The Staff

180D. Twain, Slavery, and the Literary Imagination. *

Using Mark Twain's later writings and other literary/non-literary materials, explores responses to popular and legal discourse on "blood," race, sex, resurgence of racism, and imperialism. Satisfies the English and Modern Literature concentrations. (General Education Code(s): ER.) S. Gillman

180H. Women's Literature. *

Works by women from the 18th century to the present, with special attention to the relationship of literature to history, psychology, and aesthetics. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Modern Literature concentrations. May be repeated for credit. (General Education

Code(s): TA.) The Staff

180K. War in Contemporary American Culture. S

Considers the treatment of war in American literature since World War II. Close attention paid to both literary form and relevant historical context. Also provides perspectives on, and critical tools for thinking about, contemporary armed conflict. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Modern Literature concentrations. (General Education

Code(s): TA.) B. Sanfilippo

180L. Representations of Hamlet. *

Examination of Shakespeare's Hamlet from various perspectives, including as a literary and historical object, and as a mirror of socio-political concerns. Readings include both precursors to Shakespeare and modern adaptations and revisions of the Hamlet story. Satisfies the English and Pre- and Early Modern concentrations; also satisfies the Pre- and Early Modern distribution requirement. The Staff

180M. Topics in American Literature and Culture. W,S

Studies in American literature and culture, with attention to historical context. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the English and Modern Literary Studies concentrations. May be repeated for credit.

(General Education Code(s): TA.) A. Athens, S. Gillman

180V. The Vampire in Literature and Popular Culture. F

Traces the vampire's appearance in different historical moments, different cultural contexts, and different genres and media to interrogate its place in the shifting cultural politics of gender and sexuality. Gender and sexuality are the primary lens of analysis through which to consider the ways in which they are entwined with race, ethnicity, sexuality, class, and other identity positions. Satisfies the English, Modern Literary Studies, and World Literature concentrations; also satisfies the Global distribution requirement. (Formerly American Studies 152.) (General Education

Code(s): TA.) K. Lau

190. Senior Seminars.

Seminar offered to literature majors as a way to satisfy the senior exit requirement. Offered at different times by different instructors, focus is on topics of interest in English-language literatures. All students are required to complete an essay of significant length as part of the seminar coursework. May be repeated for credit.

190A. Individual Authors. S

Intensive examination of works by individual authors. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English Literature concentration; also satisfies the Senior Seminar distribution requirement. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. H. Leicester

190C. Studies in 19th-Century British Literature. *

Study of selected authors or issues in 19th-century British literature. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English and Modern Literature concentrations; also satisfies the Senior Seminar distribution requirement. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. J. Kuskey

190F. Studies in U.S. Literature. W

Intensive examination of issues in U.S. literature. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English and Modern Literature concentrations; also satisfies the Senior Seminar distribution requirement.

Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. K. Gruesz

190K. Studies in Poetry. F

Studies in English-language poetry. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English concentration; also satisfies the Poetry and Senior Seminar distribution requirements. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. C. Chen

- 190L. Studies in English Language Literature. *
- Studies of selected authors or issues in English language literature. Course topic changes; see the Schedule of Classes for current topic. Satisfies the English Literature concentration; also satisfies the Senior Seminar distribution requirement.
- Prerequisite(s): Literature 101. Enrollment restricted to senior Literature majors. V. Cooppan
192. Directed Student Teaching. F,W,S
- Teaching of a lower-division seminar under faculty supervision. Students submit petition to sponsoring agency. The Staff
195. Senior Essay. F,W,S
- Students submit petition to sponsoring agency. Prerequisite(s): Literature 101. The Staff
198. Group Tutorial. F,W,S
- Students submit petition to sponsoring agency. May be repeated for credit. The Staff
199. Tutorial. F,W,S
- Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 199F. Tutorial (2 credits). F,W,S
- Students submit petition to sponsoring agency. The Staff

Graduate Courses

203. Periods and Movements. W,S
- Examines a particular historical period or literary movement. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. (W) K. Gruesz, (S) J. Greene
260. Transnational Literatures. *
- Investigation of English language literature which transcends national boundaries. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. K. Gruesz
270. Individual Authors. S
- Intensive examination of works by individual authors. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. S. Keilen
280. Topics in English Language Literature. W
- Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. R. Wilson
294. Teaching-Related Independent Study. F,W,S
- Directed graduate research and writing coordinated with teaching of undergraduates. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
295. Directed Reading. F,W,S
- Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
296. Special Student Seminar. F,W,S
- Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
297. Independent Study. F,W,S
- Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
299. Thesis Research. F,W,S
- Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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French Literature

Upper-Division Courses

131. The Middle Ages. W

Speaking, reading, and writing proficiency in French required. Study of 12th- and 13th-century texts, with attention to problems of history and social change. In modern translations with selected readings in Old French or Provencal. Course topic changes; see the Schedule of Classes for current topic. Satisfies the French and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. May be repeated for credit. S. Kinoshita

142. Studies in Poetry. *

Speaking, reading, and writing proficiency in French required. Emphasizes the close study of a limited number of poetic texts in terms of their linguistic, stylistic, and rhetorical devices. Course topic changes; please see Schedule of Classes for current topic. Satisfies the French and Modern Literary Studies concentrations. May be repeated for credit. W. Godzich

143. Theater and Drama. *

Speaking, reading, and writing proficiency in French required. Studies in French drama and theories of theatricality. Course topic changes; see the Schedule of Classes for current topic. Satisfies the French and Modern Literary Studies concentrations. May be repeated for credit. W. Godzich

152. Texts and Contexts. F

Speaking, reading, and writing proficiency in French required. Examines implications of social and political change in terms of literary theory and practice. Places equal emphasis on literary and other kinds of cultural texts: historical, political, and cinematic. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the French Literature concentration. May be repeated for credit. D. Bell

195. Senior Essay. F,W,S

Speaking, reading, and writing proficiency in French required. Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. The Staff

198. Group Tutorial. F,W,S

Speaking, reading, and writing proficiency in French required. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Speaking, reading, and writing proficiency in French required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Speaking, reading, and writing proficiency in French required. Students submit petition to sponsoring agency. The Staff

Graduate Courses

230. Studies in Literary and Cultural History. W,S

In-depth examination of one period of French literature. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. (W) S. Kinoshita, (W) R. Terdiman, (S), W. Godzich

240. Studies in Literary Genres. *

An in-depth examination of one genre of French literature. Course topic changes; see the Schedule of Classes for the current topic. Enrollment restricted to graduate students. May be repeated for credit. W. Godzich

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. The Staff

295. Directed Reading. F,W,S

Directed reading which does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit.

The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.

May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.

May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.

May be repeated for credit. The Staff

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German Literature

Upper-Division Courses

102. Introduction to German Literature. *

Speaking, reading, and writing proficiency in German required. Wide reading of works representing the major authors, periods, and genres of German literature. Satisfies the German and Modern Literary Studies concentrations. L. Nygaard

104. Topics in German Literature and Culture. S

Speaking, reading, and writing proficiency in German required. Course studies German literature and culture, with attention to historical context. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the German and Modern Literary Studies concentrations. May be repeated for credit. A. Bivens

120. Fear of the Foreign: Xenophobia in German Literature and Culture. W

Speaking, reading, and writing proficiency in German required. Considers recent violence against immigrants and asylum-seekers in Germany, and moves on to examine images of people perceived as "foreign" or alien in German literature and culture from early times to the present. Satisfies the German and Modern Literary Studies concentrations. L. Nygaard

150. German Romanticism. F

Speaking, reading, and writing proficiency in German required. A study of the emergence and development of German Romanticism. Central concerns are the Romantics' attitude toward the role of the imagination in literature and their attempts to revitalize myth and folklore in their works. Authors read include Tieck, Novalis, Hoffmann, Eichendorff, and Heine. Satisfies the German and Modern Literary Studies concentrations. L. Nygaard

154. The German Novelle. *

Speaking, reading, and writing proficiency in German required. A study of Novellen of the major 19th-century German authors. Satisfies the German and Modern Literary Studies concentrations. A. Bivens

161. Weimar Culture: Modernism in German Literature and Film. *

Speaking, reading, and writing proficiency in German required. A survey of the literature, film and visual culture of the post-war Weimar period, concentrating in particular on modernism, Dada and the avant-garde. Selections from Fritz Lang, Murnau, Döblin, Brecht, Trakl. Satisfies the German and Modern Literary Studies concentrations. (General Education Code(s): IM.) A. Bivens

164. Modern German Fiction. *

Speaking, reading, and writing proficiency in German required. Selected readings from the novel and novella in 20th-century German literature. Satisfies the German and Modern Literature concentrations. The Staff

165. German Drama. *

Speaking, reading, and writing proficiency in German required. Selected readings of major German dramatists; attention given to various movements in theater. Satisfies the German and Modern Literature concentrations. The Staff

166. Contemporary German Literature and Film. *

Speaking, reading, and writing proficiency in German required. A survey of contemporary German culture in the context of the current debate on postmodernism and the avant-garde. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the German and Modern Literary Studies concentrations. May be repeated for credit. A. Bivens

167. Modern German Literature and Film. *

Speaking, reading, and writing proficiency in German required. Discusses a range of modern and contemporary German texts, including poetry, drama, and film. Satisfies the German and Modern Literary Studies concentrations. May be repeated for credit. A. Bivens

195. Senior Essay. F,W,S

Speaking, reading, and writing proficiency in German required. Prerequisite: Literature 101. The Staff

198. Group Tutorial. F,W,S

Speaking, reading, and writing proficiency in German required. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Speaking, reading, and writing proficiency in German required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Graduate Courses

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Greek Literature**Upper-Division Courses**

100. Introduction to Greek Literature. S

Reading proficiency in Ancient Greek required. Satisfies the Greek and Pre- and Early Modern Studies Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. May be repeated for credit. (General Education Code(s): IH.) J. Lynn

102. Greek Poetry. *

Reading proficiency in Ancient Greek required. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Greek and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. Prerequisite(s): satisfaction of the Entry Level Writing and Composition

requirements. May be repeated for credit. The Staff

103. Greek Drama. W

Reading proficiency in Ancient Greek required. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Greek and Pre- and Early Modern Studies Literature concentrations; also satisfies the Pre- and Early Modern Studies distribution requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. M. Gamel

105. Special Topics in Greek Literature. F

Reading proficiency in Ancient Greek required. Readings in selected ancient Greek texts. Course topic changes; see the Schedule of Classes for the current topic. Focus is on translation and interpretation; requirements normally include translation exams and interpretive essays. Satisfies the Greek and Pre- and Early Modern Studies Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. K. Dority

193. Field Study. F,W,S

An individual program of study sponsored by a faculty member and completed off campus. Designed for upper-division students. May be taken concurrently or consecutively for up to three courses of credit. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195. Senior Thesis. F,W,S

Reading proficiency in Ancient Greek required. Prerequisite(s): Literature 101. The Staff

198. Group Tutorial. F,W,S

Reading proficiency in Ancient Greek required. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Reading proficiency in Ancient Greek required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Reading proficiency in Ancient Greek required. Students submit petition to sponsoring agency. The Staff

Graduate Courses

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Italian Literature

Upper-Division Courses

130. Author and Contexts.

Designed to give an in-depth study of a given author's literary production and its cultural context.

130B. Boccaccio. *

Speaking, reading, and writing proficiency in Italian required. Critical study of "The Decameron." Satisfies the Italian and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. D. Shemek

130D. Dante's Divine Comedy. *

Speaking, reading, and writing proficiency in Italian required. Reading of the "Inferno," the "Purgatorio," and selected canti of the "Paradiso," along with selections from Dante's lyrics and from medieval Italian and French poetry. Satisfies the Italian and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. The Staff

150D. Italian Opera as Drama. *

Speaking, reading, and writing proficiency in Italian required. Explores Italian opera as dramatic and spectacular cross-cultural phenomenon beginning in 1590s Florence through the 19th and 20th centuries. Attention to opera's function as a medium of cultural translation and political critique. Satisfies the Italian Literature and Modern Literary Studies concentrations. Prerequisite(s): Two years of university study of Italian language, or equivalent proficiency. (General Education Code(s): CC.) D. Shemek

164. Literature and Fascism. W

Speaking, reading, and writing proficiency in Italian required. The relationship between literature and Italian fascism is explored as concerns the rise and myths of fascism, critique and censorship, the persecution of minorities, the Resistance, the role of the intellectual. Authors include Borgese, Vittorini, Bassani, Pavese. Satisfies the Italian and Modern Literary Studies concentrations. D. Shemek

165. Studies in Italian Literature and Culture. S

Speaking, reading, and writing proficiency in Italian required. In-depth examination of a topic in Italian literary and cultural studies. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Italian and Modern Literary Studies concentrations. May be repeated for credit. The Staff

170A. Modern Italian Poetry. *

Speaking, reading, and writing proficiency in Italian required. Study of development of the Italian lyric from romanticism to present, with close stylistic and thematic analyses of works of Leopardi, D'Annunzio, Ungaretti, Quasimodo, Pavese, and Montale. Satisfies the Italian and Modern Literature concentrations; also satisfies the Poetry distribution requirement. The Staff

170B. Petrarca. F

Speaking, reading, and writing proficiency in Italian required. The transition from medieval to Renaissance modes of poetry in the works of Francesco Petrarca. Readings in the Rime Sparse, the Trionfi, and the prose works. D. Shemek

180. Women in Italy: Nineteenth and Twentieth Centuries. *

Speaking, reading, and writing proficiency in Italian required. Explores the specificity of Italian women's writing and studies their literary activities in historical and social context. Readings include Italian feminist and some history as well as literary texts. Satisfies the Italian and Modern Literary Studies concentrations. D. Shemek

191. Italian Studies Writing in the Discipline (1 credit). F,W,S

Concurrent enrollment in an approved upper-division course in Italian literature, history of art and visual culture, or history satisfies the Disciplinary Communication requirement in Italian studies. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Students submit petition to sponsoring agency. Enrollment restricted to Italian studies majors and by permission of instructor. The Staff

195. Senior Thesis. F,W,S

Speaking, reading, and writing proficiency in Italian required. Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. The Staff

198. Group Tutorial. F,W,S

Speaking, reading, and writing proficiency in Italian required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Speaking, reading, and writing proficiency in Italian required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Speaking, reading, and writing proficiency in Italian required. Students submit petition to sponsoring agency. The Staff

Graduate Courses

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Latin Literature**Upper-Division Courses**

100. Introduction to Latin Literature. S

Reading proficiency in Latin required. Satisfies the Latin and Pre- and Early Modern Studies Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. May be repeated for credit. (General Education Code(s): TA, IH.) J. Lynn

102. Roman Poetry. *

Reading proficiency in Latin required. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Latin and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. The Staff

103. Prose Authors. W

Reading proficiency in Latin required. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Latin and Pre- and Early Modern Studies Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. C. Hedrick

104. Special Topics in Latin Literature. F,S

Reading proficiency in Latin required. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Latin and Pre- and Early Modern Studies Literature concentrations; also satisfies the Poetry and Pre- and Early Modern distribution requirements. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. (F) K. Bassi, (S) D. Selden

193. Field Study. F,W,S
An individual program of study sponsored by a faculty member and completed off campus. Designed for upper-division students. May be taken concurrently or consecutively for up to three courses of credit. Students submit petition to sponsoring agency. The Staff
195. Senior Thesis. F,W,S
Reading proficiency in Latin required. Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. The Staff
198. Group Tutorial. F,W,S
Reading proficiency in Latin required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
199. Tutorial. F,W,S
Reading proficiency in Latin required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 199F. Tutorial (2 credits). F,W,S
Reading proficiency in Latin required. Students submit petition to sponsoring agency. The Staff

Graduate Courses

294. Teaching-Related Independent Study. F,W,S
Directed graduate research and writing coordinated with the teaching of undergraduates. The Staff
295. Directed Reading. F,W,S
Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
296. Special Student Seminar. F,W,S
Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
297. Independent Study. F,W,S
Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
299. Thesis Research. F,W,S
Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Modern Literary Studies

Upper-Division Courses

104. Topics in Literary Theory. F Examination of major issues in contemporary theory, with emphasis on key concepts. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration. (Formerly course 102A) May be repeated for credit. D. Bell

125. Modern Cinema.

- 125D. Cinema and Social Change in Latin America. *
Surveys selected Latin American and Latino feature and documentary films. Course topic changes; please see the Schedule Classes for the current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): CC, E.) The Staff

125J. Cinema and Subjectivity. *

- An examination of the ways in which the technological and institutional practices of cinema construct modes of modern and contemporary subjectivity. Course topic

changes; please see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies concentration. May be repeated for credit. (General Education Code(s): IM.) The Staff

125N. The Horror Film. W

Shifting definitions of horror in the movies from the late silent period to the present through close analysis of representative films and critical texts. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration. (General Education Code(s): IM.) H. Leicester

144. Modern Jewish Cultures.

Modernity transformed Jewish culture: we will explore the ways in which changed social, political, and economic conditions produced new gender roles; professional, personal, communal, and cultural experiences; and generated powerful fictions, autobiographies, films and poems. Among the writers we will read are Isaac Bashevis Singer, Rebecca Goldstein, Saul Bellow, Martin Buber, Hannah Arendt, and S.Y. Agnon.

144A. Jewish Diaspora, Ethnicity, and Urban Life. *

Focuses on modern Jewish diaspora, ethnicity, and urban life. Satisfies the Modern Literary Studies concentration. (General Education Code(s): ER, E.) B. Thompson

144C. Literature and the Holocaust. *

Reading and analysis of fiction and poetry, focusing on Holocaust literature as a problem in critical theory, cultural studies, and literary history. Though most of the works are read in translation, some knowledge of European languages is helpful. Satisfies the Modern Literary Studies concentration. May be repeated for credit. N. Deutsch

144D. Jewish Writers and the American City. F

An examination of some major Jewish writers and their responses to the American city. Major writers: Henry Roth, Saul Bellow, Bernard Malamud, J. Kaplan, Philip Roth. A look at Yiddish and other minority writers, and including sociological and historical materials on the American city. Satisfies the English and Modern Literary Studies concentrations. (General Education Code(s): ER, E.) B. Thompson

144E. Hebrew Poetry. S

Hebrew poetry—Biblical, medieval, modern—explores cultural and literary issues central to our contemporary world. Texts and discussion focus on Jewish and Israeli literary traditions. Satisfies the Modern Literary Studies concentration; also satisfies the Poetry distribution requirement. May be repeated for credit. (General Education Code(s): CC.) M. Baumgarten

144G. Global Jewish Writing. *

Comparative analysis of modern Jewish writers from Western and non-Western diasporas. Satisfies the Modern and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) M. Baumgarten

144H. Jewish Writers and the European City. W

Interrogates the master narrative of a specific European city and discusses the ways in which Jewish life and Jewish actions helped to shape that story and were shaped by it. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration. May be repeated for credit. (General Education Code(s): ER.) M. Baumgarten

144J. Jewish Travel Narratives. *

Exploration of the idea of the Diaspora as a "moving" condition, and of the multi-dimensional character of global Jewish culture, covering authors who traveled across the Jewish world from medieval times to the present. Satisfies the Modern Literary Studies or the Pre- and Early Modern Studies Literature concentrations; may also satisfy the Pre- and Early Modern distribution requirement. M. Baumgarten

145. Special Topics in Modern Literature.

145A. Modern Poetry. *

Survey of modern poetry; includes a variety of poetic forms. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies

concentration; also satisfies the Poetry distribution requirement. May be repeated for credit. (General Education Code(s): TA.) The Staff

145B. Modern Literature. F,W,S

Study of 19th- and/or 20th-century literature, with attention to its literary and historical context. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies concentration. May be repeated for credit. (General Education Code(s): TA.) (F) H. Leicester, C. Gomez-Rivas, (S) K. Lau

145C. Modern Fiction and Poetry. S

Survey of modern fiction and poetry. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration; also satisfies the Poetry distribution requirement. May be repeated for credit. K. Finberg

145J. Speculative Fiction As Cultural Theory and Practice. F

Readings of contemporary and historical speculative fiction, including examination of representational practices, technologies, and politics that emerge from and/or circumscribe their interrelations. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration. (Formerly English Language Literature 140E, Out There: Science Fiction As Cultural Theory and Practice.) May be repeated for credit. S. Magnone

146. Topics in African Literature. F

Thematic and stylistic linkages: classical texts, oral traditions, and modern developments in African literature. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. Enrollment limited to 40. (General Education Code(s): E.) W. Godzich

167. German Authors in Translation.

167G. Goethe's "Faust". *

An intensive study of Goethe's "Faust," Parts I and II. All works are read in English. Satisfies the Modern Literary Studies concentration; also satisfies the Poetry distribution requirement. L. Nygaard

167K. Kafka in Translation. W

An intensive study of the works of Franz Kafka, with reference to the literary, social, and historical context in which his work emerged. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies concentration requirement. May be repeated for credit. (General Education Code(s): TA.) A. Bivens

180. Latin American Literature in Translation.

180A. Contemporary Mexican Narrative. *

Examines 20th and 21st century Mexican literature, with attention to literary critical issues as they relate to cultural, historical, and political contexts. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. (Formerly The Mexican Narrative.) (General Education Code(s): E.) N. Klahn

190. Senior Seminar.

Seminar offered to literature majors as a way to satisfy the senior exit requirement. Offered at different times by different instructors, focus is on topics of interest in modern literary studies. All students are required to complete an essay of significant length as part of the seminar course work. Prerequisite: Literature 101. May be repeated for credit.

190N. Topics in Modern Literary Studies. W

Selected authors or issues in modern literary and cultural studies. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies concentration; also satisfies the Senior Seminar distribution requirement. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. J. Jordan

190Y. Topics in Modern Jewish Literature and Culture. S

Study of selected authors or issues related to modern Jewish literature and culture. Topic changes; please see the Schedule of Classes for the current topic. Satisfies the

Modern Literary Studies concentration; also satisfies the Senior Seminar distribution requirement. Jewish Studies majors may use this course to satisfy the Jewish Studies senior exit requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and Literature 101 (for senior literature majors) or Jewish Studies 101 (for senior Jewish studies majors). May be repeated for credit. B. Thompson

190Z. Topics in German Literature and Culture. *

Study of selected authors or issues related to German literature and culture. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies concentration; also satisfies the Senior Seminar distribution requirement. German studies majors may use this course to satisfy the German studies senior exit requirement. Prerequisite(s): Literature 101 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior German studies and literature majors. May be repeated for credit. L. Nygaard

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. The Staff

195. Senior Essay. F,W,S

Satisfies the Modern Literary Studies concentration; also satisfies the Modern Literary Studies senior exit distribution requirement. Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. Enrollment restricted to senior literature majors. The Staff

198. Group Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Graduate Courses

219. Feminist Theories/Historical Perspectives. F

A critical examination of feminist and related theories (queer, critical race, post-humanist) and criticism in historical and culturally specific contexts. Enrollment restricted to graduate students. C. Freccero

231. Studies in Literary and Cultural History. W,S

Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. (W) R. Terdiman, (S) L. Nygaard

270. Narrative Theory. *

A survey of 20th-century narratology, emphasizing structuralist and poststructuralist theories of narrative. Enrollment restricted to graduate students. May be repeated for credit. J. Jordan

280. Topics in Theory. W

Explores issues arising in both the modern practice of criticism and in writings on the theory of criticism. Course topic changes; please see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. A. Bivens, J. Poblete

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.
May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.
May be repeated for credit. The Staff

299. Thesis Research. F

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.
May be repeated for credit. The Staff

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Pre- and Early Modern Studies

Upper-Division Courses

102. Ancient Literature in Cross-Cultural Perspective. W

Comparative approaches to the study of ancient literature and culture. Topic changes; see the Schedule of Classes for current topic. Satisfies the Pre- and Early Modern and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. May be repeated for credit. (General Education Code(s): CC.) M. Gamel

107A. Reading Egyptian Hieroglyphs, Part 1. *

Introduction to Egyptian hieroglyphs as a graphic, conceptual, and communicative system. Covers the basic elements of classical Egyptian grammar, drawing primarily on inscriptions from extant Egyptian monuments. Students read one prose and one poetical text from the Middle Kingdom. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. Strongly recommended: two years previous study of a foreign language at the college level or the equivalent. (General Education Code(s): CC.) D. Selden

107B. Reading Egyptian Hieroglyphs, Part 2. *

Advanced Middle Egyptian grammar (two weeks). Close reading of the Tale of Sinuhe in Middle Egyptian, selected hymns and love poetry from the New Kingdom. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global, Pre- and Early Modern, and Poetry distribution requirements. Together, Egyptian Hieroglyphs 1 and fulfill the language prerequisites for Literature 102; together they also satisfy the intensive major second-language course requirements. Prerequisite(s): course 107A. (General Education Code(s): CC.) D. Selden

107C. Reading Egyptian Hieroglyphs, Part 3. *

Close reading of the Tale of Sinuhe in Middle Egyptian. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. Prerequisite(s): course 107A and 107B. D. Selden

119. Medieval Romance.

A study of representative texts from the 12th through the 15th centuries. Questions of subjectivity, sexuality, and history in romance narratives are addressed. Satisfies the Pre- and Early Modern Studies concentration; also satisfies the Pre- and Early Modern distribution requirement. The Staff

128. Medieval Epic. *

Medieval reworkings of stories and motifs drawn from the "barbarian" or Germanic tradition including Beowulf, The Song of Roland, Nibelungenlied, Snorri Sturlason: King Harald's Saga from Heimskringla, and Njal's Saga. Satisfies the Pre- and Early Modern Studies Literature concentration; also satisfies the Poetry and Pre- and Early Modern distribution requirements. H. Leicester

134. The Idea of Poetry. *

Focus is on the theories of rhetoric and poetry written between 1580 and 1620. Texts include English, Italian, French, and Spanish works. Satisfies the Pre- and Early Modern Studies concentration; also satisfies the Poetry and Pre- and Early Modern Studies distribution requirements. (General Education Code(s): TA.) S. Keilen

135. Travel Writing and Intercultural Relations in the Middle Ages. S

Provides a historically-based and theoretically-informed introduction to medieval and early modern European contacts with other cultures. Readings include fourth through 17th-century writings about travel, discovery, and conquest in Asia, Africa, and America. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. C. Gomez-Rivas

136. Representations of Gender in Medieval Literature. *

Examination of the portrayal of gender roles and interactions. Particular stress on erotic experience and the courtly tradition: Ovid, Andreas Capellanus, Marie de France, Chretien de Troyes, "The Romance of the Rose," Dante, Chaucer, Christine de Pizan. Satisfies the Pre- and Early Modern Studies Literature concentration; also satisfies the Poetry and Pre- and Early Modern distribution requirements. H. Leicester

137. Modern Ancient Drama. *

The study of 20th- and 21st-century productions and adaptations of ancient Greek drama in theater, dance, music, and film, including Stravinsky, Graham, Pasolini, Breuer, and von Trier, discussing artists' goals, the sociopolitical context, ideas of authenticity, and audience response. Satisfies the Pre- and Early Modern Studies Literature concentration; also satisfies the Pre- and Early Modern distribution requirement. (General Education Code(s): IM.) M. Gamel

143. Greek Drama/Modern Film. *

A reading of ancient Greek plays along with contemporary films similar to them in theme, form, and effect. Students discuss different definitions of tragedy; genre as a critical tool; and similarities and difference between the media of literature, drama, and film. Satisfies the Pre- and Early Modern Studies concentrations; also satisfies the Pre- and early Modern distribution requirement. M. Gamel

144. Pre- and Early Modern Jewish Cultures.

144B. Hebrew Bible. *

Introduction to textual, source, redaction, historical, and literary criticism of individual books of the Hebrew Bible and to exegesis as science and ideology. Covers texts and iconography of neighboring mythological traditions (Mesopotamian, Ugaritic, Egyptian, Greek) when appropriate. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Pre-and Early Modern Studies Literature concentration; also satisfies the Pre- and Early Modern distribution requirement. May be repeated for credit. (General Education Code(s): TA.) N. Deutsch

146. The Phenomenon of Tragedy. *

Examines the theory of tragedy from Aristotle to Nietzsche, while inviting students to read and discuss classic dramatic pieces to which the label "tragedy" was applied. Relies on student presentations and contributions, and teaches skills both in handling theory and in practical literary criticism. Satisfies the English and Pre- and Early Modern Studies literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. The Staff

149. Ancient Myth/Modern Poetics. *

Reading of Greek and Roman texts (in English translation) which utilize mythic material juxtaposed with later poems written in response to them. Readings from Homer, Sappho, Greek drama, Petrarch, modern poets; discussion of concepts of myth and strategies of response. Satisfies the Pre- and Early Modern concentration; also satisfies the Poetry and Pre- and Early Modern distribution requirements. M. Gamel

150. Pre- and Early Modern Literature in Translation.

150B. Early Modern Italian Women Writers. *

In early modern Italy several factors converged to foster a boom in women's writing and publication. Course addresses the context and content of these writings, dealing with key theoretical and historical issues surrounding women's entry into authorship in Europe. Knowledge of Italian not required. Satisfies the Pre- and Early Modern Studies concentrations; also satisfies Pre- and Early Modern distribution requirements. D. Shemek

150D. Orlando Furioso. F

Reading the 46-canto Italian Renaissance adventure poem of Ludovico Ariosto, the most popular book of its century and a classic of humanist literature, students

consider literary tradition, Renaissance humanism, and how entertainment literature may articulate moral and political criticism. Satisfies the Pre- and Early Modern Studies concentration; also satisfies the Poetry and Pre- and Early Modern Studies distribution requirements. (General Education Code(s): CC.) D. Shemek

152. Continental Renaissance. S

Introductory survey of great prose writings of the continental Renaissance in their cultural and historical contexts. Authors include: Machiavelli, Castiglione, Erasmus, Rabelais, Montaigne, and Cervantes. Satisfies the Pre- and Early Modern Studies concentration; also satisfies the Pre- and Early Modern Studies distribution requirement. A. Heald

153A. Biblical Hebrew, Part 1. *

Grammatical study interspersed with narrative excerpts from the Hebrew Bible. Recommended: previous study of a second language up to the advanced level. Satisfies the Pre- and Early Modern studies and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. D. Selden

153B. Biblical Hebrew, Part 2. *

Continuation of grammatical study interspersed with poetic texts from the Hebrew Bible. Satisfies the Pre- and Early Modern and World Literature concentrations; also satisfies the Global, Poetry, and Pre-and Early Modern distribution requirements. Together, Biblical Hebrew 1 and 2 fulfill the language prerequisites for Literature 102; together they also satisfy the intensive major second-language course requirements. Prerequisite(s): course 153A or the equivalent. D. Selden

153D. Sanskrit, Part 1. W

Systematic introduction to the grammar, syntax, and usage of Classical Sanskrit, to the oral dimensions of the language, and to the Sanskrit literary tradition. Satisfies the Pre- and Early Modern and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. G. Sahota

153E. Sanskrit, Part 2. S

Continued study of the grammar, syntax, and usage of Classical Sanskrit, and the Sanskrit literary tradition. Students read the entire Bhagavad-Gita, including key sections in the original Sanskrit. Satisfies the Pre-and Early Modern and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. Together Sanskrit, Part 1 and Part 2 fulfill the language prerequisites for Literature 102; together they also satisfy the intensive major second-language course requirements. Prerequisite(s): course 153D. G. Sahota

162. Early Modern Representations of Gender. *

Explores representation of gender in early modern literature, with attention to contemporary aesthetic, cultural, and theoretical contexts. Texts include drama, poetry, and prose. Satisfies the Pre- and Early Modern Studies concentration; also satisfies the Pre- and Early Modern distribution requirement. May be repeated for credit. The Staff

165. Classical Poetics in Elizabethan Verse. F

An introduction to Elizabethan poetry and poetics, with emphasis on shorter lyrics (sonnets, ballads, etc.), pastoral, erotic epyllia, devotional poetry, etc. Examines various Classical and Continental strains of influence at play in the production of English verse in the later 16th century, including Classical rhetoric, Ovidian mythology, and Petrarchanism. Satisfies the English and the Pre- and Early Modern Studies concentration; also satisfies the Pre- and Early Modern distribution requirements. M. Yinger

190. Senior Seminar.

Seminar offered to literature majors as a way to satisfy the senior exit requirement. Offered at different times by different instructors, focus is on topics of interest in pre- and early modern studies. All students are required to complete an essay of significant length as part of the seminar course work. Prerequisite: Literature 101. May be repeated for credit.

190P. Topics in Pre- and Early Modern Studies. F

Examination of individual authors or critical problems in ancient, medieval, or early modern/Renaissance literature. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Pre- and Early Modern Literature concentration; also satisfies the Pre- and Early Modern and Senior Seminar distribution requirements.

Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. K. Bassi

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. The Staff

195. Senior Essay. F,W,S

Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. The Staff

198. Group Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

204. Studies in Early Modernity. *

In-depth examination of a topic in Early Modern Studies. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. J. Aladro Font

211. History and Tragedy. *

Examines history, tragedy, and early science as ways of representing human experience in the Western canon. Topics include truth claims and questions of evidence, the nature of historical events, and tragedy as a political medium. Enrollment restricted to graduate students. K. Bassi

294. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Students submit petition to sponsoring agency. The Staff

295. Directed Reading. F,W,S

Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

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Russian Literature

Upper-Division Courses

199. Tutorial. F,W,S

Speaking, reading, and writing proficiency in Russian required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Speaking, reading, and writing proficiency in Russian required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Spanish/Latin American/Latino Literatures

Lower-Division Courses

60. Introduction to Literary Genres. F

Speaking, reading, and writing proficiency in Spanish required. The study of poetry, drama, and prose in Spain and Latin America. (General Education Code(s): TA, IH, E.) J. Aladro Font

Upper-Division Courses

100B. Peninsular Literature: 19th and 20th Centuries. W

Speaking, reading, and writing proficiency in Spanish required. A critical study of several representative texts from this period of Spanish literature. Satisfies the Modern Literary Studies and Spanish Literature concentrations. (Formerly Nineteenth and Twentieth Centuries.) The Staff

102. Introduction to Hispanic American Literature.

102A. From the Conquest to Sor Juana. F

Speaking, reading, and writing proficiency in Spanish required. A study of Hispanic American and Peninsular literatures from the chronicles of the conquest through the 17th century. Readings deal with transformations in both the idea of empire and the rights of the conquered. Includes the works of Colon, Cortes, El Inca Garcilaso de la Vega, Sor Juana Ines de la Cruz, and others. Satisfies the Pre- and Early Modern Studies, Spanish and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. (General Education Code(s): CC.) J. Poblete

102B. Romanticism to Modernism. S

Speaking, reading, and writing proficiency in Spanish required. Follows the literary manifestations of the growing consciousness of the Latin American writer: discovery of native themes, comparative analysis of Spanish American and Peninsular European models, search for a "new language" literally and figuratively. Relates historical events with literary movements. Satisfies the Modern Literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): CC, E.) L. Martinez-Echazabal

103. Sor Juana Ines de la Cruz. *

Speaking, reading, and writing proficiency in Spanish required. An in-depth examination of the life and work of Sor Juana Ines de la Cruz, a 17th-century nun, poet, playwright, and woman of genius and intellectual prowess whose ideas and accomplishments were ahead of her time. Satisfies the Pre- and Early Modern Studies and Spanish Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. J. Aladro Font

104. Erotismo y Mistica. *

Speaking, reading, and writing proficiency in Spanish required. Examines the connections between erotic literature and mystical literature through poetic representations of sublime where Eros and Thanatos meet. As symbolisms of mystical and erotic experiences fuse and confuse each other, we are able to establish connections between Sufi, Hindi, and Judeo-Christian mystical poetry. Satisfies the Pre- and Early Modern Studies and Spanish Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. J. Aladro Font

105. Introduction to Spanish Studies. W

Speaking, reading, and writing proficiency in Spanish is required. Explores the social, cultural, economic, and political changes that connect Latin America, Spain, and the United States Latina/o communities. Satisfies the Modern, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (Also offered as Spanish 105. Students cannot receive credit for both courses.) Prerequisite(s): Spanish 6 or Spanish for Heritage Speakers 6 or permission of instructor. (General Education Code(s): ER.) J. Poblete

130. Studies in Latin American Literary Genres.

130A. Contemporary Spanish American Prose. *

Speaking, reading, and writing proficiency in Spanish required. Examines contemporary Spanish American prose. Course topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): CC, E.) N. Klahn

130D. Latin American "testimonio". F

Speaking, reading, and writing proficiency in Spanish required. Contemporary non-fiction testimonial literature of Latin America. Authors: Marta Rojas, Elene Poniatowska, Rigoberta Menchu, Noema Viezzer, Omar Cabezas Lacayo, Aníbel Quijada Cerda, Mario Payeras, Eduardo Galeano, Ricardo Pozas, Hugo Neiva Samanez, Luis González de Alba. Satisfies the Modern literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) J. Poblete

130E. Latin American Poetry. *

Speaking, reading, and writing proficiency in Spanish required. Poets from "modernismo" to the present in Spanish America. Studies how this poetry attempts to define Latin America, its past, its present history, and its vision for the future. Satisfies the Modern, Spanish, and World Literature concentrations; also satisfies the Global and Poetry distribution requirements. (General Education Code(s): CC, E.) N. Klahn

131. National Literatures of Latin America.

Speaking, reading, and writing proficiency in Spanish required. A study of the literary expression of a particular Latin American country or region, with texts representing a variety of authors, periods, and genres.

131H. Cuba. *

Speaking, reading, and writing proficiency in Spanish required. Examines Cuban literature and culture, with attention to historical context. Course topic changes: please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): CC, E.) L. Martinez-Echazabal

134. Special Topics in Latin American Literature.

134B. Women in Latin American Literature. *

Speaking, reading, and writing proficiency in Spanish required. Literary and sociological writings by and about women in Latin America—in Hispanic, indigenous, and African–Latino communities; in rural and urban settings; in historical and contemporary periods. Satisfies the Modern Literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) The Staff

134L. Historia de la lectura y los lectores: Recepción y consumo cultural en el mundo L. Americano. *

Speaking, reading, and writing proficiency in Spanish required. Explores historical readers and reading practices in at least three different formations: colonial, national–popular, and transnational. Proposes a historical–theoretical reconstruction of the place of reading and readers at key moments in the history of culture in Latin America. Satisfies the Modern, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) J. Poblete

134M. Modernidad y literatura: El Boom de la novela latinoamericana. *

Speaking, reading, and writing proficiency in Spanish required. Explores the relationships between literature and mass culture, modernization, and globalization through the study of the so-called Boom of Latin American narrative. Course satisfies the Modern, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) N. Klahn

134N. El Cuento Hispanoamericano: Variedades estéticas de la literatura breve en América Latina. S

Speaking, reading, and writing proficiency in Spanish required. Explores various aesthetics of the Latin American short story including fantastic, detective,

metaliterary, social critique, historical, and philosophical writings. Satisfies the Modern Literary Studies, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) J. Poblete

135. Latin American Cinema.

135C. La Globalizacion en/del Cine Latin/o Americano. *

Speaking, reading, and writing proficiency in Spanish required. Examines globalization of Latin/o American cinema as a cultural industry. Classical issues of cultural politics and political economy are revisited from the viewpoint of current global processes. Also provides access to the representation of different aspects of globalization in Latin/o American cinema. Course satisfies the Modern Literary Studies, Spanish/Latin American/Latino, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) J. Poblete

135F. Cine y Literatura. *

Speaking, reading, and writing proficiency in Spanish required. Analysis and interpretation of Spanish-language films derived from literary works by Latin American and Spanish authors. Topic changes; see the Schedule of Classes for the current topic. Satisfies the Spanish and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): IM.) L. Martinez-Echazabal

151. Literature and Life in "Don Quijote" and Other Cervantes Texts. *

Speaking, reading, and writing proficiency in Spanish required. A close reading of the works of Cervantes, with particular attention to "Don Quijote," in an attempt to discover how these works reflect the conflictive period in which the author lived. Also looks closely at the Cervantine view of the relationship of literature to life, as manifested in the works under study. Satisfies the Pre- and Early Modern Studies and Spanish Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. J. Aladro Font

153. The Picaresque Novel. F

Speaking, reading, and writing proficiency in Spanish required. The picaresque novel of 16th-century Spain considers the fictive environment as reality in order to introduce its protagonist as a rebel against social dominion. The picaresque novel is the only literary genre comparable to what is now called "literature of social protest." Satisfies the Pre- and Early Modern and Spanish Literature concentrations; also satisfies the Pre- and Early Modern distribution requirement. (General Education Code(s): CC.) J. Aladro Font

154. Short Stories of the Spanish Golden Age. *

Speaking, reading, and writing proficiency in Spanish required. Focuses on the prose in the Renaissance period and the different genres that flourished before the creation of Cervantes' "Don Quixote" Chosen texts constitute an amalgam of Renaissance ideology, and provide examples of 16th-century literature, including the picaresque novel, pastoral novel, the Byzantine novel, and the chivalresque novel. Satisfies the Pre- and Early Modern Studies and Spanish Literature concentrations, also satisfies the Pre- and Early Modern distribution requirement. J. Aladro Font

163. The Literature of the Spanish Civil War. W

Speaking, reading, and writing proficiency in Spanish required. Examines literature related to the period of the Spanish Civil War (1936-39) and the Franco years (1939-75). Includes works by Spanish writers in exile during this period; also examines literary texts written prior to the outbreak of the war. Satisfies the Modern Literary Studies and Spanish Literature concentrations. The Staff

164. Contemporary Spanish Literature. S

Speaking, reading, and writing proficiency in Spanish required. Examines works by Spanish peninsular authors from the 19th century to the present with attention to historical and cultural as well as literary issues. The topic changes, see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies and Spanish Literature concentrations. (Formerly Fiction and History in Contemporary Spain.) May be repeated for credit. The Staff

195. Senior Essay. F,W,S

Speaking, reading, and writing proficiency in Spanish required. Prerequisite(s): Literature

101. Students submit petition to sponsoring agency. The Staff
198. Group Tutorial. F,W,S
Speaking, reading, and writing proficiency in Spanish required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
199. Tutorial. F,W,S
Speaking, reading, and writing proficiency in Spanish required. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 199F. Tutorial (2 credits). F,W,S
Speaking, reading, and writing proficiency in Spanish required. Students submit petition to sponsoring agency. The Staff

Graduate Courses

201. Don Quixote. *
Concentrates on the study and analysis of Miguel de Cervantes' major work Don Quixote, with a three part structure: life and literature in Don Quixote; Cervantes—the father of the modern novel; and madness and "ingenio" in Don Quixote. Enrollment restricted to graduate students. J. Aladro Font
210. Spain in the Eyes/Camera of Pedro Almodovar. *
Contemporary Spain through the camera of Pedro Almodovar from transgressive enthusiasm, experimentation, and cultural disobedience of the 1980s to more universal themes of human nature and borderline experiences in the pursuit of love, relationships, beauty, and art. Enrollment restricted to graduate students. J. Aladro Font
225. The Avant Garde in Latin America. F
Emerging from a Europe in crisis, this 20th-century avant-garde movement opened a space in Latin/o American literature for the emergence of a post-western aesthetic exploring a cultural identity in difference. A deconstruction of vanguardismo, lo real maravilloso, lo fantástico, lo mítico-antropológico, and realismo mágico. (Formerly Surrealisms in the Americas: An Aesthetic in Motion.) Enrollment restricted to graduate students. N. Klahn
226. Teoria Critica en America Latina. W
Overview of contemporary theoretical issues in Latin American cultural critique. Course topic changes; please see the Schedule of Classes for the current topic. Enrollment restricted to graduate students. May be repeated for credit. J. Poblete
230. Citiscapes. *
Theories of space/place poetics and politics, and the literary and visual re-presentations of urban spaces in Latin/o America. Questions of identity and location in modernist poetics, and the ways difference (gender, ethnicity, and sexuality) inhabit and imagine the post-modern lettered city. Enrollment restricted to graduate students. N. Klahn
231. National Literatures of Latin America.
- 231A. Cuba. *
Course topic changes; please see the Schedule of Classes for the current topic.
Enrollment restricted to graduate students. May be repeated for credit. L. Martinez-Echazabal
295. Directed Reading. F,W,S
Directed reading that does not involve a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
296. Special Student Seminar. F,W,S
Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff
297. Independent Study. F,W,S
Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students.
May be repeated for credit. The Staff

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World Literature and Cultural Studies

Upper-Division Courses

105. International Cyberpunk. *

Cyberpunk, considered a subgenre within science fiction, has achieved international prominence and presents interesting interpretative challenges. Course examines some issues as manifested in representative texts. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): PE-T.) W. Godzich

109. Topics in Cultural Studies. F,W

Studies in the theory of cultural studies. Course topic changes; see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): TA, E.) (F) C. Hong, (F) S. Kinoshita, (W) K. Lau

113. The Future. W

Examines modes of thinking and imagining the future throughout human history, and considers the fate of the future today. Topics include apocalyptic religion, utopia and dystopia, progress, revolution, finance, and everyday life. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. C. Connery

115. Modern Literature in a Global Context.

115A. Fiction in a Global Context. *

Comparative examination of fiction in the modern world and of fictional responses to social change and crisis. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): TA.) V. Cooppan

123. The 1960s. *

An interdisciplinary study of the cultural and social movements of the 1960s. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) C. Connery

124. Cultural Theory in Historical Perspective. F

Examination of representations of medieval and early modern Mediterranean history. Course topic changes; please see the Schedule of Classes for current topic. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global and Pre- and Early Modern distribution requirements. May be repeated for credit. (General Education Code(s): CC, E.) C. Gomez-Rivas

127. Chicano/Mexicano Geographies. *

Considers the historical, current, and future directions of Chicano/a literary culture within the context of the long-standing exchanges of culture and politics across the U.S.-Mexican border and the challenges of globalization. Includes novels, essays, and films. Satisfies the English, Modern, and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): ER, E.) K. Gruesz

129. Theorizing Race and Comics. *

Examines comics' origins in the United States' legacies of racial caricature and political cartoons about slavery, Asian exclusion, yellow journalism, and imperial expansion. Analyses of graphic novel's 20th-century evolution around human-rights violations and post-atrocity representational strategies around race, nationalism and minority status. Satisfies the English, Modern Literary Studies, and World Literature concentrations; also satisfies the Global distribution requirement. Enrollment by interview only; course requires

an essay application. Enrollment restricted to literature and history of art and visual culture majors. (General Education Code(s): ER.) C. Hong

132. Global Cities. *

Examines cities as social spaces and as local spaces in the global economy and global imaginary. Focus is interdisciplinary, including literature, film, cultural studies, history, and sociology. Topic changes; please see the Schedule of Classes for the current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. (General Education Code(s): CC.) C. Connery

135. Classical Chinese Culture and Literature, 10th Century B.C.E. through Sixth Century C.E. *

Survey of writing and culture from the 10th century B.C.E. through the sixth century C.E., focusing on poetry, philosophical and historical writing, supernatural fiction, Buddhist/Taoist texts in contexts of fragmentation, empire building, dynastic collapse, rebellion, eremitism, and courtly society. Satisfies the Pre- and Early Modern and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. (Also offered as History 141A. Students cannot receive credit for both courses.) (General Education Code(s): E.) C. Connery

136. Classical Chinese Culture and Literature, Sixth Century through 16th Century. *

Survey of writing and culture from the Tang through early Ming dynasties (sixth century C.E. through 16th century C.E.). Themes include literary, religious, and philosophical innovation; courtly life; cultural contacts with non-Chinese people; and transformations of state and society. Satisfies the Pre- and Early Modern Studies and World Literature concentrations; also satisfies the Global, Poetry, and Pre- and Early Modern distribution requirements. (Also offered as History 141B. Students cannot receive credit for both courses.) (General Education Code(s): E.) C. Connery

140. The Historical Imaginary. *

A survey of historical literature in the Americas that examines fictional attempts to re-imagine New World histories. Readings focus on secret or mangled histories, the legacies of slavery and colonialism, gendered critiques of national histories, and US imperialism. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. (General Education Code(s): E.) S. Gillman

150. World Literature and Cultural Studies Core Sequence.

150A. Worldlings. S

How to think about the world as a whole: representations, networks, systems, taxonomies, versions of globalization. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. V. Cooppan

150B. Space/Time. *

The world as understood through spatial and temporal divisions: regions, nations, empires, periods in a worlded perspective. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern and World Literature concentrations; also satisfies the Global distribution requirement. May be repeated for credit. The Staff

150C. Problems. *

Considers a range of phenomena from a critical world perspective: subject formation; human activity on a global scale; questions that demand a worlded answer. Course topic changes; see the Schedule of Classes for current topic. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global requirement. May be repeated for credit. The Staff

190. Senior Seminar.

Seminar offered to literature majors as a way to satisfy the senior exit requirement. Offered at different times by different instructors; focus is on topics of interest in world literature and cultural studies. All students are required to complete an essay of significant length as part of the seminar course work. Prerequisite(s): Literature 101.

190A. Topics in World Literature and Cultural Studies. W,S

Course topic changes; see the Schedule of Classes for current topic. Satisfies the World Literature concentration; also satisfies the Global and Senior Seminar distribution requirements. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. May be repeated for credit. (General Education Code(s): E.) V. Cooppan, G. Sahota

190B. Studies in Slavery, Race, and Nation in the Americas. *

Compares literatures and histories of slavery, abolitionism, and nationalism in 19th-century Cuba and the U.S. Readings include slave narratives and antislavery novels. Satisfies the Modern Literary Studies and World Literature concentrations; also satisfies the Global and Senior Seminar distribution requirements. Prerequisite(s): Literature 101. Enrollment restricted to senior literature majors. (General Education Code(s): E.) S. Gillman

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. Students submit petition to sponsoring agency. The Staff

195. Senior Essay. F,W,S

Prerequisite(s): Literature 101. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Group Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

201. Theory and Methods. *

Global theories of history and cultural production. Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. S. Gillman

209. Topics in Cultural Studies. F,S

Course topic changes; see the Schedule of Classes for current topic. Enrollment restricted to graduate students. May be repeated for credit. (F) S. Kinoshita, (F) C. Hong, (S) C. Connery, (S) W. Godzich

295. Directed Reading. F,W,S

Directed reading which does not require a term paper. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

* Not offered in 2014-15

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Revised: 09/01/14



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Mathematics

[2014-15 General Catalog](#)

4111 McHenry

(831) 459-2969

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[Faculty | Program Statement](#)

Lower-Division Courses

2. College Algebra for Calculus. F,W

Operations on real numbers, complex numbers, polynomials, and rational expressions; exponents and radicals; solving linear and quadratic equations and inequalities; functions, algebra of functions, graphs; conic sections; mathematical models; sequences and series. Prerequisite(s): mathematics placement examination (MPE) score of 100 or higher. The Staff

2S. College Algebra for Calculus (2 credits). *

This two-credit, stretch course offers students two quarters to master material covered in course 2: operations on real numbers, complex numbers, polynomials, and rational expressions; exponents and radicals; solving linear and quadratic equations and inequalities; functions, algebra of functions, graphs; conic sections; mathematical models; sequences and series. After successful completion of this course in the first quarter, students enroll in course 2 the following quarter to complete the sequence and earn an additional 5 credits. Prerequisite(s): mathematics placement examination (MPE) score of 100 or higher. N. Bhattacharya, The Staff

3. Precalculus. F,W,S

Inverse functions and graphs; exponential and logarithmic functions, their graphs, and use in mathematical models of the real world; rates of change; trigonometry, trigonometric functions, and their graphs; and geometric series. Students cannot receive credit for both course 3 and Applied Mathematics and Statistics 3. Applied Mathematics and Statistics 3 can substitute for course 3. Prerequisite(s): course 2 or mathematics placement examination (MPE) score of 200 or higher. (General Education Code(s): MF, Q.) The Staff

4. Mathematics of Choice and Argument. *

Techniques of analyzing and creating quantitative arguments. Application of probability theory to questions in justice, medicine, and economics. Analysis and avoidance of statistical bias. Understanding the application and limitations of quantitative techniques. Prerequisite(s): course 2, or mathematics placement examination (MPE) score of 200 or higher, or AP Calculus AB examination score of 3 or higher. (General Education Code(s): SR, Q.) The Staff

11A. Calculus with Applications. F,W,S

A modern course stressing conceptual understanding, relevance, and problem solving. The derivative of polynomial, exponential, and trigonometric functions of a single variable is

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

developed and applied to a wide range of problems involving graphing, approximation, and optimization. Students cannot receive credit for both this course and course 19A or Applied Mathematics and Statistics 11A and 15A, or Economics 11A. Prerequisite(s): course 3 or Applied Mathematics and Statistics 3; or mathematics placement examination (MPE) score of 300 or higher; or AP Calculus AB exam score of 3 or higher. (General Education Code(s): MF, IN, Q.) The Staff

11B. Calculus with Applications. F,W,S

Starting with the fundamental theorem of calculus and related techniques, the integral of functions of a single variable is developed and applied to problems in geometry, probability, physics, and differential equations. Polynomial approximations, Taylor series, and their applications conclude the course. Students cannot receive credit for this course and course 19B, or Applied Mathematics and Statistics 11B and 15B, or Economics 11B. Prerequisite(s): course 11A or 19A or Applied Mathematics and Statistics 15A or AP Calculus AB exam score of 4 or 5, or BC exam score of 3 or higher, or IB Mathematics Higher Level exam score of 5 or higher. (General Education Code(s): MF, IN, Q.) The Staff

19A. Calculus for Science, Engineering, and Mathematics. F,W,S

The limit of a function, calculating limits, continuity, tangents, velocities, and other instantaneous rates of change. Derivatives, the chain rule, implicit differentiation, higher derivatives. Exponential functions, inverse functions, and their derivatives. The mean value theorem, monotonic functions, concavity, and points of inflection. Applied maximum and minimum problems. Students cannot receive credit for both this course and course 11A or Applied Mathematics and Statistics 11A and 15A, or Economics 11A. Prerequisite(s): course 3 or Applied Mathematics and Statistics 3; or mathematics placement examination (MPE) score of 400 or higher; or AP Calculus AB exam score of 3 or higher. (General Education Code(s): MF, IN, Q.) The Staff

19B. Calculus for Science, Engineering, and Mathematics. F,W,S

The definite integral and the fundamental theorem of calculus. Areas, volumes. Integration by parts, trigonometric substitution, and partial fractions methods. Improper integrals. Sequences, series, absolute convergence and convergence tests. Power series, Taylor and Maclaurin series. Students cannot receive credit for both this course and course 11B, Applied Math and Statistics 11B and 15B, or Economics 11B. Prerequisite(s): course 19A or AP Calculus AB exam score of 4 or 5, or BC exam score of 3 or higher, or IB Mathematics Higher Level exam score of 5 or higher. (General Education Code(s): MF, IN, Q.) The Staff

20A. Honors Calculus. F

Challenging course designed to approach single-variable calculus from the perspective of modern mathematics. Emphasis is on the evolution and historical development of core concepts underlying calculus and analysis. Prerequisite(s): mathematics placement examination (MPE) score of 500 higher; or AP Calculus AB examination score of 4 or 5; or BC examination of 3 or higher; or IB Mathematics Higher Level examination score of 5 or higher. Enrollment limited to 60. (General Education Code(s): MF, IN, Q.) The Staff

20B. Honors Calculus. W

Challenging course designed to approach single-variable calculus from the perspective of modern mathematics. Emphasis is on the evolution and historical development of core concepts underlying calculus and analysis. Prerequisite(s): course 20A. Enrollment limited to 60. (General Education Code(s): MF, IN, Q.) The Staff

21. Linear Algebra. F,W,S

Systems of linear equations, matrices, determinants. Introduction to abstract vector spaces, linear transformation, inner products, geometry of Euclidean space, and eigenvalues. Prerequisite(s): Mathematics 11A or 19A or 20A or Applied Mathematics and Statistics 11A or 15A. (General Education Code(s): MF, Q.) The Staff

22. Introduction to Calculus of Several Variables. S

Functions of several variables. Continuity and partial derivatives. The chain rule, gradient and directional derivative. Maxima and minima, including Lagrange multipliers. The double and triple integral and change of variables. Surface area and volumes. Applications from biology, chemistry, earth sciences, engineering, and physics. Students cannot receive credit for this course and course 23A. Prerequisite(s): course 11B or 19B or 20B or Applied Mathematics and Statistics 15B or AP calculus BC exam score of 4 or 5. (General Education Code(s): MF.) The Staff

Management UCDC Program Writing Program Theater Arts Yiddish	<p>23A. Vector Calculus. F,W,S Vectors in n-dimensional Euclidean space. The inner and cross products. The derivative of functions from n-dimensional to m-dimensional Euclidean space is studied as a linear transformation having matrix representation. Paths in 3-dimensions, arc length, vector differential calculus, Taylor's theorem in several variables, extrema of real-valued functions, constrained extrema and Lagrange multipliers, the implicit function theorem, some applications. Students cannot receive credit for this course and course 22. (Formerly Multivariable Calculus.) Prerequisite(s): course 19B or 20B or AP calculus BC exam score of 4 or 5. (General Education Code(s): MF.) The Staff</p> <p>23B. Vector Calculus. F,W,S Double integral, changing the order of integration. Triple integrals, maps of the plane, change of variables theorem, improper double integrals. Path integrals, line integrals, parametrized surfaces, area of a surface, surface integrals. Green's theorem, Stokes' theorem, conservative fields, Gauss' theorem. Applications to physics and differential equations, differential forms. (Formerly Multivariable Calculus.) Prerequisite(s): course 23A. (General Education Code(s): MF.) The Staff</p> <p>24. Ordinary Differential Equations. S First and second order ordinary differential equations, with emphasis on the linear case. Methods of integrating factors, undetermined coefficients, variation of parameters, power series, numerical computation. Students cannot receive credit for this course and Applied Mathematics and Statistics 20. Prerequisite(s): course 22 or 23A; course 21 is recommended as preparation. The Staff</p> <p>99. Tutorial. F,W,S The Staff</p> <p>99F. Tutorial (2 credits). F,W,S May be repeated for credit. The Staff</p>
Upper-Division Courses	
	<p>100. Introduction to Proof and Problem Solving. F,W,S Students learn the basic concepts and ideas necessary for upper-division mathematics and techniques of mathematical proof. Introduction to sets, relations, elementary mathematical logic, proof by contradiction, mathematical induction, and counting arguments. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; courses 11A and 11B or 19A and 19B or 20A and 20B. Enrollment limited to 80. (General Education Code(s): MF.) The Staff</p> <p>101. Mathematical Problem Solving. W Students learn the strategies, tactics, skills and tools that mathematicians use when faced with a novel (new) problem. These include generalization, specialization, the optimization, invariance, symmetry, Dirichlet's box principle among others in the context of solving problems from number theory, geometry, calculus, combinatorics, probability, algebra, analysis, and graph theory. (Formerly, course 30.) Prerequisite(s): courses 21 and 100. (General Education Code(s): PR-E.) The Staff</p> <p>103A. Complex Analysis. W,S Complex numbers, analytic and harmonic functions, complex integration, the Cauchy integral formula, Laurent series, singularities and residues, conformal mappings. (Formerly course 103.) Prerequisite(s): course 23B; and either course 100 or Computer Science 101. The Staff</p> <p>103B. Complex Analysis II (2 credits). * Conformal mappings, the Riemann mapping theorem, Möbius transformations, Fourier series, Fourier and Laplace transforms, applications, and other topics as time permits. Prerequisite(s): course 103A. The Staff</p> <p>105A. Real Analysis. F,W The basic concepts of one-variable calculus are treated rigorously. Set theory, the real number system, numerical sequences and series, continuity, differentiation. Prerequisite(s): course 22 or 23B and either course 100 or Computer Science 101. The Staff</p>

105B. Real Analysis. S Metric spaces, differentiation and integration of functions. The Riemann–Stieltjes integral. Sequences and series of functions. Prerequisite(s): course 105A. The Staff
105C. Real Analysis. * The Stone–Weierstrass theorem, Fourier series, differentiation and integration of functions of several variables. Prerequisite(s): course 105B. The Staff
106. Systems of Ordinary Differential Equations. W Linear systems, exponentials of operators, existence and uniqueness, stability of equilibria, periodic attractors, and applications. (Formerly course 106A.) Prerequisite(s): courses 21 and 24 (preferred) or Applied Mathematics and Statistics 10 and 20; and either course 100 or Computer Science 101. The Staff
107. Partial Differential Equations. * Topics covered include first and second order linear partial differential equations, the heat equation, the wave equation, Laplace's equation, separation of variables, eigenvalue problems, Green's functions, Fourier series. (Formerly course 106B.) Prerequisite(s): courses 21 and 24 (preferred) or Applied Mathematics and Statistics 10 and 20; and either course 100 or Computer Science 101; course 106 is recommended as preparation. The Staff
110. Introduction to Number Theory. F,W Prime numbers, unique factorization, congruences with applications (e.g., to magic squares). Rational and irrational numbers. Continued fractions. Introduction to Diophantine equations. An introduction to some of the ideas and outstanding problems of modern mathematics. Prerequisite(s): course 100 or Computer Science 101. (General Education Code(s): Q.) The Staff
111A. Algebra. F,W Group theory including the Sylow theorem, the structure of abelian groups, and permutation groups. Prerequisite(s): course 21 or Applied Mathematics and Statistics 10 and either course 100 or Computer Science 101. The Staff
111B. Algebra. S Introduction to rings and fields including polynomial rings, factorization, the classical geometric constructions, and Galois theory. Prerequisite(s): course 111A. The Staff
114. Introduction to Financial Mathematics. * Financial derivatives: contracts and options. Hedging and risk management. Arbitrage, interest rate, and discounted value. Geometric random walk and Brownian motion as models of risky assets. Ito's formula. Initial boundary value problems for the heat and related partial differential equations. Self-financing replicating portfolio; Black–Scholes pricing of European options. Dividends. Implied volatility. American options as free boundary problems. Corequisite(s): Applied Mathematics and Statistics 131 or Computer Engineering 107. The Staff
115. Graph Theory. S Graph theory, trees, vertex and edge colorings, Hamilton cycles, Eulerian circuits, decompositions into isomorphic subgraphs, extremal problems, cages, Ramsey theory, Cayley's spanning tree formula, planar graphs, Euler's formula, crossing numbers, thickness, splitting numbers, magic graphs, graceful trees, rotations, and genus of graphs. Prerequisite(s): course 21 or Applied Mathematics and Statistics 10 and either course 100 or Computer Science 101. The Staff
116. Combinatorics. * Based on induction and elementary counting techniques: counting subsets, partitions, and permutations; recurrence relations and generating functions; the principle of inclusion and exclusion; Polya enumeration; Ramsey theory or enumerative geometry. Prerequisite(s): course 100. Enrollment restricted to sophomores juniors, and seniors. Familiarity with basic group theory recommended. The Staff
117. Advanced Linear Algebra. F Review of abstract vector spaces. Dual spaces, bilinear forms, and the associated geometry. Normal forms of linear mappings. Introduction to tensor products and exterior algebras. Prerequisite(s): course 21 or Applied Mathematics and Statistics 10 and either course 100 or Computer Science 101. The Staff

118. Advanced Number Theory. S

Topics include divisibility and congruences, arithmetical functions, quadratic residues and quadratic reciprocity, quadratic forms and representations of numbers as sums of squares, Diophantine approximation and transcendence theory, quadratic fields. Additional topics as time permits. Prerequisite(s): course 110 or 111A. The Staff

120. Coding Theory. *

An introduction to mathematical theory of coding. Construction and properties of various codes, such as cyclic, quadratic residue, linear, Hamming, and Golay codes; weight enumerators; connections with modern algebra and combinatorics. Prerequisite(s): course 21. The Staff

121A. Differential Geometry. W

Topics include Euclidean space, tangent vectors, directional derivatives, curves and differential forms in space, mappings. Curves, the Frenet formulas, covariant derivatives, frame fields, the structural equations. The classification of space curves up to rigid motions. Vector fields and differentiable forms on surfaces; the shape operator. Gaussian and mean curvature. The theorem Egregium; global classification of surfaces in three space by curvature. Prerequisite(s): courses 21 and 23B and either course 100 or Computer Science 101. Course 105A strongly recommended. The Staff

121B. Differential Geometry and Topology. *

Examples of surfaces of constant curvature, surfaces of revolutions, minimal surfaces.

Abstract manifolds; integration theory; Riemannian manifolds. Total curvature and geodesics; the Euler characteristic, the Gauss–Bonnet theorem. Length-minimizing properties of geodesics, complete surfaces, curvature and conjugate points covering surfaces. Surfaces of constant curvature; the theorems of Bonnet and Hadamard.

Prerequisite(s): course 121A. The Staff

124. Introduction to Topology. F

Topics include introduction to point set topology (topological spaces, continuous maps, connectedness, compactness), homotopy relation, definition and calculation of fundamental groups and homology groups, Euler characteristic, classification of orientable and nonorientable surfaces, degree of maps, and Lefschetz fixed-point theorem.

Prerequisite(s): course 100; course 111A recommended. The Staff

128A. Classical Geometry: Euclidean and Non–Euclidean. S

Rigorous foundations for Euclidean and non-Euclidean geometries. History of attempts to prove the parallel postulate and of the simultaneous discovery by Gauss, J. Bolyai, and Lobachevsky of hyperbolic geometry. Consistency proved by Euclidean models.

Classification of rigid motions in both geometries. Prerequisite(s): either course 100 or Computer Science 101. The Staff

128B. Classical Geometry: Projective. *

Theorems of Desargue, Pascal, and Pappus; projectivities; homogeneous and affine coordinates; conics; relation to perspective drawing and some history. Prerequisite(s): course 21. The Staff

129. Algebraic Geometry. *

Algebraic geometry of affine and projective curves, including conics and elliptic curves; Bezout's theorem; coordinate rings and Hilbert's Nullstellensatz; affine and projective varieties; and regular and singular varieties. Other topics, such as blow-ups and algebraic surfaces as time permits. Prerequisite(s): courses 21 and 100. Enrollment limited to 40. The Staff

130. Celestial Mechanics. *

Solves the two-body (or Kepler) problem, then moves onto the N-body problem where there are many open problems. Includes central force laws; orbital elements; conservation of linear momentum, energy, and angular momentum; the Lagrange–Jacobi formula; Sundman's theorem for total collision; virial theorem; the three-body problem; Jacobi coordinates; solutions of Euler and of Lagrange; and restricted three-body problem. Prerequisite(s): courses 19A–B and course 23A or Physics 5A or 6A; courses 21 and 24 strongly recommended. Enrollment limited to 35. The Staff

134. Cryptography. F

Introduces different methods in cryptography (shift cipher, affine cipher, Vigenere cipher, Hill cipher, RSA cipher, ElGamal cipher, knapsack cipher). The necessary material from number theory and probability theory is developed in the course. Common methods to attack ciphers discussed. Prerequisite(s): course 100; course 110 recommended as preparation. The Staff

140. Industrial Mathematics. *

Introduction to mathematical modeling of industrial problems. Problems in air quality remediation, image capture and reproduction, and crystallization are modeled as ordinary and partial differential equations then analyzed using a combination of qualitative and quantitative methods. Prerequisite(s): course 24 and either course 100 or Computer Science 101, and course 105A. The Staff

145. Introductory Chaos Theory. *

The Lorenz and Rossler attractors, measures of chaos, attractor reconstruction, and applications from the sciences. Students cannot receive credit for this course and Applied Mathematics and Statistics 114. Prerequisite(s): course 22 or 23A; course 21; course 100 or Computer Science 101. Concurrent enrollment in course 145L is required. The Staff

145L. Introductory Chaos Laboratory (1 credit). *

Laboratory sequence illustrating topics covered in course 145. One three-hour session per week in microcomputer laboratory. Concurrent enrollment in course 145 is required. The Staff

148. Numerical Analysis. *

The theory of constructive methods in mathematical analysis and its application with scientific computation. Some typical topics are difference equations, linear algebra, iteration, Bernoulli's method, quotient difference algorithm, the interpolating polynomial, numerical differentiation and integration, numerical solution of differential equations, finite Fourier series. Prerequisite(s): course 22 or 23A; course 21 and 24 or Applied Mathematics and Statistics 10 and 20; course 100 or Computer Science 101. Concurrent enrollment in course 148L is required. The Staff

148L. Numerical Analysis Laboratory (1 credit). *

Laboratory sequence illustrating topics covered in course 148. One three-hour session per week in microcomputer laboratory. Concurrent enrollment in course 148 is required. The Staff

160. Mathematical Logic I. *

Propositional and predicate calculus. Resolution, completeness, compactness, and Lowenheim-Skolem theorem. Recursive functions, Godel incompleteness theorem. Undecidable theories. Hilbert's 10th problem. Prerequisite(s): course 100 or Computer Science 101. The Staff

161. Mathematical Logic II. *

Naive set theory and its limitations (Russell's paradox); construction of numbers as sets; cardinal and ordinal numbers; cardinal and ordinal arithmetic; transfinite induction; axiom systems for set theory, with particular emphasis on the axiom of choice and the regularity axiom and their consequences (such as, the Banach-Tarski paradox); continuum hypothesis. Prerequisite(s): course 100 or equivalent, or by permission of instructor. Enrollment limited to 45. The Staff

181. History of Mathematics. W

A survey from a historical point of view of various developments in mathematics. Specific topics and periods to vary yearly. Prerequisite(s): course 19B. course 100 strongly recommended for preparation. (General Education Code(s): TA.) The Staff

188. Supervised Teaching. F,W,S

Supervised tutoring in self-paced courses. May not be repeated for credit. Students submit petition to sponsoring agency. (General Education Code(s): PR-S.) The Staff

189. ACE Program Service Learning (2 credits). F

Students participate in training and development to co-facilitate collaborative learning in ACE chemistry discussion sections and midterm/exam review sessions. Students are role models for students pursuing science- and math-intensive majors. Prerequisite(s): Prior participation in ACE; good academic standing; no non-passing grades in prior quarter.

Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 10.

(General Education Code(s): PR-S.) The Staff

194. Senior Seminar. W,S

Designed to expose the student to topics not normally covered in the standard courses. The format varies from year to year. In recent years each student has written a paper and presented a lecture on it to the class. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 103 or 103A or 105A or 111A. Enrollment priority given to seniors. The Staff

195. Senior Thesis. F,W,S

Students research a mathematical topic under the guidance of a faculty sponsor and write a senior thesis demonstrating knowledge of the material. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Algebra I. F

Group theory: subgroups, cosets, normal subgroups, homomorphisms, isomorphisms, quotient groups, free groups, generators and relations, group actions on a set. Sylow theorems, semidirect products, simple groups, nilpotent groups, and solvable groups. Ring theory: Chinese remainder theorem, prime ideals, localization. Euclidean domains, PIDs, UFDs, polynomial rings. Prerequisite(s): courses 111A and 117 are recommended as preparation. Enrollment restricted to graduate students. May be repeated for credit. The Staff

201. Algebra II. W

Vector spaces, linear transformations, eigenvalues and eigenvectors, the Jordan canonical form, bilinear forms, quadratic forms, real symmetric forms and real symmetric matrices, orthogonal transformations and orthogonal matrices, Euclidean space, Hermitian forms and Hermitian matrices, Hermitian spaces, unitary transformations and unitary matrices, skewsymmetric forms, tensor products of vector spaces, tensor algebras, symmetric algebras, exterior algebras, Clifford algebras and spin groups. Prerequisite(s): Course 200 is recommended as preparation. Enrollment restricted to graduate students. The Staff

202. Algebra III. S

Module theory: Submodules, quotient modules, module homomorphisms, generators of modules, direct sums, free modules, torsion modules, modules over PIDs, and applications to rational and Jordan canonical forms. Field theory: field extensions, algebraic and transcendental extensions, splitting fields, algebraic closures, separable and normal extensions, the Galois theory, finite fields, Galois theory of polynomials. Prerequisite(s): Course 201 is recommended as preparation. Enrollment restricted to graduate students. The Staff

203. Algebra IV. F

Topics include tensor product of modules over rings, projective modules and injective modules, Jacobson radical, Wedderburn's theorem, category theory, Noetherian rings, Artinian rings, affine varieties, projective varieties, Hilbert's Nullstellensatz, prime spectrum, Zariski topology, discrete valuation rings, and Dedekind domains.

Prerequisite(s): courses 200, 201, and 202. Enrollment restricted to graduate students. The Staff

204. Analysis I. F

Completeness and compactness for real line; sequences and infinite series of functions; Fourier series; calculus on Euclidean space and the implicit function theorem; metric spaces and the contracting mapping theorem; the Arzela-Ascoli theorem; basics of general topological spaces; the Baire category theorem; Urysohn's lemma; and Tychonoff's theorem. Prerequisite(s): courses 105A and 105B are recommended as preparation. Enrollment restricted to graduate students. The Staff

205. Analysis II. W

Lebesgue measure theory, abstract measure theory, measurable functions, integration, space of absolutely integrable functions, dominated convergence theorem, convergence in measure, Riesz representation theorem, product measure and Fubini's theorem. L_p spaces, derivative of a measure, the Radon–Nikodym theorem, and the fundamental theorem of calculus. Prerequisite(s): course 204. Enrollment restricted to graduate students. The Staff

206. Analysis III. S

Banach spaces, Hahn–Banach theorem, uniform boundedness theorem, the open mapping and closed graph theorems, weak and weak* topology, the Banach–Alaoglu theorem, Hilbert spaces, self-adjoint operators, compact operators, spectral theory, Fredholm operators, spaces of distributions and the Fourier transform, and Sobolev spaces.

Prerequisite(s): Courses 204 and 205 recommended as preparation. Enrollment restricted to graduate students. The Staff

207. Complex Analysis. F

Holomorphic and harmonic functions, Cauchy's integral theorem, the maximum principle and its consequences, conformal mapping, analytic continuation, the Riemann mapping theorem. Prerequisite(s): Course 103 is recommended as preparation. Enrollment restricted to graduate students. The Staff

208. Manifolds I. F

Definition of manifolds; the tangent bundle; the inverse function theorem and the implicit function theorem; transversality; Sard's theorem and the Whitney embedding theorem; vector fields, flows, and the Lie bracket; Frobenius's theorem. Course 204 recommended for preparation. Enrollment restricted to graduate students. The Staff

209. Manifolds II. W

Tensor algebra. Differential forms and associated formalism of pullback, wedge product, exterior derivative, Stokes theorem, integration. Cartan's formula for Lie derivative. Cohomology via differential forms. The Poincaré lemma and the Mayer–Vietoris sequence. Theorems of deRham and Hodge. Prerequisite(s): course 208. Course 201 is recommended as preparation. Enrollment restricted to graduate students. The Staff

210. Manifolds III. S

The fundamental group, covering space theory and van Kampen's theorem (with a discussion of free and amalgamated products of groups), CW complexes, higher homotopy groups, cellular and singular cohomology, the Eilenberg–Steenrod axioms, computational tools including Mayer–Vietoris, cup products, Poincaré duality, the Lefschetz fixed point theorem, the exact homotopy sequence of a fibration and the Hurewicz isomorphism theorem, and remarks on characteristic classes. Prerequisite(s): Courses 208 and 209 recommended as preparation. Enrollment restricted to graduate students. The Staff

211. Algebraic Topology. F

Continuation of course 210. Topics include theory of characteristic classes of vector bundles, cobordism theory, and homotopy theory. Prerequisite(s): Courses 200, 201, and 202 recommended as preparation. Enrollment restricted to graduate students. The Staff

212. Differential Geometry. S

Principal bundles, associated bundles and vector bundles, connections and curvature on principal and vector bundles. More advanced topics include: introduction to cohomology, the Chern–Weil construction and characteristic classes, the Gauss–Bonnet theorem or Hodge theory, eigenvalue estimates for Beltrami Laplacian, and comparison theorems in Riemannian geometry. Prerequisite(s): course 208. Enrollment restricted to graduate students. The Staff

213A. Partial Differential Equations I. W

First of the two PDE courses covering basically Part I in Evans' book; Partial Differential Equations; which includes transport equations; Laplace equations; heat equations; wave equations; characteristics of nonlinear first-order PDE; Hamilton–Jacobi equations; conservation laws; some methods for solving equations in closed form; and the Cauchy–Kovalevskaya theorem. Courses 106 and 107 are recommended as preparation. Enrollment restricted to graduate students. The Staff

213B. Partial Differential Equations II. *

Second course of the PDE series covering basically most of Part II in Evans' book and some

topics in nonlinear PDE including Sobolev spaces, Sobolev inequalities, existence, regularity and a priori estimates of solutions to second order elliptic PDE, parabolic equations, hyperbolic equations and systems of conservation laws, and calculus of variations and its applications to PDE. Prerequisite(s): Courses 106, 107, and 213A are recommended as preparation. Enrollment restricted to graduate students. The Staff

214. Theory of Finite Groups. *

Nilpotent groups, solvable groups, Hall subgroups, the Frattini subgroup, the Fitting subgroup, the Schur-Zassenhaus theorem, fusion in p-subgroups, the transfer map, Frobenius theorem on normal p-complements. Prerequisite(s): Courses 200 and 201 recommended as preparation. Enrollment restricted to graduate students. The Staff

215. Operator Theory. *

Operators on Banach spaces and Hilbert spaces. The spectral theorem. Compact and Fredholm operators. Other special classes of operators. Prerequisite(s): Courses 204, 205, 206, and 207 are recommended as preparation. Enrollment restricted to graduate students. The Staff

216. Advanced Analysis. *

Topics include: the Lebesgue set, the Marcinkiewicz interpolation theorem, singular integrals, the Calderon-Zygmund theorem, Hardy Littlewood-Sobolev theorem, pseudodifferential operators, compensated compactness, concentration compactness, and applications to PDE. Prerequisite(s): Courses 204, 205, and 206 recommended as preparation. Enrollment restricted to graduate students. The Staff

217. Advanced Elliptic Partial Differential Equations. *

Topics include elliptic equations, existence of weak solutions, the Lax-Milgram theorem, interior and boundary regularity, maximum principles, the Harnack inequality, eigenvalues for symmetric and non-symmetric elliptic operators, calculus of variations (first variation: Euler-Lagrange equations, second variation: existence of minimizers). Other topics covered as time permits. Prerequisite(s): Courses 204, 205, and 206 recommended as preparation. Enrollment restricted to graduate students. The Staff

218. Advanced Parabolic and Hyperbolic Partial Differential Equations. *

Topics include: linear evolution equations, second order parabolic equations, maximum principles, second order hyperbolic equations, propagation of singularities, hyperbolic systems of first order, semigroup theory, systems of conservation laws, Riemann problem, simple waves, rarefaction waves, shock waves, Riemann invariants, and entropy criteria. Other topics covered as time permits. Prerequisite(s): courses 205 and 206. Enrollment restricted to graduate students. The Staff

219. Nonlinear Functional Analysis. *

Topological methods in nonlinear partial differential equations, including degree theory, bifurcation theory, and monotonicity. Topics also include variational methods in the solution of nonlinear partial differential equations. Enrollment restricted to graduate students. The Staff

220A. Representation Theory I. *

Lie groups and Lie algebras, and their finite dimensional representations. Prerequisite(s): courses 200, 201, and 202. Courses 225A and 227 recommended as preparation. Enrollment restricted to graduate students. The Staff

220B. Representation Theory II. *

Lie groups and Lie algebras, and their finite dimensional representations. Prerequisite(s): course 220A. Enrollment restricted to graduate students. The Staff

222A. Algebraic Number Theory. *

Topics include algebraic integers, completions, different and discriminant, cyclotomic fields, parallelotopes, the ideal function, ideles and adeles, elementary properties of zeta functions and L-series, local class field theory, global class field theory. Courses 200, 201, and 202 are recommended as preparation. Enrollment restricted to graduate students. The Staff

222B. Algebraic Number Theory. *

Topics include geometric methods in number theory, finiteness theorems, analogues of Riemann-Roch for algebraic fields (after A. Weil), inverse Galois problem (Belyi theorem)

and consequences. Enrollment restricted to graduate students. The Staff

223A. Algebraic Geometry I. W

Topics include examples of algebraic varieties, elements of commutative algebra, local properties of algebraic varieties, line bundles and sheaf cohomology, theory of algebraic curves. Weekly problem solving. Courses 200, 201, 202, and 208 are recommended as preparation. Enrollment restricted to graduate students. The Staff

223B. Algebraic Geometry II. *

A continuation of course 223A. Topics include theory of schemes and sheaf cohomology, formulation of the Riemann–Roch theorem, birational maps, theory of surfaces. Weekly problem solving. Course 223A is recommended as preparation. Enrollment restricted to graduate students. The Staff

225A. Lie Algebras. F

Basic concepts of Lie algebras. Engel's theorem, Lie's theorem, Weyl's theorem are proved. Root space decomposition for semi-simple algebras, root systems and the classification theorem for semi-simple algebras over the complex numbers. Isomorphism and conjugacy theorems. Prerequisite(s): Courses 201 and 202 recommended as preparation. Enrollment restricted to graduate students. The Staff

225B. Infinite Dimensional Lie Algebras. *

Finite dimensional semi-simple Lie algebras: PBW theorem, generators and relations, highest weight representations, Weyl character formula. Infinite dimensional Lie algebras: Heisenberg algebras, Virasoro algebras, loop algebras, affine Kac–Moody algebras, vertex operator representations. Prerequisite(s): course 225A. Enrollment restricted to graduate students. The Staff

226A. Infinite Dimensional Lie Algebras and Quantum Field Theory I. *

Introduction to the infinite-dimensional Lie algebras that arise in modern mathematics and mathematical physics: Heisenberg and Virasoro algebras, representations of the Heisenberg algebra, Verma modules over the Virasoro algebra, the Kac determinant formula, and unitary and discrete series representations. Enrollment restricted to graduate students. The Staff

226B. Infinite Dimensional Lie Algebras and Quantum Field Theory II. *

Continuation of course 226A: Kac–Moody and affine Lie algebras and their representations, integrable modules, representations via vertex operators, modular invariance of characters, and introduction to vertex operator algebras. Enrollment restricted to graduate students. The Staff

227. Lie Groups. W

Lie groups and algebras, the exponential map, the adjoint action, Lie's three theorems, Lie subgroups, the maximal torus theorem, the Weyl group, some topology of Lie groups, some representation theory: Schur's Lemma, the Peter–Weyl theorem, roots, weights, classification of Lie groups, the classical groups. Prerequisite(s): courses 200, 201, 204, and 208. Enrollment restricted to graduate students. The Staff

228. Lie Incidence Geometries. *

Linear incidence geometry is introduced. Linear and classical groups are reviewed, and geometries associated with projective and polar spaces are introduced. Characterizations are obtained. Enrollment restricted to graduate students. The Staff

229. Kac–Moody Algebras. *

Theory of Kac–Moody algebras and their representations. The Weil–Kac character formula. Emphasis on representations of affine superalgebras by vertex operators. Connections to combinatorics, PDE, the monster group. The Virasoro algebra. Enrollment restricted to graduate students. The Staff

232. Morse Theory. *

Classical Morse Theory. The fundamental theorems relating critical points to the topology of a manifold are treated in detail. The Bott Periodicity Theorem. A specialized course offered once every few years. Prerequisite(s): Courses 208, 209, 210, 211, and 212 recommended as preparation. Enrollment restricted to graduate students. The Staff

233. Random Matrix Theory. *

Classical matrix ensembles; Wigner semi-circle law; method of moments. Gaussian ensembles. Method of orthogonal polynomials; Gaudin lemma. Distribution functions for spacings and largest eigenvalue. Asymptotics and Riemann–Hilbert problem. Painlevé theory and the Tracy–Widom distribution. Selberg's Integral. Matrix ensembles related to classical groups; symmetric functions theory. Averages of characteristic polynomials. Fundamentals of free probability theory. Overview of connections with physics, combinatorics, and number theory. Prerequisite(s): courses 103, 204, and 205; course 117 recommended as preparation. Enrollment restricted to graduate students. The Staff

234. Riemann Surfaces. *

Riemann surfaces, conformal maps, harmonic forms, holomorphic forms, the Riemann–Roch theorem, the theory of moduli. Enrollment restricted to graduate students. The Staff

235. Dynamical Systems Theory. S

An introduction to the qualitative theory of systems of ordinary differential equations. Structural stability, critical elements, stable manifolds, generic properties, bifurcations of generic arcs. Prerequisite(s): courses 203 and 208. Enrollment restricted to graduate students. The Staff

238. Elliptic Functions and Modular Forms. W

The course, aimed at second-year graduate students, will cover the basic facts about elliptic functions and modular forms. The goal is to provide the student with foundations suitable for further work in advanced number theory, in conformal field theory, and in the theory of Riemann surfaces. Prerequisite(s): courses 200, 201, 202, and either 207 or 103A are recommended as preparation. Enrollment restricted to graduate students. The Staff

239. Homological Algebra. S

Homology and cohomology theories have proven to be powerful tools in many fields (topology, geometry, number theory, algebra). Independent of the field, these theories use the common language of homological algebra. The aim of this course is to acquaint the participants with basic concepts of category theory and homological algebra, as follows: chain complexes, homology, homotopy, several (co)homology theories (topological spaces, manifolds, groups, algebras, Lie groups), projective and injective resolutions, derived functors (Ext and Tor). Depending on time, spectral sequences or derived categories may also be treated. Courses 200 and 202 strongly recommended. Enrollment restricted to graduate students. The Staff

240A. Representations of Finite Groups I. F

Introduces ordinary representation theory of finite groups (over the complex numbers). Main topics are characters, orthogonality relations, character tables, induction and restriction, Frobenius reciprocity, Mackey's formula, Clifford theory, Schur indicator, Schur index, Artin's and Braver's induction theorems. Recommended: successful completion of courses 200–202. Enrollment restricted to graduate students. The Staff

240B. Representations of Finite Groups II. *

Introduces modular representation theory of finite groups (over a field of positive characteristic). Main topics are Grothendieck groups, Brauer characters, Brauer character table, projective covers, Brauer–Cartan triangle, relative projectivity, vertices, sources, Green correspondence, Green's indecomposability theorem. Recommended completion of courses 200–203 and 240A. Prerequisite(s): Courses 200, 201, 202, 203, and 240A recommended. Enrollment restricted to graduate students. The Staff

246. Representations of Algebras. *

Material includes associative algebras and their modules; projective and injective modules; projective covers; injective hulls; Krull–Schmidt Theorem; Cartan matrix; semisimple algebras and modules; radical, simple algebras; symmetric algebras; quivers and their representations; Morita Theory; and basic algebras. Prerequisite(s): courses 200, 201, and 202. Enrollment restricted to graduate students. The Staff

248. Symplectic Geometry. F

Basic definitions. Darboux theorem. Basic examples: cotangent bundles, Kähler manifolds and co-adjoint orbits. Normal form theorems. Hamiltonian group actions, moment maps. Reduction by symmetry groups. Atiyah–Guillemin–Sternberg convexity. Introduction to Floer homological methods. Relations with other geometries including contact, Poisson, and Kähler geometry. Prerequisite(s): course 204; courses 208 and 209 are recommended

as preparation. Enrollment restricted to graduate students. The Staff

249A. Mechanics I. *

Covers symplectic geometry and classical Hamiltonian dynamics. Some of the key subjects are the Darboux theorem, Poisson brackets, Hamiltonian and Langrangian systems, Legendre transformations, variational principles, Hamilton-Jacobi theory, geodesic equations, and an introduction to Poisson geometry. Courses 208 and 209 are recommended as preparation. Courses 208 and 209 recommended as preparation. Enrollment restricted to graduate students. The Staff

249B. Mechanics II. *

Hamiltonian dynamics with symmetry. Key topics center around the momentum map and the theory of reduction in both the symplectic and Poisson context. Applications are taken from geometry, rigid body dynamics, and continuum mechanics. Course 249A is recommended as preparation. Enrollment restricted to graduate students. The Staff

249C. Mechanics III. *

Introduces students to active research topics tailored according to the interests of the students. Possible subjects are complete integrability and Kac-Moody Lie algebras; Smale's topological program and bifurcation theory; KAM theory, stability and chaos; relativity; quantization. Course 249B is recommended as preparation. Enrollment restricted to graduate students. Offered in alternate academic years. The Staff

252. Fluid Mechanics. *

First covers a basic introduction to fluid dynamics equations and then focuses on different aspects of the solutions to the Navier-Stokes equations. Prerequisite(s): courses 106 and 107 are recommended as preparation. Enrollment restricted to graduate students. The Staff

254. Geometric Analysis. *

Introduction to some basics in geometric analysis through the discussions of two fundamental problems in geometry: the resolution of the Yamabe problem and the study of harmonic maps. The analytic aspects of these problems include Sobolev spaces, best constants in Sobolev inequalities, and regularity and a priori estimates of systems of elliptic PDE. Courses 204, 205, 209, 212, and 213 recommended as preparation. Enrollment restricted to graduate students. The Staff

256. Algebraic Curves. *

Introduction to compact Riemann surfaces and algebraic geometry via an in-depth study of complex algebraic curves. Courses 200, 201, 202, 203, 204, and 207 are recommended as preparation. Enrollment restricted to graduate mathematics and physics students. The Staff

260. Combinatorics. *

Combinatorial mathematics, including summation methods, binomial coefficients, combinatorial sequences (Fibonacci, Stirling, Eulerian, harmonic, Bernoulli numbers), generating functions and their uses, Bernoulli processes and other topics in discrete probability. Oriented toward problem solving applications. Applications to statistical physics and computer science. Enrollment restricted to graduate students. The Staff

280. Topics in Analysis. S

Enrollment restricted to graduate students. May be repeated for credit. The Staff

281. Topics in Algebra. S

Enrollment restricted to graduate students. May be repeated for credit. The Staff

282. Topics in Geometry. S

Enrollment restricted to graduate students. May be repeated for credit. The Staff

283. Topics in Combinatorial Theory. *

Enrollment restricted to graduate students. May be repeated for credit. The Staff

284. Topics in Dynamics. *

Enrollment restricted to graduate students. May be repeated for credit. The Staff

285. Topics in Partial Differential Equations. *

Topics such as derivation of the Navier-Stokes equations. Examples of flows including water waves, vortex motion, and boundary layers. Introductory functional analysis of the Navier-Stokes equation. Enrollment restricted to graduate students. May be repeated for

credit. The Staff

286. Topics in Number Theory. S

Topics in number theory, selected by instructor. Possibilities include modular and automorphic forms, elliptic curves, algebraic number theory, local fields, the trace formula. May also cover related areas of arithmetic algebraic geometry, harmonic analysis, and representation theory. Courses 200, 201, 202, and 205 are recommended as preparation. Enrollment restricted to graduate students. May be repeated for credit. The Staff

287. Topics in Topology. *

Topics in topology, selected by the instructor. Possibilities include generalized (co)homology theory including K-theory, group actions on manifolds, equivariant and orbifold cohomology theory. Enrollment restricted to graduate students. May be repeated for credit. The Staff

292. Seminar (no credit). F,W,S

A weekly seminar attended by faculty, graduate students, and upper-division undergraduate students. All graduate students are expected to attend. Enrollment restricted to graduate students. The Staff

296. Special Student Seminar. F,W,S

Students and staff studying in an area where there is no specific course offering at that time. Enrollment restricted to graduate students. The Staff

297. Independent Study. F,W,S

Either study related to a course being taken or a totally independent study. Enrollment restricted to graduate students. The Staff

298. Master's Thesis Research. F,W,S

Enrollment restricted to graduate students. The Staff

299. Thesis Research. F,W,S

Enrollment restricted to graduate students. The Staff

* Not offered in 2014–15

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Merrill College

[2014–15 General Catalog](#)

College Office

(831) 459-2144

merrill.ucsc.edu

For college description and list of faculty, see [colleges](#).

Lower-Division Courses

10. Becoming a Successful Student (2 credits). W

An interactive course providing the opportunity to assess and revise methods of and purposes in studying. Critical, effective approaches to reading, writing, participating in lectures and sections, taking exams, balancing competing responsibilities, and utilizing campus resources are explored. Contact college office for interview-only criteria.

Enrollment limited to 30. The Staff

20N. Re-Evaluation Counseling. *

Class introduces the fundamentals of re-evaluation counseling (co-counseling) and focuses on those aspects of the theory and practice which facilitate living in a diverse world. Interview with instructor before first class meeting. Enrollment limited to 20. Offered in alternate academic years. P. Roby

28. Peer Leadership in Co-Curricular Settings (2 credits). S

Introductory course for student leaders combining theoretical background and practical applications. Topics include: student-development theory; communication strategies; leadership-skills assessment; and intergroup relations. Includes readings, discussions, self-reflection, and lectures. Resident assistant (RA) pre-employment training course. Enrollment by interview only: approval of instructor required. Enrollment restricted to selection as resident assistant (RA), program assistant, or alternate for Merrill College. Enrollment limited to 30. May be repeated for credit. The Staff

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff

80A. Introduction to University Discourse: Cultural Identities and Global Consciousness. F

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Examines world poverty, imperialism, and nationalism; peoples' need to assert their cultural identities; and the benefits of individuals' absorption in worthy causes. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. (General Education Code(s): T3–Social Sciences, C1, E.) The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
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■ History
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■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

80B. Rhetoric and Inquiry: Cultural Identities and Global Consciousness. F
Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Examines world poverty, imperialism, and nationalism; peoples' need to assert their cultural identities; and the benefits of individuals' absorption in worthy causes. Incorporates outside research. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. (General Education Code(s): T3–Social Sciences, C2, E.) The Staff

80C. Merrill Seminar. W,S
Research-based seminar on a topic of particular cultural, historical, or contemporary interest, open to all undergraduate students, taught by either a Merrill College Fellow or other member of the UCSC faculty. (General Education Code(s): T5–Humanities and Arts or Social Sciences.) The Staff

83F. Topics in Foreign Policy (2 credits). S
Students read and evaluate mainstream and Internet media sources on foreign–policy topics of interest to them, and learn the craft of writing news columns—writing for a public audience—on their chosen foreign–policy topics. Prerequisite(s): Satisfaction of the college core course. Merrill students are offered first priority. Enrollment limited to 25. C. Hallinan

85B. Merrill Classroom Connection Field Study (3 credits). F,W,S
Supervised hands-on experience assisting in local K–12 school classrooms. Students attend UCSC class meetings, complete relevant readings in educational theory, and present a final assignment. Priority enrollment restricted to Merrill College members. May be repeated for credit. (General Education Code(s): PR–S.) The Staff

85C. Merrill Classroom Connection Field Study (2 credits). F,W,S
Supervised hands-on experience assisting in local K–12 school classrooms. Students also attend UCSC course meetings, complete relevant readings in educational theory, and present a final assignment. Priority enrollment restricted to Merrill College members. May be repeated for credit. (General Education Code(s): PR–S.) The Staff

90. Theory and Practice of Field Study. S
Course provides an opportunity for lower–division students to learn about Santa Cruz, Calif., its contemporary history, culture, and politics through classroom theoretical learning integrated with individual field studies. Course also examines social change, qualitative research, and community organizing. Enrollment restricted to Frosh and sophomore Merrill, Kresge, and Stevenson College students enrolled in College Challenge programs. Enrollment limited to 25. (General Education Code(s): PR–S.) M. Rotkin

90F. Merrill Field Study Practicum (2 credits). F,W,S
Offers Merrill students an opportunity for practical field study experience with preparation and support for practical skill development and critical reflection on service–learning experience. Enrollment restricted to sophomore, junior, and senior college members. Enrollment limited to 30. (General Education Code(s): PR–S.) M. Rotkin

91F. Challenge Speakers Colloquium (2 credits). F
Eight lectures, six by faculty about research problems in their disciplines. Students attend two dinners with the speakers; respond to research papers in each speaker's field; conduct a research interview with a professor; and investigate a research question. (Also offered as Stevenson College 91F. Students cannot receive credit for both courses.) Prerequisite(s): course 90, or Stevenson 90, or Kresge 171. E. Abrams

93. Field Study. F,W,S
Provides for individual programs of study sponsored by the college and performed off campus. Up to three such courses may be taken for credit in any one quarter. Approval of student's adviser and provost required. The Staff

93F. Field Study (2 credits). F,W,S
Provides for individual program of study sponsored by the college and performed off campus. Approval of instructor required. May be repeated for credit. The Staff

93G. Field Study (3 credits). F,W,S
Provides for individual programs of study sponsored by the college and performed off campus. Approval of instructor required. May be repeated for credit. The Staff

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Teaching and Administrative Staff**Appendices**[Archive of General Catalogs](#)[Nondiscrimination Statement](#)[Search the Catalog](#)**99. Tutorial. F,W,S**

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits). F,W,S

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. The Staff

Upper-Division Courses**120. Personal Empowerment. W**

Intensive course on individual goal-oriented behavior, commonly called problem solving. Focus on purpose, goals, meaning, emotions, languages, model-building, reality, thinking, logic, creativity, the steps of problem solving, common blocks, and techniques of unblocking. Meet with instructor prior to advance enrollment; priority given to upper-level students. Enrollment limited to 20. F. Andrews

180. Research Skills for College and Beyond (2 credits). W

Focuses on exploration/development of skills for planning, study habits, research, networking, and communication skills for college, graduate and professional school, and beyond. Primary focus is on writing, public speaking, and academic and professional research. Enrollment restricted to junior and senior college members. Enrollment limited to 15. S. Amador

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar by an upper-division student under faculty supervision. (See course 42.) Students submit petition to sponsoring agency, supported by faculty member willing to supervise. The Staff

193. Field Study. F,W,S

Provides for individual programs of study sponsored by the college and performed off campus. Up to three such courses may be taken for credit in one quarter. Approval of student's adviser and provost required. May be repeated for credit. The Staff

193F. Field Study (2 credits). F,W,S

Provides for individual programs of study sponsored by the college and performed off campus. Up to three such courses may be taken for credit in one quarter. Approval of student's adviser and provost required. May be repeated for credit. The Staff

193G. Field Study (3 credits). F,W,S

Provides for individual programs of study sponsored by the college and performed off campus. Up to three such courses may be taken for credit in one quarter. Approval of student's adviser and provost required. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

A program of independent study arranged between a group of students and a faculty member. The Staff

195. Senior Research Project. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

Provides for college-sponsored individual study programs off campus, for which faculty supervision is not in person (e.g., supervision is by correspondence). Up to three such courses may be taken for credit in any one quarter. This may be a multiple-term course extending over two or three quarters; in this case the grade and evaluation submitted for the final quarter apply to all previous quarters. Petitions may be obtained at the Merrill College Office. Approval of student's adviser, certification of adequate preparation, and approval by the Merrill Provost required. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Microbiology and Environmental Toxicology

[2014-15 General Catalog](#)

430 Physical Sciences Building

Telephone (831) 459-4719

FAX (831) 459-3524

<http://www.metx.ucsc.edu>

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Lower-Division Courses

80E. Aquatic Toxicology. F

An introduction to the sources, cycling, and impacts of toxicants in aquatic systems, including acid rain, ground water, fresh water rivers and lakes, estuaries, and the ocean. Emphasis is on the properties of toxic chemicals that influence their biogeochemical cycles and factors that influence their toxicity to aquatic organisms and humans. (General Education Code(s): SI, T-2 Natural Sciences.) A. Flegal

Upper-Division Courses

101. Sources and Fates of Pollutants. S

Presents in-depth important principles of environmental toxicology related to the introduction, transport, and fate of toxicants in aquatic and terrestrial environments, including environmental chemistry and biogeochemical cycles as well as exposure pathways and uptake by organisms. Additional emphasis placed on susceptibility and effects of toxicants across organ systems, toxicokinetic and biomarkers of exposure, and effects at the ecosystem level. Students cannot receive credit for this course and course 201. A. Flegal

102. Cell and Molecular Toxicology. W

Emphasizes biochemical, cellular, and organ system basis of intoxication, including dose-response relationships, biotransformation of toxicants, biochemical mechanisms underlying toxicity, factors influencing toxic action, and biomarkers of exposure. Emphasizes effects of various classes of toxins, including heavy metals and persistent synthetic organics, with a focus on susceptible biochemical/cellular processes of the central nervous, immune, hepatic, and renal target organ systems. Designed for advanced undergraduates. Students cannot receive credit for this course and course 202. (Formerly Cellular and Organismal Toxicology.) Prerequisite(s): Biology 20A and 20B or equivalent; Biology 100, Biochemistry, and 110, Cell Biology, are recommended. Enrollment restricted to juniors and seniors. D. Smith

119. Microbiology. F,W

Cell and molecular biology of bacteria and their viruses, including applications in medicine,

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■ Environmental Studies
■ Feminist Studies
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■ History
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■ History of Consciousness
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■ Latin
■ Latin American and Latino Studies
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■ Merrill College
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■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

public health, agriculture, and biotechnology. Prerequisite(s): BIOL 100 or BIOC 100A. V. Stone, F. Yildiz

119L. Microbiology Laboratory. F,W,S

An introduction to the principles and practices of laboratory microbiology, with a substantial presentation of optical microscopy. Students are billed a materials fee. Prerequisite(s): previous or concurrent enrollment in course 119 required; satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to biological sciences and affiliated majors; biology minors; other majors by permission. (General Education Code(s): W.) C. Saltikov, K. Ottemann

125. Practicing Safe Science (2 credits). W

Introduces research safety principles and practices. Instructors and guest experts discuss research hazards and control measures. Students explore the safe use of research methods and materials via hands-on and outside exercises. Issues include compliance with hazardous waste and other environmental safety regulations. J. Schoonover

135. Functional Anatomy. S

A rigorous systems-based course in anatomy. Lectures provide an overview of functional anatomy at all levels from the systems to the tissues. Provides a mechanistic understanding of the structures of the body as a foundation for human-health oriented studies. (Formerly BIOL 135.) Prerequisite(s): courses 20A and Biology: Ecology and Evolutionary 20B. Concurrent enrollment in course 135L is required. Enrollment restricted to biological sciences majors and affiliated majors and biology minors. M. Camps

135L. Functional Anatomy Lab (2 credits). S

Complements lecture course 135. Emphasizes nomenclature and recognition; includes the embryology and histology of bones, muscles, and internal organs, and the interactions between the systems of the body. Students are billed a materials fee. (Formerly BIOL 135L.) Prerequisite(s): courses 20A and Biology: Ecology and Evolutionary 20B. Enrollment restricted to biological sciences majors and affiliated majors and biology minors.

Enrollment limited to 24. M. Camps

138. Pathogenesis: Molecular Mechanisms of Disease. *

Overview of the pathogenic mechanisms underlying human disease at the physiological and molecular levels, with their implications for epidemiology, diagnosis, and treatment. Includes discussion of clinical cases and of emerging areas of research. Geared toward students interested in future research or clinical careers in the area of human or animal health. Students cannot receive credit for this course and Microbiology and Environmental Toxicology 238. (Also offered as Biology: Molecular Cell & Dev 118. Students cannot receive credit for both courses.) Prerequisite(s): Biology 130. Enrollment restricted to students majoring in biology; health sciences; molecular, cell, and developmental biology; biochemistry and molecular biology; or neuroscience and behavior. Offered in alternate academic years. M. Camps

140. Molecular Biology of Prokaryotes. *

Focuses on several aspects of prokaryotic molecular biology. Covers transcriptional regulation, translational regulation, DNA replication and segregation, protein secretion, transport of small molecules, control of metabolism, stress response, bacterial differentiation, signal transduction, biofilm formation, and motility. Strong focus on experimental techniques and approaches used in prokaryotic molecular biology. Focus on model bacteria such as *Escherichia coli* and *Bacillus subtilis*. Students cannot receive credit for this course and course 240. Prerequisite(s): Biology 119. K. Ottemann

144. Groundwater Contamination. S

Analyses of contemporary problems in groundwater contamination, based on current scientific understanding of contaminant transport in aquifers. Topics include both theoretical concepts and case studies. To be offered in alternate academic years.

Prerequisite(s): Earth Science 110B. A. Flegal

145. Medical Geology. *

An interdisciplinary analysis of natural geochemical processes that impact human health and of anthropogenic processes that exacerbate those impacts. Prerequisite(s): Chemistry 1A, 1B, 1C, 1M, and 1N. A. Flegal

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Lecture-based course for advanced undergraduates actively engaged in undergraduate research (e.g., independent study or senior thesis). Emphasizes basic lab skills, including laboratory safety and handling of laboratory equipment; experimental design; scientific record keeping; and literature searching, review, and management. K. Ottemann, (FWS) The Staff

151. Scientific Writing and Presentation. *

For advanced undergraduates who are actively engaged in undergraduate research (e.g., independent study or senior thesis). Emphasizes the collection, reduction, analysis, management, and interpretation of scientific data; the presentation of scientific data in written and oral formats; and further development of critical thinking. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): W.) The Staff

160. Coastal Environmental Toxicology and Policy (3 credits). *

Interdisciplinary analysis of the scientific basis and policy development to regulate and manage environmental pollutants in coastal waters. Focuses on case studies involving aspects of environmental toxicology and policy including environmental monitoring and regulatory programs; ecosystem restoration; and regulating the environmental impacts of coastal development. Enrollment restricted to sophomores, juniors, seniors, and graduate students. M. Connor, G. Griggs, A. Flegal

170. Drug Action and Development. *

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and course 270. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Biomolecular Engineering 170. Students cannot receive credit for both courses.) Prerequisite(s): Biology 100 or Chemistry 103 or Biochemistry 100A. Biology 110 and 130/L or 131/L are recommended. Enrollment restricted to juniors and seniors. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

195. Senior Thesis. F,W,S

An individually supervised course, with emphasis on independent research culminating in a senior thesis. May be repeated for credit. The Staff

195F. Senior Thesis (2 credits). F,W,S

An individually supervised course with emphasis on independent research culminating in a senior thesis. May be repeated for credit. The Staff

198. Independent Study. F,W,S

Provides for individual programs of study (a) by means other than the usual supervision in person or (b) when the student is doing all or most of the course work off campus. With permission of the department, two or three courses may be taken concurrently, or the course repeated for credit. May be repeated for credit. The Staff

198F. Independent Study (2 credits). F,W,S

Provides for individual programs of study (a) by means other than the usual supervision in person or (b) when the student is doing all or most of the coursework off campus. With permission of the department, two or three courses may be taken concurrently, or the course repeated for credit. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Reading, discussion, written reports, and laboratory research on selected topics. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Reading, discussion, written reports, and laboratory research on selected topics. Enrollment limited to 4. May be repeated for credit. The Staff

Graduate Courses**200. Interdisciplinary Approaches in Environmental Toxicology. F**

Introduction to interdisciplinary, case-based approaches to problem-solving. Course

demonstrates how important, current problems in environmental and human health have been addressed and solved. Assigned problems that integrate the different organization levels (environmental, molecular/cellular, organismal/public health) inherent to environmental and human health are presented. Students work in collaborative teams to analyze each problem and create a proposal for a research plan/solution. Enrollment restricted to graduate students. C. Saltikov, A. Flegal

201. Sources and Fates of Pollutants. *

Presents in-depth important principles of environmental toxicology related to the introduction, transport, and fate of toxicants in aquatic and terrestrial environments including environmental chemistry and biogeochemical cycles as well as exposure pathways and uptake by organisms. Additional emphasis will be placed on the susceptibility and effects of toxicants across organ systems, toxicokinetics and biomarkers of exposure, and effects at the ecosystem level. Students cannot receive credit for this course and course 101. Enrollment restricted to graduate students; qualified undergraduate science majors may enroll with permission of instructor. A. Flegal

202. Cell and Molecular Toxicology. W

Emphasizes biochemical, cellular, and organ system basis of intoxication, including dose-response relationships, biotransformation of toxicants, biochemical mechanisms underlying toxicity, factors influencing toxic action, and biomarkers of exposure. Emphasizes effects of various classes of toxins, including heavy metals and persistent synthetic organics, with a focus on susceptible biochemical/cellular processes of the central nervous, immune, hepatic, and renal target organ systems. Students cannot receive credit for this course and Microbiology and Environmental Toxicology 102 or BIOL 122.. (Formerly "Cellular and Organismal Toxicology.") Enrollment restricted to graduate students. D. Smith

203. Cellular and Molecular Toxicology. *

Presents in-depth cellular and molecular principles of environmental toxicology. These include modes of action and cellular and molecular targets of toxicants, as well as mechanisms of cellular and molecular responses to toxicants and their detoxification. State-of-the-art biological methodologies and approaches to identify and study cellular targets of toxicants. Designed to provide students with a broad and deep understanding of the biological aspects of toxicology at both cellular and molecular levels, and the skills to approach emerging challenges in the field. Enrollment restricted to graduate students; qualified undergraduates may enroll with instructor's permission. (FWS) The Staff

205. Scientific Skills, Ethics, and Writing. S

Course provides fundamental training of graduate students in the scientific method, experimental design, ethics in science, grant proposal and scientific writing, data presentation, and scientific speaking. Students are evaluated on class participation, performance, and a written NIH/NSF style research proposal. Enrollment restricted to graduate students. The Staff

206A. Advanced Microbiology. W

Focuses on aspects of bacterial molecular biology. Covers four main areas: (1) metabolism-catabolism, anabolism, building-block precursors; (2) transcription/signal transduction; (3) replication/plasmid biology/division; (4) translation/protein processing/secretion/cell structure. Strong focus on experimental techniques and approaches used in molecular biology, and on model bacteria, such as *Escherichia coli* and *Bacillus subtilis*. Enrollment restricted to graduate students. Advanced undergraduates may enroll with permission of instructor. F. Yildiz, V. Stone, C. Saltikov, K. Ottemann

210. Molecular and Cellular Basis of Bacterial Pathogenesis. *

Focuses on the molecular basis of bacterial pathogenesis with specific emphasis on gene expression, regulation, and ecology and evolution. Enrollment restricted to graduate students. Advanced undergraduates with extensive background in microbiology and biology may enroll with permission of instructor. F. Yildiz

215. Seminar in Advanced Prokaryotic Molecular Biology (2 credits). *

Seminar focuses on aspects of prokaryotic molecular biology. Specific topics include transcriptional regulation, translational regulations, DNA replication, secretion of proteins, transport of small molecules, bacterial differentiation, signal transduction, biofilm formation, and motility. Discussions focus on model bacteria such as *Escherichia coli* and *Bacillus subtilis*. Enrollment restricted to graduate students. F. Yildiz, C. Saltikov, K.

Ottemann

238. Pathogenesis: Molecular Mechanisms of Disease. *

Overview of the pathogenic mechanisms underlying human disease at the physiological and molecular levels, with their implications for epidemiology, diagnosis, and treatment. Includes discussion of clinical cases and of emerging areas of research. Geared toward students interested in research or clinical careers in the area of human or animal health. Students cannot receive credit for this course and course 138. Enrollment restricted to graduate students. M. Camps

240. Molecular Biology of Prokaryotes. *

Focuses on several aspects of prokaryotic molecular biology. Covers transcriptional regulation, translational regulation, DNA replication and segregation, protein secretion, transport of small molecules, control of metabolism, stress response, bacterial differentiation, signal transduction, biofilm formation, and motility. Strong focus on experimental techniques and approaches used in prokaryotic molecular biology. Focus on model bacteria such as *Escherichia coli* and *Bacillus subtilis*. Students cannot receive credit for this course and course 140. K. Ottemann

250. Environmental Microbiology. S

How microbes interact with their environments. Topics include anaerobic metabolism; biotransformation of toxic metals and organic pollutants; geomicrobiology; life in extreme environments; water quality. Advanced undergraduates with extensive background in microbiology and biology may enroll with permission of instructor. Enrollment restricted to graduate students. Offered in alternate academic years. C. Saltikov

270. Drug Action and Development. *

Lectures and case studies explore principles and approaches in drug discovery and development, emphasizing concepts in pharmacology; medicinal chemistry; and genomics- and bioinformatics-based approaches to drug discovery to illustrate pathways from discovery through development for clinical use. Cannot receive credit for this course and course 170. (Formerly Frontiers in Drug Action and Discovery.) (Also offered as Biomolecular Engineering 270. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. D. Smith, T. Holman, M. Camps, R. Linington, P. Berman

281A. Topics in Environmental Toxicology. *

Selected topics in environmental toxicology. Topics vary from year to year. Enrollment restricted to graduate students; qualified upper-division science majors may enroll with instructor's permission. May be repeated for credit. The Staff

281C. Topics in Environmental Microbiology (2 credits). F,W,S

Seminar and discussion focusing on mechanism of microbial transformation of metals. Participants present results from their research projects in a seminar format. Relevant journal articles presented and discussed. Enrollment restricted to graduate students; qualified undergraduates may enroll with instructor's permission. C. Saltikov

281F. Topics in Aquatic Toxicology (2 credits). F,W,S

Analyses of the sources and fates of aquatic pollutants. Discussions on processes at the air-water interface, within the water column, and in aquatic sediments. Topics vary from year to year. Enrollment restricted to graduate students; qualified upper-division science majors may enroll with instructor's permission. May be repeated for credit. A. Flegal

281M. Topics in Molecular Toxicology (2 credits). F,W,S

Seminar and discussion on the mechanisms of toxicity in DNA alkylating agents. Participants present results from their research, and relevant journal articles are discussed. Enrollment restricted to graduate students. Undergraduates may enroll with instructor's permission. Enrollment limited to 5. May be repeated for credit. M. Camps

281O. Topics in Bacterial Pathogenesis (2 credits). F,W,S

Intensive seminar focusing on mechanisms of bacterial pathogenesis of the ulcer-causing bacterium *Helicobacter pylori*. Participants are required to present results from their own research and relevant journal articles. (Also offered as Biology: Molecular Cell & Dev 2800. Students cannot receive credit for both courses.) Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 20. May be repeated for credit. K. Ottemann

- 281S. Cellular and Organismal Responses to Toxicants (2 credits). F,W,S**
 Intensive research seminar on the concepts, theory, and techniques in deriving physiologically based pharmacokinetic models of toxin exposure, metabolism, and efficacy of therapeutic treatment in mammalian models of human metal toxicity. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. D. Smith
- 281V. Topics in Bacterial Pathogenesis and Innate Immunity (2 credits). F,W,S**
 Focuses on the interplay between the human gut bacterial pathogen Yersinia pseudotuberculosis and the innate immune system of the host. Participants are required to present the goals, results, and conclusions from their own research. Participation in the general discussion during others' presentations is also required. Enrollment restricted to graduate students. Qualified undergraduates performing research under the supervision of the instructor may enroll with instructor's permission. May be repeated for credit. V. Stone
- 281Y. Biofilms: Processes and Regulation (2 credits). F,W,S**
 Intensive seminar series focusing on the most current work on genes and the processes that regulate biofilm development dynamics as well as on the recent developments on visualization of biofilms. Presentation and discussion based. Enrollment restricted to graduate students. Qualified undergraduate students may enroll with instructor's permission. May be repeated for credit. F. Yildiz
- 282. Current Approaches to Molecular Pathogenesis (2 credits). ***
 Graduate level seminar focusing on the mechanisms by which bacterial pathogens cause disease. Specific topics include basic concepts of virulence and virulence factors, virulence factor regulation, toxins, and interactions of pathogens with mammalian cells and organs. Discussions focus on several key pathogens, including Helicobacter pylori, Vibrio cholerae, Salmonella typhimurium, and Listeria monocytogenes. May be repeated for credit. K. Ottemann
- 290. Proseminar. ***
 Special topics offered from time to time by faculty, visiting professors, or staff members. Enrollment restricted to graduate students; qualified undergraduates may enroll with instructor's permission. May be repeated for credit. The Staff
- 290A. Epidemiology and Risk Assessment. ***
 Approaches different techniques of biological monitoring and the exposure and effect of biomarkers related to occupational and environmental exposure to chemicals. Available methods for risk assessment and identification of protective exposure limits also considered. (Formerly Biological Impact of Chemical Exposures.) The Staff
- 292. Introductory Graduate Seminar (no credit). F,W,S**
 Weekly seminars by academic and research faculty on their areas of special interest. Students write weekly abstracts on articles covered by the seminars. Enrollment restricted to graduate students; qualified undergraduates may enroll with instructor's permission. The Staff
- 297. Independent Study. F,W,S**
 Independent study for graduate students who have not yet settled on a research area for the thesis. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
- 299. Thesis Research. F,W,S**
 Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Molecular, Cell, and Developmental Biology

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Molecular, Cell, and Developmental Biology Department

225 Sinsheimer Laboratories

(831) 459-2385

<http://www.mcd.ucsc.edu>

Physical and Biological Sciences Undergraduate Affairs Office

142 Jack Baskin Engineering Bldg.

(831) 459-4143

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Lower-Division Courses

15. Undergraduate Research Reports (1 credit). F,W,S

Undergraduate students who work in faculty research laboratories present the results of their projects. Organized by the Minority Undergraduate Research Program and the Minority Access to Research Careers Program. Designed for students with membership in the above-mentioned programs. Prerequisite(s): qualifications as determined by instructor at first class meeting. May be repeated for credit. A. Zahler, M. Jurica

20A. Cell and Molecular Biology. F,W,S

Introduction to molecular biology, cell physiology, and genetics. Prerequisite(s): Chemistry 1A and 1B. (General Education Code(s): IN.) J. Tamkun, M. Rexach, The Staff

20L. Experimental Biology Laboratory (2 credits). F,W,S

Provides biology majors with the theory and practice of experimental biology. A wide range of concepts and techniques used in the modern laboratory are included in the exercises. Designed to satisfy the introductory biology lab requirement of many medical and professional schools. Students are billed a materials fee. Prerequisite(s): BIOL 20A and previous or concurrent enrollment in BIOE 20B. Enrollment restricted to human biology and health sciences majors; other majors by permission. Enrollment limited to 20. L. Ogren

80A. Female Physiology and Gynecology. S

Biochemical, medical, social, and clinical aspects of the female body. Emphasis will be on biological-chemical interactions in the female organs. Topics include female anatomy, cell physiology, endocrine functions, sexuality and intimacy, sexually transmitted diseases, puberty, pregnancy, menopause, birth control, abortion, immunity, cancer. (General Education Code(s): SI, T-2 Natural Sciences.) M. Zavanelli

80E. Evolution. *

Introduction to Darwinian evolution including how the theory was devised and a discussion

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of other theories proposed at the time. Explores the facts and evidence of evolutionary processes and the insights they provide in biological diversity, consequences of extinction, and emergence of new diseases. Includes a discussion of evolution and spirituality. (General Education Code(s): SI, T-2 Natural Sciences.) M. Zavanelli

80J. Biology of AIDS. W

An overview of the biology of the acquired immunodeficiency syndrome (AIDS) and the social and legal issues that surround it are explored in a series of lectures by biology faculty and experts in the field. (General Education Code(s): SI, T-2 Natural Sciences.) M. Zavanelli

Upper-Division Courses

100. Biochemistry. F,W

An introduction to biochemistry including biochemical molecules, protein structure and function, membranes, bioenergetics, and regulation of biosynthesis. Provides students with basic essentials of modern biochemistry and the background needed for upper-division biology courses. Students who plan to do advanced work in biochemistry and molecular biology should take the Biochemistry and Molecular Biology 100 series directly. Students cannot receive credit for this course after they have completed any two courses from the BIOC 100A, 100B, and 100C sequence. Prerequisite(s): BIOL 20A and BIOE 20B; and CHEM 108A or 112A. J. Sanford, D. Kellogg

100L. Advanced Biochemistry Laboratory. F,W,S

Basic techniques and principles of laboratory biochemistry including isolation and characterization of a natural product, manipulation of proteins and nucleic acids to demonstrate basic physical and chemical properties; and characterization of enzyme substrate interactions. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors; non-majors by instructor permission. Prerequisite(s): BIOL 100 or BIOC 100A, and BIOL 100K or BIOL 20L or BIOL 101L; satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 20. (General Education Code(s): W.) M. Zavanelli

101. Molecular Biology (3 credits). W,S

Covers the basic molecular mechanism of DNA replication and transcription, protein synthesis, and gene regulation in bacterial and eukaryotic organisms. The experimental techniques used to determine these mechanisms are emphasized. Unless students have already passed course 20L, they are strongly encouraged to enroll in course 101L.

Prerequisite(s): course 100. M. Jurica, G. Hartzog

101L. Biochemistry Laboratory (2 credits). F,W,S

Laboratory course providing hands-on experience with, and covering conceptual background in, fundamental techniques in molecular biology and biochemistry, including DNA cloning, PCR, restriction digest, gel electrophoresis, protein isolation, protein quantification, protein immunoblot (Western) analysis, and use of online bioinformatics tools. Students are billed a materials fee. (Formerly course 100K.) Previous or concurrent enrollment in BIOL 100, 101, or BIOC 100A is required. Students cannot receive credit for this course and BIOL 20L. J. Lee

105. Genetics. F,W,S

Mendelian and molecular genetics; mechanisms of heredity, mutation, recombination, and gene action. Prerequisite(s): BIOL 20A and BIOE 20B. N. Bhalla, S. Strome, R. Kamakaka

105L. Eukaryotic Genetics Laboratory. F,W,S

Classical and newly developed molecular-genetic techniques used to explore genetic variation in wild populations of the fruit fly *Drosophila melanogaster*. Topics include Mendelian fundamentals, mapping, design of genetic screens, bio-informatic and database analysis, genetic enhancers, and population genetics. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors; non-majors by instructor permission. Prerequisite(s): BIOL 100 or BIOC 100A; BIOL 100K or BIOL 20L or BIOL 101L; BIOL 105; satisfaction of Entry Level Writing and Composition Requirements. (General Education Code(s): W.) W. Sullivan, The Staff

105M. Microbial Genetics Laboratory. *

Exploration of basic genetics processes such as replication, mutation, DNA repair,

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recombination, gene exchange, population genetics, and evolution using microbial model organisms; classic techniques in microbial genetics and contemporary molecular techniques presented. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors. Non-majors enroll by instructor permission. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L, and BIOL 105. Satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 16. (General Education Code(s): W.) The Staff

109L. Yeast Molecular Genetics Laboratory. F

The powerful genetic and molecular techniques available for yeast combined with the complete genomic DNA sequence offers opportunity for discovery of fundamental aspects of eukaryotic life. Lab providing practical experience in using yeast as an experimental system. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors. Non-majors enroll by instructor permission.

Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L, and BIOL 105. Satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 15. (General Education Code(s): W.) G. Ruben

110. Cell Biology. F,S

Covers the structure, organization, and function of eukaryotic cells. Topics include biological membranes, organelles, protein and vesicular trafficking, cellular interactions, the cytoskeleton, and signal transduction. Requires a good understanding of basic biochemistry and molecular biology. Prerequisite(s): BIOL 100 or CHEM 103 or BIOC 100A, and BIOL 105. M. Rexach, W. Saxton

110L. Cell Biology Laboratory. *

Fundamental aspects of cell biology explored through experimentation in a modern laboratory setting. Research topics include the structure and function of biological membranes; intracellular transport and organelle biogenesis; the cell cycle; and the cytoskeleton. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors. Non-majors enroll by instructor permission. Prerequisite(s): BIOL 100 or BIOC 100A, and BIOL 100K or BIOL 20L or BIOL 101L, and previous or concurrent enrollment in BIOL 110. Satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 16. (General Education Code(s): W.) The Staff

111. Immunology. F

Immune systems--their manifestations and mechanisms of action. Prerequisite(s): BIOL 20A, BIOE 20B, BIOL 105, and BIOL 110. G. Ruben

111A. Immunology I. *

Principles and concepts of the innate and adaptive immune systems, with emphasis on mechanisms of action and molecular and cellular networks. The development, differentiation, and maturation of cells of the immune system are also discussed. Prerequisite(s): courses BIOE 20B, and BIOL 20A, 105, and 110. M. Zuniga

111B. Immunology II. *

The immune system in health and disease, including failures of host immune-defense mechanisms, allergy and hypersensitivity, autoimmunity, transplantation biology, the immune response to tumors, immune-system interactions with pathogens, and manipulation of the immune response. Prerequisite(s): courses BIOE 20B, and 20A, 105, 110, and 111A. M. Zuniga

113. Mammalian Endocrinology. S

Introduction to the major endocrine organs, their hormones, and their receptors. Emphasis is on the following topics: structural analysis of the hormones and receptors at the protein and molecular level, regulation of expression of hormones and their receptors, and the biological functions of hormones. Prerequisite(s): BIOL 20A, and BIOE 20B; and BIOL 100 or CHEM 103 or BIOC 100A; and BIOL 101L or BIOL 20L or BIOL 100K. L. Ogren

114. Cancer Cell Biology. S

Focuses on the molecular and cellular mechanisms behind cancer. Topics covered include oncogenes, tumor suppressor genes, cell growth genes, checkpoint genes, telomeres, and apoptosis. Students will gain experience in reading the primary scientific literature.

Prerequisite(s): BIOL 110 or 115. (General Education Code(s): TA.) A. Zahler

115. Eukaryotic Molecular Biology. W
 Covers eukaryotic gene and genome organization; DNA, RNA, and protein synthesis; regulation of gene expression; chromosome structure and organization; and the application of recombinant DNA technology to the study of these topics. Prerequisite(s): BIOL 100 or CHEM 103 or BIOC 100A, and BIOL 105. Enrollment restricted to biological sciences and affiliated majors, non-majors by permission of instructor. H. Boeger

115L. Eukaryotic Molecular Biology Laboratory. F,W,S
 A laboratory designed to provide students with direct training in basic molecular techniques. Each laboratory is a separate module which together builds to allow cloning, isolation, and identification of a nucleic acid sequence from scratch. Students cannot receive credit for this course and course 187L or 287L. Students are billed a materials fee. Restricted to biological sciences/affiliated majors; biology minors; other majors by permission. Prerequisite(s): BIOL 100 or BIOC 100A or CHEM 3, and BIOL 100K or BIOL 20L or BIOL 101L, and previous or concurrent enrollment in BIOL 115. Satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 20. (General Education Code(s): W.) M. Zavanelli

116. Advanced Topics in Cell Biology (3 credits). S
 Advanced course in cell biology featuring small-classroom discussion of topics related to the structure and function of cells and their organelles. Emphasis is given to experimental strategies used in cell biology research. Requires discussion of scientific literature and student-led presentations. Prerequisite(s): course 110. Enrollment restricted to senior human biology, molecular, cell, and developmental biology, and neuroscience majors. Other majors by permission of instructor. Enrollment limited to 30. M. Rexach

117. Neglected Tropical Diseases (3 credits). F
 Neglected tropical diseases afflict more than 1 billion of the poorest individuals on the planet. This course covers the molecular basis and pathology of the most prevalent neglected diseases and emerging strategies to combat these diseases. Prerequisite(s): course 110. Enrollment restricted to senior human biology, molecular, cell, and developmental biology, and neuroscience majors. Other majors by permission of instructor. Enrollment limited to 30. W. Sullivan

118. Pathogenesis: Molecular Mechanisms of Disease. *
 Overview of the pathogenic mechanisms underlying human disease at the physiological and molecular levels, with their implications for epidemiology, diagnosis, and treatment. Includes discussion of clinical cases and of emerging areas of research. Geared toward students interested in future research or clinical careers in the area of human or animal health. Students cannot receive credit for this course and Microbiology and Environmental Toxicology 238. (Also offered as Microbiol & Environ Toxicology 138. Students cannot receive credit for both courses.) Prerequisite(s): Biology 130. Enrollment restricted to students majoring in biology; human biology; molecular, cell and developmental biology; biochemistry and molecular biology; or neuroscience. Offered in alternate academic years. M. Camps

120. Developmental Biology. W
 A description and analysis of selected developmental events in the life cycle of animals. Experimental approaches to understanding mechanisms are emphasized. (Formerly Development.) Prerequisite(s): BIOL 100 or CHEM 103 or BIOC 100A, and BIOL 105 and BIOL 110. The Staff

120L. Development Laboratory. W
 Experimental studies of animal development using a variety of locally obtainable organisms. Approximately eight hours weekly, but it will often be necessary to monitor continuing experiments throughout the week. Students are billed a materials fee. Enrollment restricted to biological sciences and affiliated majors; biology minors; other majors by permission. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L; satisfaction of the Entry Level Writing and Composition requirements. Previous or concurrent enrollment in BIOL 120 is required. J. Lee

121L. Environmental Phage Biology Laboratory. *
 Introduction to hypothesis-driven laboratory research. Students isolate a unique bacteriophage and characterize its structure and genome. An understanding of molecular

biology and basic genetics required. Students are billed a materials fee. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to biological sciences and affiliated majors with sophomore standing or higher. Enrollment by application and permission of instructor. Enrollment limited to 20. G. Hartzog

125. Introduction to Neuroscience. W

The structure and function of the nervous system. Topics include elementary electrical principles, biophysics and physiology of single nerve and muscle cells, signal transduction at synapses, development of the nervous system, and neural basis of behavior. Requires a good understanding of basic biochemistry, cell biology, and molecular biology.

Prerequisite(s): BIOL 20A, BIOE 20B; and BIOL 100 or BIOC 100A or CHEM 103. B. Chen

126. Advanced Molecular Neuroscience. S

Explores in detail cellular and molecular events that underlay the function of the nervous system. Topics include neural development, axon guidance and regeneration, advanced electrical principles (synaptic transmission through a variety of receptors), synaptic plasticity, learning and memory, as well as several neural disorders. Prerequisite(s): BIOL 125. (General Education Code(s): TA.) D. Feldheim

127. Mechanisms of Neurodegenerative Disease. *

Focuses on cellular and molecular processes that underlie neurodegenerative diseases. Includes lectures, student oral presentations, discussions, a term paper, and exams.

Prerequisite(s): BIOL 105 and 110. (General Education Code(s): TA.) W. Saxton

130. Human Physiology. F,W

Function, organization, and regulation of the major organ systems of humans, with emphasis on integration among systems. Students cannot receive credit for this course and course 131. Prerequisite(s): BIOL 110. L. Ogren

130L. Human Physiology Laboratory (2 credits). F,W

Examines fundamental principles of systemic physiology focusing on the human. Students cannot receive credit for this course and BIOE 131L. Students are billed a materials fee. Enrollment is restricted to biological sciences and affiliated majors; biology minors; other majors by permission. Prerequisite(s): Satisfaction of Entry Level Writing and Composition requirements; BIOL 110; previous or concurrent enrollment in BIOL130 is required. L. Ogren

140. Biophysics. S

Physical principles and techniques used in biology: X-ray diffraction; nuclear magnetic resonance; statistics, kinetics, and thermodynamics of macromolecules; viscosity and diffusion; DNA/RNA pairing; electrophoresis; physics of enzymes; biological energy conversion; optical tweezers. (Also offered as Physics 180. Students cannot receive credit for both courses.) Enrollment restricted to juniors and seniors. (General Education Code(s): PR-E.) J. Deutsch

178. Stem Cell Biology. W

Basic concepts, experimental approaches, and therapeutic potential are discussed. Students gain experience in reading the primary scientific literature. (Also offered as Biomolecular Engineering 178. Students cannot receive credit for both courses.) Prerequisite(s): BIOL 110; BIOL 115 recommended. C. Forsberg

178L. Protocols in Stem Cell Biology. *

Provides hands-on experience in embryonic stem cell culture methods and techniques. Students grow and passage mouse embryonic stem (mES) cells and perform established protocols that differentiate mES cells into cardiac muscle cells and neurons. Enrollment restricted to biological sciences and affiliated majors; biology minors; non-majors by permission. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K; satisfaction of the Entry Level Writing and Composition requirements; previous or concurrent enrollment in course 178. Enrollment limited to 16. The Staff

179. Biotechnology and Drug Development. W

Recommended for students interested in careers in the biopharmaceutical industry. Focuses on recombinant DNA technology and the drug-development process, including discovery research; preclinical testing; clinical trials; and regulatory review, as well as

manufacturing and production considerations. Students may not receive credit for this course and Biomolecular Engineering 255 and Chemistry 255. (Also offered as Biomolecular Engineering 155. Students cannot receive credit for both courses.) Prerequisite(s): BIOL 20A and BIOL 100 or CHEM 103 or BIOC 100A. Enrollment limited to 15. P. Berman

180. Research Programming in the Life Sciences. S

No programming experience is required, but basic computer and molecular biology understanding is assumed. Students learn programming in Python to manipulate biological data. Programming assignments comprise the majority of the assignments, and a final project using skills developed in this course is required. BioPython and other modules introduced for use in the final project. (Formerly Research Programming for Biologists and Biochemists.) (Also offered as Biomolecular Engineering 160. Students cannot receive credit for both courses.) Prerequisite(s): BIOL 20A or BIOL 21A. Concurrent enrollment in BIOL 180L is required. (General Education Code(s): MF.) The Staff

180L. Research Programming in the Life Sciences Laboratory (1 credit). S

Laboratory sequence illustrating topics covered in course 180. One two-hour laboratory per week. (Formerly Research Programming for Biologists and Biochemists Laboratory.) (Also offered as Biomolecular Engineering 160L. Students cannot receive credit for both courses.) Prerequisite(s): BIOL 20A or BIOL 21A. Concurrent enrollment in BIOL 180 is required. The Staff

181. Computational Biology Tools. F,W

Hands-on lectures and laboratory geared to teach basic tools and skills used in computational biology (genome browsers, sequence database searching, motif analysis, multiple sequence alignment, gene finders, phylogenetics analysis, protein structure visualization, and others). Web-based tools/databases are used on student laptops. Open to all science students; no prior programming or Unix experience required. (Also offered as Biomolecular Engineering 110. Students cannot receive credit for both courses.)

Prerequisite(s): course 100, 105, Biochemistry 100A, or Chemistry 103 or declared Bioinformatics majors. Enrollment limited to 25. T. Lowe, The Staff

182. Genomes. F,S

Advanced elective for biology majors, examining biology on the genome scale. Topics include genome sequencing; large scale computational and functional analysis; features specific to prokaryotic, eukaryotic, or mammalian genomes; proteomics; SNP analysis; medical genomics; and genome evolution. (Also offered as Biomolecular Engineering 130. Students cannot receive credit for both courses.) Prerequisite(s): BIOL 100 or CHEM 103 or BIOC 100A; and BIOL 105; or approval of instructor. Enrollment limited to 30. R. Green

186F. Undergraduate Research in MCD Biology (2 credits). F,W,S

Supervised undergraduate research in laboratory of an MCD biology faculty member accompanied by weekly lectures on ethical and practical scientific issues. Topics include: laboratory safety; the scientific method; the collection, treatment, and presentation of data; critical evaluation of scientific literature; scientific misconduct; and peer review. Career issues, including how to apply for admission to graduate and professional schools, is also discussed. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L. Each enrolled student must have a committed MCD faculty sponsor by the first class meeting. Enrollment restricted to biology and affiliated majors. May be repeated for credit. B. Chen, R. Ludwig, M. Rexach

186L. Undergraduate Research in MCD Biology. F,W,S

Supervised undergraduate research in laboratory of an MCD biology faculty member accompanied by weekly lectures on ethical and practical scientific issues. Topics include: laboratory safety; the scientific method; the collection, treatment, and presentation of data; critical evaluation of scientific literature; scientific misconduct; and peer review. Career issues, including how to apply for admission to graduate and professional schools, are also discussed. Prerequisite(s): Entry Level Writing and Composition requirements; BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L. Each enrolled student must have a committed MCD faculty sponsor by the first class meeting. Enrollment restricted to biology and affiliated majors. (General Education Code(s): W.) B. Chen, R. Ludwig, M. Rexach

186R. Undergraduate Research in MCD Biology. F,W,S

Supervised undergraduate research in the laboratory of an MCD biology faculty member accompanied by weekly lectures on practical scientific issues. Topics include: laboratory

safety; the scientific method; the collection, treatment, and presentation of data; critical evaluation of scientific literature; ethics and scientific misconduct; and peer review. Career issues, including how to apply for admission to graduate and professional schools, are discussed. Students cannot receive credit for this course and course 186L. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K or BIOL 20L or BIOL 101L; previous completion of the Disciplinary Communication requirement. Each enrolled student must have a committed MCD faculty sponsor by the first class. Enrollment restricted to majors. May be repeated for credit. B. Chen, R. Ludwig, M. Rexach

187L. Molecular Biotechnology Laboratory. *

An intensive molecular biology laboratory that presents procedures used in molecular and biotechnology research. Topics and procedures include DNA/RNA isolation, cloning and library construction, southern and northern hybridization, DNA fingerprinting, PCR, manual and automated sequencing, and computer methods for analyzing molecular data. New procedures currently being developed in biotechnology industries are presented by industry representatives. Students cannot receive credit for this course and BIOL 115L or BIOL 287L. Students are billed a materials fee. Prerequisite(s): BIOL 100 or BIOC 100A; and BIOL 100K and BIOL 110; satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 20. The Staff

188. Life in Healthcare (2 credits). S

Students explore healthcare from the perspectives of both clinicians and patients. The class focuses on medicine's cognitive, emotional, and spiritual elements, with the goal of understanding the rewards and costs of healthcare practice. Enrollment restricted to junior and senior human biology majors, and others by permission of instructor. Enrollment limited to 30. May be repeated for credit. The Staff

189. Health Sciences Internship (3 credits). F,W,S

Structured off-campus learning experience providing experience and pre-professional mentoring in a variety of health-related settings. Interns are trained and supervised by a professional at their placement and receive academic guidance from their faculty sponsor. Students spend 8 hours per week at their placement, participate in required class meetings on campus, and keep a reflective journal. Enrollment by application. Students interview with health sciences internship coordinator; applications are due one quarter in advance to the Health Sciences Internship Office. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; concurrent enrollment in course 189W is required. Enrollment restricted to human biology majors. M. Rexach, L. Hinck

189W. Disciplinary Communication: Human Biology (2 credits). F,W,S

Writing-intensive course offered in conjunction with the health sciences internship. Weekly class meetings include academic guidance and mentoring as well as discussion of the mechanisms and conventions of academic writing about health and health care. Students complete multiple writing assignments, culminating in a term paper in the format of a scholarly article. Enrollment by application. Students interview with the health-sciences internship coordinator; applications are due one quarter in advance to the Health Care Sciences Internship Office. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Previous or concurrent enrollment in course 189 is required. Enrollment restricted to human biology majors. L. Hinck, M. Rexach

190. Senior Seminar (2 credits). S

Satisfies the senior exit requirement for all biological sciences majors. (Also offered as Biology:Ecology & Evolutionary 190. Students cannot receive credit for both courses.) J. Lee

191. ACE Program Service Learning (2 credits). F

Students participate in training and development to co-facilitate collaborative learning in ACE chemistry discussion sections and midterm/exam review sessions. Students are role models for students pursuing science- and math-intensive majors. Prerequisite(s): Prior participation in ACE; good academic standing; no non-passing grades in prior quarter. Enrollment restricted to sophomores, juniors, and seniors. (Formerly course 182.) Enrollment limited to 10. (General Education Code(s): PR-S.) The Staff

195. Senior Thesis Research. F,W,S

An individually supervised course, with emphasis on independent research, to culminate in a senior thesis. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

Provides for individual programs of study (a) by means other than the usual supervision in person, or (b) when the student is doing all or most of the course work off campus. With permission of the department, may be repeated for credit, or two or three courses taken concurrently. Students submit petition to sponsoring agency. May be repeated for credit.

The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for two units of independent field study (a) by means other than the usual supervision in person, or (b) when the student is doing all or most of the course work off campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Reading, discussion, written reports, and laboratory research on selected biological topics, using facilities normally available on campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Two-unit Tutorial. Reading, discussion, written reports, and laboratory research on selected biological topics, using facilities normally available on campus. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses**200A. Critical Analysis of Scientific Literature. F**

Development of critical thinking skills via discussion of research articles on a broad range of topics. Prepares students to critically evaluate research publications, and improves their ability to organize effective oral presentations and to evaluate the oral presentations of other scientists. Enrollment restricted to graduate students in MCD biology, or by permission of instructor. Enrollment limited to 20. J. Sanford, J. Tamkun

200B. Advanced Molecular Biology. F

An in-depth coverage of the structure, function, and synthesis of DNA, RNA, and proteins. Discussion of the roles of macromolecules in the regulation of information in the cell. Prerequisite(s): Enrollment restricted to graduate students. R. Kamakaka

200C. Advanced Cell Biology. W

An in-depth coverage of topics in cellular and subcellular organization, structure, and function in plants and animals. Emphasis on current research problems. Prerequisite(s): BIOL 200B. Enrollment restricted to graduate students. D. Kellogg

200D. Developmental Biology. S

Key topics in developmental biology, including developmental genetics, epigenetics, stem cell biology, and developmental neurobiology. Lectures are accompanied by critical analysis and discussion of recent publications. Enrollment restricted to graduate students in MCD biology, or by permission of instructor. Enrollment limited to 20. Y. Zuo

201. RNA Processing. *

An advanced graduate-level course on biological aspects of RNA function and processing in eukaryotes. Lectures and discussions will be developed using the current literature. Prerequisite(s): BIOL 200B or permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 15. M. Jurica, M. Ares

203. Ribosomes and Translation. *

Covers the field of ribosome research in depth, including the structure and function of ribosomes and the molecular mechanisms of protein synthesis. Begins with historical review of the ribosome field and proceeds to the most recent findings. Focus is on central questions: (1) How is the accuracy of the aminoacyl-tRNA selection determined? (2) What is "accommodation"? (3) What is the mechanism of peptide bond formation (peptidyl transferase)? (4) What is the mechanism of translocation? (5) What are the mechanistic roles of the ribosome and translation factor EF-G in translocation? (6) To what extent is the mechanism of translation determined by RNA? (7) Why is RNA so well suited for the ribosome? (8) How did translation evolve from an RNA world? Prerequisite(s): BIOC 100A, BIOL 200B or permission of instructor. Enrollment restricted to graduate students.

The Staff

204. Chromatin. *

Eukaryotic DNA is complexed with histones to form chromatin. This course focuses on the ways in which chromatin influences and is manipulated to regulate gene expression. Prerequisite(s): BIOL 105 and BIOL 115; undergrads by permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 15. Offered in alternate academic years. J. Tamkun, G. Hartzog

205. Epigenetics. *

In-depth coverage of epigenetics focusing on how alterations in chromatin structure and DNA methylation establish and maintain heritable states of gene expression. Lectures are supplemented with critical discussion of recent publications. Prerequisite(s): BIOL 105 and BIOL 115, or permission of instructor. Enrollment restricted to graduate students.

Enrollment limited to 20. S. Strome, J. Tamkun

206. Introduction to Stem Cell Biology. *

Fundamental concepts, experimental approaches, and current advances in stem cell biology, with consideration of key ethical issues. Topics include: self-renewal and differentiation; the microenvironment; epigenetics; cell-cycle regulation; and how basic research translates to medical therapeutics. Ethical, moral, and political issues surrounding stem cell research are discussed with lectures from philosophy and other relevant disciplines. Enrollment restricted to graduate students. Enrollment limited to 15. W. Sullivan

206L. Current Protocols in Stem Cell Biology. *

Provides students with hands-on experience in embryonic stem cell culture methods. Enrollment restricted to graduate students; qualified undergraduates may enroll by permission of instructor. Enrollment limited to 10. Y. Zuo, D. Feldheim

208. Cellular Signaling Mechanisms. *

All eukaryotic cells utilize intricate signaling pathways to control such diverse events as cell-cell communication, cell division, and changes in cell morphology. This course covers the molecular basis of these cellular signaling pathways, focusing on the most current research. Prerequisite(s): BIOL 105, BIOL 110, and BIOL 115. Enrollment restricted to seniors and graduate students. Enrollment limited to 15. Offered in alternate academic years. D. Kellogg

214. Advances in Cancer Biology. *

Provides students with knowledge of the latest concepts in cancer biology and cancer therapeutics, and a general appreciation of the rapid advances being made in this area of biomedicine. Prerequisite(s): course 200B or by permission of instructor. Enrollment restricted to graduate students. Enrollment limited to 15. L. Hinck

215. Applied Statistics for Molecular, Cell, and Developmental Biology. *

For experimental biologists: focuses on resolving practical statistical issues typically encountered in molecular, cellular, and developmental biology lab research. No prior experience in statistics or programming is necessary. Enrollment restricted to graduate students in molecular, cellular, and developmental biology. Enrollment limited to 20. The Staff

226. Advanced Molecular Neuroscience. S

Basis of neural behavior at the cellular, molecular and system levels. First half of course focuses on cellular, molecular, and developmental aspects of the nervous system and covers two sensory systems: olfaction and auditory. Last half of course concerns higher-level functions of the nervous system, such as processing and integrating information. Discusses human diseases and disorders. Enrollment restricted to graduate students. D. Feldheim

280A. Topics in Research on Molecular Genetics of Yeast (2 credits). F,W,S

Intensive research seminar on the structure and function of the gene expression machinery in the simple eukaryote *Saccharomyces cerevisiae* and its relationship to the human gene expression machinery. Enrollment restricted to graduate students; qualified undergraduates may enroll with approval of instructor. May be repeated for credit. M. Ares

280B. Chromatin Structure and Transcriptional Regulation (2 credits). F,W,S

Weekly seminar on structure and gene regulatory function of chromatin. Discusses research

of participants and relevant scientific literature. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. H. Boeger

280C. Mammalian Brain Development (2 credits). F,W,S

Seminar covers research into the development of the mammalian brain. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. B. Chen

280D. RNA Processing (2 credits). F,W,S

A discussion of current research and literature concerning the regulation of precursor messenger RNA processing. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. A. Zahler

280E. Meiotic Chromosome Dynamics (2 credits). F,W,S

Intensive course on the molecular mechanisms underlying homolog pairing, synapses, and recombination; and how they are regulated, coordinated, and monitored to ensure accurate meiotic chromosome segregation. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. May be repeated for credit. N. Bhalla

280F. Development of Vertebrate Neural Connections (2 credits). F,W,S

Intensive research seminar on molecular mechanisms by which neural connections are established during mouse development. Special focus on topographic maps and role of Eph receptors and ephrins in this process. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. D. Feldheim

280H. Topics on Research into Chromatin and Transcription (2 credits). F,W,S

Seminar covering research into the effects of chromatin on transcription in yeast. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. G. Hartzog

280I. Epigenetic Gene Silencing and Insulators (2 credits). F,W,S

Intensive course on molecular mechanisms by which insulator elements regulate epigenetic gene silencing. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. R. Kamakaka

280J. Structures of Macromolecular Complexes (2 credits). F,W,S

Focuses on structure and function of the spliceosome using electron microscopy and x-ray crystallography. Participants present results from their own research and relevant journal articles. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 20. May be repeated for credit. M. Jurica

280K. Topics in Cell Cycle Research (2 credits). F,W,S

An intensive seminar focusing on current research on the molecular mechanisms that control cell division. Participants are required to present results of their own research or to review journal articles of interest. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. D. Kellogg

280L. Development (2 credits). F,W,S

Seminar covering research into breast development and cancer. (Formerly Topics on Neural Development.) Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. L. Hinck

280M. Post-Transcriptional Control of Mammalian Gene Expression (2 credits). F,W,S

Intensive course on the molecular mechanisms by which RNA binding proteins regulate gene expression. Enrollment restricted to graduate students; qualified undergraduates may enroll with the permission of the instructor. Enrollment limited to 8. May be repeated for credit. J. Sanford

280N. Structure and Function of Ribosomes (2 credits). F,W,S

An intensive and advanced course focusing on the structure and function of ribosomes. Participants present research findings in an organized, critical fashion, in the context of

current research literature in the ribosome field. Enrollment restricted to graduate students; qualified undergraduate students may enroll with permission of the instructor. Enrollment limited to 20. May be repeated for credit. H. Noller

280O. Topics in Bacterial Pathogenesis (2 credits). F,W,S

Intensive seminar focusing on mechanisms of bacterial pathogenesis of the ulcer-causing bacterium *Helicobacter pylori*. Participants are required to present results from their own research and relevant journal articles. (Also offered as Microbiol & Environ Toxicology 281O. Students cannot receive credit for both courses.) Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 20. May be repeated for credit. K. Ottemann

280Q. Cell Biology of Oocytes, Embryos, and Neurons (2 credits). F,W,S

Weekly seminar and round-table discussion about research problems and recent advances in molecular motor proteins, cytoskeletons, and the control of force-producing processes. Each participant reports recent advances in their field from current literature, their own primary research questions, current approaches to answering those questions, and their research progress. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. W. Saxton

280R. Structure and Function of the Nuclear Pore Complex (2 credits). F,W,S

Intensive and advanced course focusing on structure and function of the nuclear pore complex. Participants present research findings in an organized critical fashion in the context of current research literature in the nucleo-cytoplasmic transport field. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. M. Rexach

280S. Chromatin and RNA Regulation in *C. elegans* (2 credits). F,W,S

Intensive research seminar about regulators of chromatin organization; the composition and function of germ granules; and the roles of both levels of regulation in germline development in *C. elegans*. Participants present their research results and report on related journal articles. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. S. Strome

280T. Molecular Biology of Drosophila Development (2 credits). F,W,S

An intensive seminar concerning the molecular genetics of Drosophila. Recent research is discussed weekly, with an emphasis on gene regulation and development. Students present their own research or critical reviews of recent articles at least once during the quarter. Enrollment restricted to graduate students. Qualified undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. J. Tamkun

280U. Discussions on the Development of the Drosophila Embryo (2 credits). F,W,S

Involves a two-hour weekly meeting in which the students discuss topics concerning the cell cycle, early embryonic development, and the cytoskeleton. These discussions critically evaluate ongoing research in this area. Material is drawn from student research and recently published journal articles. Students are also expected to meet individually with the instructor two hours weekly. In addition to a three-five page research proposal, each student gives two one-hour oral presentations. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. May be repeated for credit. W. Sullivan

280W. Membrane Proteins (2 credits). F

Seminar on recent research on membrane proteins, with an emphasis on ion-pumping ATPase. Enrollment restricted to graduate students; qualified undergraduates may enroll with permission of instructor. Enrollment limited to 20. May be repeated for credit. B. Bowman

280X. Mammalian Developmental and Stem Cell Biology (2 credits). F,W,S

Explores topics in developmental and stem cell biology, with emphasis on mammalian systems. Students present results of independent research projects in the context of relevant publications and other background information. Course meets once each week. Enrollment restricted to graduate students. May be repeated for credit. A. Ralston

280Y. Activity-Dependent Synaptic Plasticity (2 credits). F,W,S

Research seminar covering the regulation of synaptic plasticity in the mammalian nervous system, focusing on how the activity regulates the structural and functional dynamics of synapses. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. Enrollment limited to 10. May be repeated for credit. Y. Zuo

289. Practice of Science. W

Examination of ethical and practical scientific issues, including the collection and treatment of data, attribution of credit, plagiarism, fraud, and peer review. Career issues, including how to apply for grants and positions in industry or academia, will be discussed.

Prerequisite(s): BIOL 200A, BIOL 200B, and BIOL 200C or permission of instructor.

Enrollment restricted to graduate students; undergraduates may enroll with permission of the instructor. Enrollment limited to 20. D. Feldheim

291. Molecular, Cellular, and Developmental Biology Seminar (2 credits). F,W,S

Topics of current interest in molecular, cellular, and developmental biology are presented weekly by graduate students, faculty, and guest speakers. Enrollment restricted to graduate students. Enrollment limited to 60. May be repeated for credit. The Staff

292. MCD Seminar (no credit). F,W,S

Various topics by weekly guest speakers. Enrollment restricted to graduate students. The Staff

296. Laboratory Research in Molecular, Cell, and Developmental Biology. F,W,S

Independent laboratory research in molecular, cellular, and developmental biology.

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent study for graduate students who have not yet settled on a research area for their thesis. Students submit petition to sponsoring agency. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. The Staff

* Not offered in 2014-15

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Music

[2014-15 General Catalog](#)

244 Music Center

(831) 459-2292

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<http://music.ucsc.edu>

[Faculty | Program Statement](#)

Lower-Division Courses

1A. Women's Chorale (2 credits). *

Study of vocal and choral techniques in the context of ensemble rehearsals, often culminating in public performance. Repertoire to include varied works for treble choir, both a cappella and with instrumental accompaniment. Familiarity with basic music notation recommended. Some additional rehearsal time, both individually and with the group is required. Students are billed a materials fee. Admission by audition with conductor prior to first class meeting. May be repeated for credit. (General Education Code(s): A.) The Staff

1C. University Concert Choir (2 credits). F,W,S

A study of selected works for mixed chorus, with emphasis on masterworks for chorus and orchestra, culminating in one or more public concerts. Familiarity with basic music notation recommended. Admission by audition with conductor prior to first class meeting. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): PR-E, A.) The Staff

2. University Orchestra (2 credits). F,W,S

A study of selected works for orchestra, culminating in one or more public concerts. Admission by audition with conductor prior to first class meeting. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): PR-E, A.) The Staff

3. Large Jazz Ensemble (2 credits). F,W,S

Instruction in performance in large jazz ensembles with written arrangements. Prepares a specific repertoire for public performance. Admission by audition with instructor prior to first class meeting. Students are billed a materials fee. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) The Staff

4A. Latin American Ensemble: "Voces" (2 credits). *

Instruction in diverse musical traditions, and their culturally-grounded performance contexts, of Native American, Ibero-American, and African American music cultures of Latin America, including texted music in Spanish and Quechua or other regional languages. The class forms an ensemble that prepares varying cultural and national repertoires for public performance. Some Spanish language ability is recommended. Attend first class meeting. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

- 4B. Latin American Ensemble: "Taki Ñan" (2 credits). *
Development of Latin American, Native American, Ibero-American, African American, and/or Nueva Canción (New Song) repertoire in a small ensemble setting. Three quarters of course 4A or previous enrollment in course 4B required prior to enrolling in this course. Admission by audition with instructor at first class meeting. Enrollment limited to 10. May be repeated for credit. (General Education Code(s): A.) The Staff
- 5A. West Javanese Gamelan Ensemble: Beginning (2 credits). F,W,S
Instruction in practice and performance of gamelan music from Java or Sunda. Preparation of several works for public presentation. Attend first class meeting. May be repeated for credit. (General Education Code(s): A.) U. Sumarna
- 5B. West Javanese Gamelan Ensemble: Intermediate (2 credits). F,W,S
Instruction in practice and performance of gamelan music from Java or Sunda. Preparation of several works for public presentation. Attend first class meeting. May be repeated for credit. (General Education Code(s): A.) U. Sumarna
- 5C. West Javanese Gamelan Ensemble: Advanced (2 credits). F,W,S
Instruction in practice and performance of gamelan music from Java or Sunda. Preparation of several works for public presentation. Attend first class meeting. May be repeated for credit. (General Education Code(s): A.) U. Sumarna
6. Classical Guitar Ensemble (2 credits). *
Study of selected repertoire and instruction in performance for classical guitar ensemble. Ensembles for guitar and other instruments will prepare works for public performances both on and off campus. All students enrolled in individual guitar lessons are expected to enroll. Students of other instruments or voice may also audition. Some additional rehearsal time, individually and with the group, is required. Admission by audition with instructor prior to first class meeting. May be repeated for credit. (General Education Code(s): A.) The Staff
8. Balinese Gamelan Ensemble (2 credits). F,W,S
Instruction in practice and performance of gamelan music from Bali and Indonesia, including ritual and new music. Preparation of several works for public presentation. Attend first class meeting. Prerequisite(s): course 5A or 5B or 5C , or by permission of instructor at first class meeting. May be repeated for credit. (General Education Code(s): A.) The Staff
9. Wind Ensemble (2 credits). F,W,S
A study of selected advanced-level works for wind ensemble, culminating in one or more public concerts. Admission by audition with conductor prior to first class meeting. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): PR-C, A.) The Staff
10. Eurasian Ensemble (2 credits). W,S
Performing ensemble focusing on the vernacular and art musics of the Eurasian continent, with emphasis on Central Asia. Admission by instructor determination at first class meeting. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): PR-C, A.) T. Merchant
- 11A. Classical Music from the Middle Ages to the Present. *
A study of significant works of classical music from Gregorian chant to the present day in relation to the historical periods which they represent. Emphasis upon the listening experience and awareness of musical style and structure. Illustrated lectures and directed listening. (General Education Code(s): IM, IH, A.) A. Leikin, N. Treadwell, L. Miller
- 11B. Introduction to Jazz. *
Designed to provide students with thorough and comprehensive background in history and roots of jazz as a musical style from its African roots to the present. Essential jazz styles and traditions are discussed through lectures, required listening, readings, lecture demonstrations, and film presentations. (General Education Code(s): IH, A, E.) K. Hester
- 11C. Introduction to American Popular Music. *
Survey of American popular music, from the beginnings of mass media to the late-twentieth century and beyond. Areas of focus will include early African-American styles (the blues, gospel and ragtime), vaudeville songs, a variety of immigrant traditions and folk

<p>Management</p> <p>UCDC Program</p> <p>Writing Program</p> <p>Theater Arts</p> <p>Yiddish</p> <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>movements, rock and roll, soul, R & B, hip-hop, and others. Musical experience helpful but not required. (General Education Code(s): IH, A.) B. Carson</p> <p>11D. Introduction to World Music. * Covers topics reflecting distinctive features of selected world music cultures. Introduces content, scope, and method of ethnomusicology. Focuses on understanding the musical styles, performance practices, and cultural functions of these musical traditions. Incorporates live class performance of selected music. (General Education Code(s): CC, IH, A, E.) T. Merchant</p> <p>15. Preparatory Musicianship. S Basic studies in musicianship related to Western European notation and literature. Students with prior training in music notation develop literacy in basic tonal melody and harmony. Skills include dictation and sight-reading. Simple composition and analysis exercises accompany the training. Enrollment by placement examination and permission of instructor. May be repeated for credit. H. Kim, B. Carson</p> <p>30A. Theory, Literature, and Musicianship. F Integrated musicianship, theory, and analysis. Species counterpoint and fundamentals of tonal harmony. Analysis of literature from the Middle Ages and Renaissance. Ear-training, taught in smaller sections, emphasizes recognition of triad and dominant-seventh inversions, dictation of diatonic melodies, and aural analysis of simple diatonic interval and chord progressions. Most of the ear-training materials consist of homophonic and polyphonic examples from music literature performed live in class. Prerequisite: admission by core curriculum placement examination. Enrollment limited to 60. A. Leikin</p> <p>30B. Theory, Literature, and Musicianship. W Integrated musicianship, theory, and analysis. Diatonic harmony and fundamentals of chromatic harmony and musical form, with an emphasis on early 18th-century styles. Ear-training, taught in smaller sections, emphasizes recognition of triad and seventh-chord qualities and inversions, dictation of moderately complex melodies and multi-voice chorales, and aural analysis of chord progressions including secondary functions. Most of the ear-training materials consist of homophonic and polyphonic examples from music literature performed live in class. Prerequisite(s): course 30A; instructor determination at first class meeting. Enrollment limited to 60. A. Leikin</p> <p>30C. Theory, Literature, and Musicianship. S Integrated musicianship, theory, and analysis. Chromatic harmony and large forms, with emphasis on late 18th- and early 19th-century styles. Ear-training, taught in smaller sections, emphasizes melodic and multi-voice dictation, as well as aural analysis of chord progressions, with materials including digressions, modulations, and advanced chromatic idioms. Most of the ear-training materials consist of homophonic and polyphonic examples from music literature performed live in class. Prerequisite(s): course 30B; instructor determination at first class meeting. Enrollment limited to 60. A. Leikin</p> <p>42. Student-Directed Seminar. * Seminars taught by upper-division students under faculty supervision. (See course 192.) Students submit petition to sponsoring agency. The Staff</p> <p>51. Vocal Repertoire Class (2 credits). F,W,S The study and performance of vocal repertoire from 1400 to the present, including solo song, oratorio, opera, ensemble music. Emphasis is given to the development of effective performance skills, culminating in public performance. Attend first class meeting; concurrent enrollment in individual voice lessons with instructor of this course is required. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): A.) P. Maginnis, B. Staufenbiel</p> <p>54. North Indian Music Workshop (2 credits). S A course covering the music of North India taught using the oral traditions of Indian music. For beginners as well as more experienced students, this course is well suited for instrumentalists and vocalists. Interview; instructor determination at first class meeting. May be repeated for credit. (General Education Code(s): A.) A. Khan</p> <p>60. Fundamental Keyboard Skills (2 credits). * Elementary instruction in piano technique, including group and individual performance</p>
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experience. A minimum of six hours per week of individual practice is required. Curriculum is coordinated with keyboard requirements of course 30A. Concurrent enrollment in course 30A is required. Students are billed a course fee. Prerequisite(s): Instructor determination at first class meeting. (Formerly Group Instruction in Piano.) Enrollment limited to 8. May be repeated for credit. E. Arulanantham

61. Individual Lessons: Half Hour (2 credits). F,W,S

One-half hour of individual instrumental or vocal instruction. Repertory, technique, and performance practice. A minimum of six hours per week of individual practice is required. Concurrent enrollment in an ensemble in the lesson instrument or voice is required. Students are billed a course fee. Admission by audition with the instructor prior to first class meeting. Enrollment priority given to music majors and minors. May be repeated for credit. The Staff

62. Individual Lessons: One Hour (3 credits). F,W,S

One hour of individual instrumental or vocal instruction. Repertory, technique, and performance practice. A minimum of nine hours per week of individual practice is required. Concurrent enrollment in an ensemble in the lesson instrument or voice is required. Students are billed a course fee. Admission by audition with the instructor prior to first class meeting. Enrollment priority given to music majors and minors. May be repeated for credit. The Staff

63. Group Instrumental and Vocal Lessons (2 credits). *

Elementary group instruction in instrumental (excluding piano) or vocal techniques, including group and individual performance experience. A minimum of six hours per week of individual practice is required. Students are billed a course fee. Admission by audition with the instructor prior to first class meeting. Enrollment limited to 6. May be repeated for credit. The Staff

75. Beginning Improvisational Theory. *

Studies in the modes, scales, chord alternations and extensions, chord voicings, chord progressions, and forms that underlie jazz improvisation, composition, and arranging in a variety of styles. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): A.) The Staff

80A. Music of the Silk Road. *

Exploration of the commonalities between music cultures found along ancient trade routes through Asia. (General Education Code(s): CC, T4-Humanities and Arts, A, E.) T. Merchant

80C. History, Literature, and Technology of Electronic Music. *

This survey of electronic music from previous centuries to the present studies the works and aesthetics of important composers, acoustics, musical perception, the effects of technological innovation on cultural evolution, and the development of synthesizers and computer music. (General Education Code(s): PE-T, T6-Natural Sciences or Humanities and Art, A.) The Staff

80E. Race and American Music. *

Survey of American music and its dynamic formation through cultural constructions of racial difference. Students hear music as contentious signals of identity, power, and transgressions, contextualized by wide-ranging testimony on racial difference, ethnicity, gender, sexuality, and musical practice. (General Education Code(s): ER.) B. Carson

80F. Music in Latin American Culture: Regional Traditions. *

In-depth study of select music cultures of Mexico, Central America, and Caribbean, Brazil, Chile, Argentina, Colombia, and Peru. Characteristic regional genres, ensembles, instruments, and music rituals. Case studies by ethnomusicologists with expertise in specific regional musics. Also Latin American Nueva Canción, women's musics, and overarching themes in Latin American music, as a whole. Offered on a rotational basis with other non-Western courses in the 80 series. (General Education Code(s): T4-Humanities and Arts, A, E.) The Staff

80G. American Musical Theater. *

Surveys American musicals from operetta through rock musicals with a historical approach focusing on selected examples from the literature. Music reading or musical experience helpful but not required. Offered in alternate academic years. (General Education Code(s):

IM, T4–Humanities and Arts, A.) The Staff

80H. The Hollywood Musical. *

Introductory study of the Hollywood music film, exploring the theory of film sound, the musical genre, and representative works from the 1920s to the present. Students expected to view about two films each week, read assigned section of texts, and contribute to class discussions. (General Education Code(s): T4–Humanities and Arts, A.) The Staff

80I. Music of Modern Israel. *

Historical, musicological, and anthropological study of the many (and often conflicting) worlds brought together by Israeli popular and art music: Jewish and Arabic traditions, Western ideals, and modern beats. Enrollment limited to 40. (General Education Code(s): CC, T4–Humanities and Arts, A, E.) A. Tchamni

80J. American Folk Music. *

Surveys American folk music, both instrumental and vocal, by region and period. Approach is primarily through listening. Previous musical experience helpful, but not required. Offered in alternate academic years. (General Education Code(s): T4–Humanities and Arts, A.) The Staff

80L. Artificial Intelligence and Music. *

An introduction to basic concepts in music and artificial intelligence, and to algorithmic composition (composition by a set of explicit instructions, often using the computer). Other topics include basic introductions to related concepts in linguistics, mathematics, neural nets, pattern matching, genetic algorithms, fuzzy logic, and interactive systems. Previous experience in one or more of these topics is helpful but not required. Students produce a project based on one of the models presented in class. Offered in alternate academic years. (General Education Code(s): MF, T–6 Natural Sciences or Humanities and Arts, A.) The Staff

80M. Film Music. *

A survey of film music including a discussion of current trends and film composers. Techniques and styles of film music are explored through lectures, required listenings, readings, and viewing of relevant films. A musical background, including the ability to read music, is helpful but not necessary. Offered in alternate academic years. (General Education Code(s): IM, T4–Humanities and Arts, A.) N. Treadwell, The Staff

80N. Music of the Grateful Dead. *

In-depth exploration of the music of the Grateful Dead. Contextual study of the sociology and history of the late 1960s psychedelic movement supplies background for study of the music as the band evolved through time. Offered in alternate academic years. (General Education Code(s): IM, T4–Humanities and Arts, A.) The Staff

80O. Music, Politics, and Protest. *

Examination of relationship between music, politics, and protest in the U.S. in the 20th century, with focus on how music commented upon and reflected different eras in American cultural and political life. (General Education Code(s): IM, T4–Humanities and Arts, A.) D. Neuman

80P. History of Jewish Music. *

Survey of the diverse and rich musical traditions of Jewish music in the diaspora from biblical times to the present. Examines the historical, social, and anthropological aspects of the different communities from sacred music through art and popular songs. Enrollment limited to 40. (General Education Code(s): CC, T4–Humanities and Arts, A, E.) A. Tchamni

80Q. A Survey of African Music. *

Traces the various stylistic musical areas throughout the African continent and explores the development of traditional African music from antiquity into the 20th century. Offered in alternate academic years. (General Education Code(s): CC, T4–Humanities and Arts, A, E.) K. Hester

80R. Music and the World Wide Web. *

A survey of musical applications of the World Wide Web and the technologies they employ: tools for musical research, playback, composition, performance, and publishing. Historical perspectives and artistic ethics also discussed. Students prepare a creative project using software tools, techniques, sound sources available on the web, and learn how to publish the results on the web. Enrollment limited to 44. Offered in alternate academic years.

(General Education Code(s): T6–Natural Sciences or Humanities and Arts, A.) The Staff

80S. Women in Music. F

An exploration of the sociological position of women as composers and performers in Western and non-Western musics, with a focus on both ethnographic and historical sources. (Also offered as Feminist Studies 80S. Students cannot receive credit for both courses.) Offered in alternate academic years. (General Education Code(s): CC, T4–Humanities and Arts, A.) T. Merchant

80T. Mizrach: Jewish Music in the Lands of Islam. *

A survey of the musical traditions of the Jews of North Africa and the Middle East. Based on the "Maqamat," the Arabic musical modes, Jewish music flourished under Islamic rule, encompassing the fields of sacred, popular, and art music. (General Education Code(s): CC, T4–Humanities and Arts.) A. Tchamni

80V. The Music of the Beatles. *

The most significant group in the history of popular music, the Beatles spanned the gamut of styles from hard-edged R & B to sophisticated art-rock. This course explores their work in detail, in its own terms, and in the historical/cultural/technological contexts. Students cannot receive credit for both this course and course 180V in the same quarter. Course 11C is recommended but not required as preparation. (General Education Code(s): IM, T4–Humanities and Arts, A.) The Staff

80W. Music Business. *

Explores the many facets of the music industry: history, technology, economics, sociology, and legislation. Provides both a broad understanding of the industry and a pragmatic survey of available career paths. Students cannot receive credit for both this course and course 180W in the same quarter. Offered in alternate academic years. (General Education Code(s): T4–Humanities and Arts, A.) The Staff

80X. Music of India. *

A survey course in Hindustani (North Indian) and Karnatak (South Indian) music covering the Raga (modal system) and Tala (metric system) as they have developed in the two traditions. Consideration is given to the historical development of the music, from Vedic chanting to the modern Raga system; social functions of the music throughout history; and instrumental and vocal forms with an emphasis on listening. (General Education Code(s): CC, T4–Humanities and Arts, A, E.) D. Neuman

80Y. Music, Anti-Semitism, and the Holocaust. *

The musical legacy of the Holocaust: music and anti-Semitism in the 19th century; morality, collaboration, and composing in the Third Reich; music in the ghettos and concentration camps; impact on post-war music; second-generation composers' trauma; music in Holocaust films. Enrollment limited to 85. (General Education Code(s): IM.) A. Tchamni

80Z. Laptop Music. F

Basic digital audio editing and mixing; related concepts in the physics of sound, psychoacoustics, and the digital representation and computer control of audio. Musical notation of musical pulse, meter, and rhythm, and sonic realization via MIDI (musical instruction digital interface). Using their own computers, students complete projects involving recording and spectral analysis, creative editing and mixing of existing recordings, composition of polyphonic drum rhythms, and constructing a collaborative sonic environment. Enrollment limited to 30. (General Education Code(s): PR-C.) D. Jones

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Admission requires approval of department. The Staff

99. Tutorial. F,W,S

A program of directed study arranged with a department faculty member. Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits). F,W,S

A program of directed study arranged with a department faculty member. Class time is proportionally less than a five-credit course. Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

101A. History of Western Art Music. W

First quarter of a three-quarter chronological study of Western art music. Coordinated lectures, readings, listening, and analysis of representative works: Medieval, Renaissance, Baroque. Prerequisite(s): course 30A and satisfaction of the Entry Level Writing and Composition requirements. N. Treadwell, L. Miller

101B. History of Western Art Music. S

Second quarter of a three-quarter chronological study of Western art music. Coordinated lectures, readings, listening, and analysis of representative works: Baroque, Classical, Romantic. Prerequisite(s): course 30B. A. Leikin

101C. History of Western Art Music. F

Third quarter of a three-quarter chronological study of Western art music. Coordinated lectures, readings, listening, and analysis of representative works: Romantic, 20th Century. Prerequisite(s): course 30C and satisfaction of the Entry Level Writing and Composition requirements. A. Beal

102. University Orchestra (2 credits). F,W,S

A study of selected works for orchestra, culminating in one or more public concerts. Admission by audition with conductor prior to first class meeting. Students are billed a materials fee. Enrollment restricted to juniors and seniors. May be repeated for credit. (General Education Code(s): A.) Y. Samet

103. University Concert Choir (2 credits). F,W,S

A study of selected works for orchestra, culminating in one or more public concerts. Prerequisite(s): admission by audition with conductor prior to first class meeting. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): A.) N. Berman

105. Special Topics in History.

105A. Music of the United States. *

Traces major developments in the history of American music since the Revolutionary Era, focusing on what makes music in the United States unique. Material drawn from classical, popular, religious, jazz, and avant-garde traditions. Prerequisite(s): course 101A, 101B, or 101C, or by permission of the instructor. Enrollment restricted to juniors and seniors. Enrollment limited to 35. A. Beal, L. Miller

105E. Early Keyboard Music. *

Survey of four centuries of early keyboard music, including representative genres, instruments, composers, and compositions from the late-Gothic to the Classical period. Harpsichord, virginal, organ and fortepiano works studied through scores, recordings, and live performance. Social context, instrument tuning and representative performance practices will coordinate each unit. Prerequisite(s): course 101A or 101B or 101C. Enrollment restricted to junior and senior music majors. The Staff

105I. Improvisation and Collaborative Practices in the 20th Century. *

Study of music repertoires and performance practices based on improvisation and collaborative approaches to real-time composition in the areas of jazz and other new music. Prerequisite(s): courses 30A, 30B, and 30C, and at least one course from the 101 series. Enrollment restricted to music majors. Enrollment limited to 40. A. Beal, K. Hester

105O. Opera from Peri to Pergolesi. W

Traces the development of opera from its origins in the late 16th century through the works of the early 18th century. Explores all aspects of this multimedia genre, with significant research and writing components. Prerequisite(s): courses 30C and 101A, or by permission of the instructor. N. Treadwell

105Q. The String Quartet from Haydn to Shostakovich. *

Traces the development of the string quartet from its origins in the mid-18th Century through the works of the mid-late 20th Century. Emphasis is on listening and analysis

with significant research and writing component. Prerequisite(s): course 30C and course 101B, or by permission of instructor. Enrollment limited to 35. L. Miller

111B. Seminar in Jazz Analysis. F

Analytic exploration of the evolution of "jazz" in America. The process involves independent listening, analysis, transcription, weekly seminar discussions, and oral presentation to students in course 11B. Prerequisite(s): course 30B and course 11B. Enrollment limited to 20. K. Hester

120. Seminar in Music Composition. W

Instruction in individual composition offered in the context of a group; composition in traditional large and small forms. Counts as one of two choices for a capstone course. Prerequisite(s): course 30C. Enrollment limited to 20. D. Jones, L. Polansky, H. Kim

121. Orchestration. F

A study of the nature of each instrument of the orchestra. Scoring for various small instrumental combinations, culminating in a transcription for full orchestra. (Formerly course 130.) Prerequisite(s): course 30C. Enrollment limited to 20. H. Kim

123. Electronic Sound Synthesis. W

Introduction to electronic music studio techniques, relevant electroacoustical studies, and procedures of electronic music composition. Practical experience in the UCSC electronic music studio with an analog synthesizer; mixing, equalization, multitrack recording equipment, and other sound processing. Application form available at department office during last two weeks of the previous quarter. Preference given to music majors, students in the film/video major, and those with substantial musical experience. Prerequisite(s): instructor determination via application; course 80C or course 30A placement. Enrollment limited to 25. The Staff

124. Intermediate Electronic Sound Synthesis. S

Composition with the use of small computers in the electronic music studio. Techniques covered include hybrid synthesis, digital synthesis, and MIDI-controlled systems. No programming is involved, but basic computer literacy is helpful. Prerequisite(s): course 123. Enrollment limited to 25. The Staff

125. Advanced Electronic Sound Synthesis. F

Continuing study in the electronic music studio, with concentration on compositional development. Includes advanced applications of skills developed in courses 123 and 124, expansion of background knowledge and relevant electroacoustical studies. Prerequisite(s): course 124. Enrollment limited to 25. The Staff

127. Sound, Listening, and Consciousness. S

This course is a hands-on practicum. Students explore the cutting edge of sound and consciousness from multiple perspectives, realizing inherent skills as listeners and music-makers through direct engagement--through attention to sound. Enrollment limited to 20. (General Education Code(s): PR-C.) J. Hoefs

130. Harmony and Form in 19th-Century and Early 20th-Century Music. F

Analysis, theory, musicianship, and aural skills associated with advanced tonal music. Study of chromaticism, larger forms, and other features of 19th-Century and early 20th-Century music. Prerequisite(s): course 30C and Piano Proficiency Exam. Enrollment limited to 20. (General Education Code(s): MF.) D. Jones, B. Carson

150. Special Topics in Theory.

150C. Special Topics in Music Theory: Tonal Counterpoint. S

Tonal counterpoint modeled on the music of J.S. Bach. Imitative and non-imitative forms including binary dance, invention, canon, and fugue. Discussion and analytical application of generalized intervallic and harmonic models. Development of related keyboard, singing, and aural skills, including dictation in two and three voices. Prerequisite(s): course 130. (General Education Code(s): IM.) D. Jones, B. Carson

150I. Special Topics in Music Theory: Hindustani Music. *

In-depth introduction into the music, culture, and theory of Hindustani music. Prerequisite(s): course 130. Enrollment restricted to junior and senior music majors. (General Education Code(s): CC.) D. Neuman

150P. Special Topics in Music Theory: 20th-Century Popular Song. *
 Analysis and composition in two 20th-century popular song genres. Part one (of two) is drawn from 1930s swing or Tin-Pan Alley standards. Part two varies according to instructor and may include genres outside the United States. Prerequisite(s): course 30C or permission of instructor. Enrollment restricted to music majors. (General Education Code(s): IM.) B. Carson

150S. Focus on Spontaneous Composition. S
 Examines both music and musical composition, and the characteristics they share with science, mathematics, and the natural world. Written for upper-division and graduate courses, the course text shows that music is part of an interdisciplinary collection of artistic modes of expression, and that these modes can be better understood in the context of what students observe in the real world. Thinking about music, through a variety of angles, students aim to understand that creativity is a vehicle through which to explore the evolution and interconnectedness of music as well as other phenomena in our universe. Prerequisite(s): course 130. Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 35. K. Hester

150X. Theoretical Practices of American Music. *
 Examines theoretical practices and compositional methods of 20th-Century American composers including Charles Ives, Henry Cowell, Ruth Crawford, Johanna Beyer, Harry Patch, Conlon Nancarrow, John Cage, James Tenney, Kenneth Gaburo, George Russell, and Ornette Coleman. Prerequisite(s): courses 30A, 30B, and 30C. Enrollment restricted to music majors. Enrollment limited to 25. (General Education Code(s): IM.) D. Jones, L. Polansky, A. Beal

159A. Opera Workshop (2 credits). F,W
 A workshop for singers, accompanists, and directors, the course develops a wide variety of skills related to opera through scenework. Attention will be given to movement, acting, coaching, and operatic stage-directing technique. Instruction culminates in studio productions of scenes from operas and musicals. Admission by permission of vocal instructor, or by audition with instructor prior to first class meeting. Students are billed a materials fee. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): A.) B. Staufenbiel

160. University Opera Theater. S
 A production workshop, culminating in one or more staged performances of an entire opera or selected scenes from the operatic repertory. Admission by audition with instructor prior to first class meeting; auditions usually take place in fall quarter. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): A.) B. Staufenbiel

161. Individual Lessons: One Hour (3 credits). F,W,S
 One hour of individual instrumental or vocal instruction. Repertory, technique, and performance practice. A minimum of nine hours per week of individual practice is required. Concurrent enrollment in an ensemble in the lesson instrument or voice is required. Students are billed a course fee. Admission by audition with the instructor prior to first class meeting. Enrollment priority given to music majors and minors. May be repeated for credit. The Staff

162. Advanced Individual Lessons: One Hour. F,W,S
 One hour of individual instruction for advanced students. Study of repertory, technique, and performance practice. A minimum of 18 hours per week of individual practice and at least one 30-minute recital are required. May be taken three times for credit. Concurrent enrollment in an ensemble in the lesson instrument or voice is required. Students are billed a course fee. Admission by juried audition. May be repeated for credit. The Staff

163. Early Music Consort (2 credits). *
 A study of selected works for varied early music instrumental and vocal resources, culminating in one or more public concerts. Individual lessons are recommended in conjunction with consort work. Recommended for students who have instrumental or vocal competence and music literacy. Admission by audition with instructor prior to first class meeting. May be repeated for credit. (General Education Code(s): PR-C.) N. Treadwell

164. Jazz Ensembles (2 credits). F,W,S
 Instruction in combo performance and techniques of the jazz idiom. The class forms

several ensembles that prepare a specific repertory for public performance. Admission by audition with instructor prior to first class meeting. May be repeated for credit. S. Poplin

165. Chamber Music Workshop (2 credits). F,W,S

A study of selected works for various small combinations of instruments, culminating in one or more public concerts. Admission by audition with instructor prior to first class meeting. May be repeated for credit. The Staff

166. Chamber Singers (2 credits). F,S

The study of selected works for small vocal ensemble from the 15th through 20th centuries, with performances on and off campus throughout the academic year. Students must have demonstrated vocal and music reading skills. Admission by audition with instructor prior to first class meeting. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): PR-C, A.) The Staff

167. Workshop in Electronic Music (2 credits). F,W,S

Continuing studio work in electronic music. Students carry out individual projects, meeting in weekly seminar to share problems and discoveries. Relevant advanced topics are covered, including new developments in the art. Prerequisite(s): course 124. Enrollment limited to 20. May be repeated for credit. The Staff

168. Contemporary Music Ensemble (2 credits). *

A study of selected works for various small combinations of instruments and voice, culminating in one or more public concerts. Admission by audition with instructor prior to first class meeting. May be repeated for credit. A. Beal, L. Miller

174. Intermediate Jazz Improvisation. *

Develops basic skills through a range of advanced bop, quasi-modal and post-bebop styles—including selected free jazz and "avant-garde" repertoire. Prerequisite(s): course 75; audition with instructor at first class meeting. Enrollment limited to 20. May be repeated for credit. K. Hester

175. Jazz Theory II. W

Through transcription, analysis, and performance of "jazz" standards, composition, arranging, improvisation, and spontaneous creation explored. Students write a series of improvisations, short compositions, and arrangements throughout the course.

Prerequisite(s): course 75. Enrollment limited to 30. K. Hester

180A. Studies in World Musics: Asia and the Pacific. *

In-depth ethnomusicological studies of selected music cultures of East Asia, Southeast Asia, and the Pacific. Emphasizes comparison of historical, theoretical, contextual, and cultural features. Includes basic ethnomusicological points of reference, as regards organology, music ritual, notation and transcription, and aspects of field research. Prerequisite(s): course 30B. Concurrent enrollment in a non-Western performing ensemble is strongly recommended. Enrollment restricted to music majors and graduate students. Anthropology majors may enroll with permission of instructor. Enrollment limited to 30. (General Education Code(s): A, E.) T. Merchant, D. Neuman

180B. Studies in World Musics: Africa and the Americas. *

In-depth ethnomusicological studies of selected music cultures of sub-Saharan Africa and South and North America, including Native America. Emphasizes comparison of historical, theoretical, contextual, and cultural features. Includes basic ethnomusicological points of reference, as regards organology, music ritual, notation and transcription, and aspects of field research. Prerequisite(s): course 30B; concurrent enrollment in a non-Western performing ensemble is strongly recommended. Enrollment restricted to music majors and graduate students. Anthropology majors may enroll with permission of instructor. Enrollment limited to 30. (General Education Code(s): A, E.) The Staff

180C. Studies in World Musics: Central Asia. *

In-depth, ethnomusicologically oriented course on select music cultures in Central Asia. Compares theoretical, historical, and cultural aspects of music and culture from Uzbekistan, Tajikistan, Afghanistan, Kyrgyzstan, Kazakhstan, the Xinjiang region of China, Mongolia, and Tuva. Prerequisite(s): course 30A. Enrollment restricted to music majors. Enrollment limited to 36. T. Merchant

180D. Music of Insular Southeast Asia. S

Comparative studies of selected music cultures focusing on the cosmology, music rituals, and organology of varied cultures in Malaysia, Indonesia, Papua New Guinea, and the Philippines. Introduction to ethnomusicology field research and transcription, and hands-on ensemble workshops. Prerequisite(s): course 30A; concurrent enrollment in course 5B, 5C, or 8. Enrollment restricted to music majors. Anthropology majors may enroll with permission of instructor. (General Education Code(s): CC.) The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Upper-division standing and a proposal supported by a music faculty member willing to supervise required. The Staff

195A. Senior Thesis. F,W,S

Preparation of senior thesis over one or two quarters. If taken as a multiple-term course, the grade and evaluation submitted for the final quarter applies to the previous quarter. Students submit petition to sponsoring agency. The Staff

195B. Senior Thesis. F,W,S

Preparation of senior thesis over one or two quarters. If taken as a multiple-term course, the grade and evaluation submitted for the final quarter applies to the previous quarter. Students submit petition to sponsoring agency. The Staff

196A. Senior Recital Preparation (without individual lessons). F,W,S

Prerequisite(s): juried audition or approved composition portfolio. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

196B. Senior Recital Preparation (with individual lessons). F,W,S

Students are billed a course fee. Prerequisite(s): juried audition. May be repeated for credit. The Staff

199. Tutorial. F,W,S

A program of directed study arranged with a department faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

A program of directed study arranged with a department faculty member. Class time is proportionally less than a five-credit course. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200. Introduction to Research Methods. F

Practical introduction to graduate study in music focusing on research methods, music sources and bibliography, techniques of scholarly writing, and critical readings in the discipline. Culminates in a public oral presentation on the model of a professional conference paper. N. Treadwell, L. Miller

201. History of Music Theory from the Greeks Through Rameau. W

Study and analysis of pre-tonal and tonal music from the Greeks through the 18th century. Course combines a history of theory with analyses that utilize contemporaneous theoretical concepts. (Formerly Pretonal and Tonal Analysis.) Enrollment restricted to graduate students. Offered in alternate academic years. L. Miller

202. Tonal and Posttonal Analysis. W

Encompasses various forms of linear analysis, set theory, and selected topics in current analytical practice. Offered in alternate academic years. P. Nauert, H. Kim, D. Jones

203. Special Topics in Performance Practice. *

Investigation of primary and secondary sources of information about the culturally and historically accurate performance of music in various times and places. Undergraduates who have completed the appropriate course 101 courses may enroll in 203 courses by interview with the instructor. The Staff

203A. Performance Practice in the Middle Ages. *

A study of performance practices in medieval music from Gregorian chant to the 14th century. History of instruments and notation. Rhythmic interpretations of chant and a study of improvised practices in organum. Editing and performance of representative

works. Offered on a rotational basis with other courses in the 203 series. L. Miller

203B. Performance Practice in the Renaissance. *

A study of performance practices in Renaissance music, including concepts of mode, *musica ficta*, ornamentation, text underlay, tempo, and articulation. Basic principles of white notation and a brief history of instruments. Transcription, editing, and performance of a Renaissance work. Offered on a rotational basis with other courses in the 203 series. N. Treadwell, L. Miller

203C. Performance Practice in the Baroque. *

An examination of historically informed performance practice techniques in Baroque music, with attention to aspects of ornamentation, articulation, figured bass realization, dance choreography, rhythm and tempo, and organology. In-class performances and editing of source materials are included. Offered on a rotational basis with other courses in the 203 series. The Staff

203D. Performance Practice in the Classic Period. *

Issues in performance practice focusing on selected topics and styles from the time of C.P.E. Bach through Haydn. Development of selected genres and ensembles, sources and editing, and interpretation and improvisation. Offered on a rotational basis with other courses in the 203 series. The Staff

203E. Performance Practice in the Romantic Period. W

Interpretation of music from Beethoven to Scriabin through examinations of both the musical texts (form, genre, harmony, texture, orchestration, etc.) and the period performance practices. Topics range from interpretative analyses of selected compositions to critical assessments of modern as well as documented 19th- and early 20th-century performances. Offered on a rotational basis with other courses in the 203 series. A. Leikin

203F. Performance Practice in the 20th Century. *

Projects in analysis, notational studies, extended instrumental techniques, and the aesthetics and performance practices associated with composers from Debussy to the present. Reading and listening focuses on the writings and performances of the composers themselves and upon interpretive writings by informed performers of 20th-century music. Offered on a rotational basis with other courses in the 203 series. May be repeated for credit. B. Carson, A. Beal, D. Jones

203G. Concepts, Issues, and the Practice of Ethnomusicology. *

Ethnomusicological field methodology; vocal and instrumental performance practices as related to the ethnomusicological endeavor. Specific topics: philosophical paradigms, historical overview, and definitional issues of ethnomusicology; field research concepts and procedures; studies in instrumental and vocal performance practices of diverse cultures; selected writings of Charles Seeger; transcription and analysis issues; studies in micromusics. Offered on a rotational basis with other courses in the 203 series. The Staff

203H. Area Studies in Performance Practice. *

Intensive examination of the vocal and instrumental performance practices of living musical traditions of Indonesia, Latin America, or other regions. Topics may incorporate soloistic and ensemble traditions, secular and sacred traditions. Research rubrics include tuning, tone quality, performance posture and rhetoric, and improvisational and fixed patterns, as dictated by regional norms. May be repeated for credit in a different area. Offered on a rotational basis with other courses in the 203 series. May be repeated for credit. D. Neuman, H. Kim

205. Conceptual Foundations in Music Repertoire and Analysis. F,W,S

A series of 2-credit courses that build upon and advance the depth and breath of analytical skills with the aim of preparing graduate students for advanced work in cultural musicology. The Staff

205A. Conceptual Foundations in Western Music Analysis (2 credits). F

Focused analysis of selected works from the Western classical music repertoire. Emphasis is on aural and analytical skills, the modal and tonal foundations of Western music, and the evolution of form and expression. Enrollment is restricted to graduate

students. A. Leikin, N. Treadwell, A. Beal, L. Miller

205B. Conceptual Foundations in World Music (2 credits). W

A broad survey of traditional and vernacular musical practices from around the world with an emphasis on aural analysis and critical listening skills. Enrollment is restricted to graduate students. Enrollment limited to 15. D. Neuman, N. Hammond, T. Merchant

206A. World Music Composition. W

Studies in the history, structure, and cultural function of music from cultures as diverse as Global African, central European, Korean, Latin American, Indonesian, and Indian traditions. Examines ways in which composers such as Bartok, Anthony Braxton, Chou Wen-Chung, Lou Harrison, and Takemitsu sought and integrated such influences. Students choose to write critical and analytic essays on musics exhibiting diverse cultural influences, or to compose music that takes a vernacular or non-European music as a model for a compositional/improvisational approach. Enrollment restricted to graduate students. Enrollment limited to 12. May be repeated for credit. K. Hester

206B. Computer-Assisted Composition. *

Study of techniques of algorithmic and computer-assisted composition in a variety of contemporary idioms. Topics may include stochastic methods, generative grammars, search strategies, and the construction of abstract compositional designs and spaces. Final project for course involves students formulating and algorithmically implementing their own theoretical assumptions and compositional strategies. (Also offered as Digital Arts and New Media 217. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. L. Polansky

206D. Music Perception and Cognition. *

Investigations in the psychology of musical listening and awareness. Topics include time and rhythm perception, auditory scene analysis, pattern recognition, and theories of linguistics applied to harmony, melody, and form in the music of diverse cultures. Explores applications of the cognitive sciences to music transcription, analysis, composition, interpretation, and performance practice. Students apply existing knowledge in the cognitive sciences to a developing creative or analytical project, or develop and conduct new experiments. Enrollment restricted to graduate students. Enrollment limited to 16. May be repeated for credit. B. Carson

219. Techniques in Composition. F

Short compositional exercises incorporating diverse contemporary techniques with emphasis on problem solving and development of compositional skills. Exercises focus on particular strategies for organizing and coordinating aspects of pitch, rhythm, timbre, and other musical dimensions, depending on interests of instructor and students. (Formerly course 219A.) Enrollment restricted to graduate students. May be repeated for credit. D. Jones

220. Graduate Seminar in Music Composition. S

Instruction in individual composition offered in the context of a group; composition in large forms of the 20th century with emphasis on techniques since 1950. May be taken by upper-division undergraduates for credit. Interview with instructor at first class meeting. Prerequisite(s): course 219. Enrollment limited to 16. May be repeated for credit. D. Jones, L. Polansky, H. Kim

228. Techniques of Modernity and Aesthetic Formations. *

Explores the transformations and aesthetic possibilities of the digital age through a study of perceptual shifts of the past, from orality to literacy, gift to commodity, pre-colonial to colonial, "pre-modern" to "modern," and the technological revolutions that accompanied these shifts. Enrollment restricted to graduate students; upper-division undergraduates may enroll with permission of instructor. Enrollment limited to 18. D. Neuman

252. Current Issues Colloquium (no credit). F,W,S

An interactive colloquium featuring presentations by faculty, graduate students, and visiting scholars on research projects in composition, musicology / ethnomusicology, and performance practice, followed by focused discussion. Enrollment restricted to graduate students. Undergraduate students may enroll with permission of instructor. L. Burman-Hall, A. Beal

253A. Pitch, Melody, and Tuning Systems. *

Focuses on pitch systems from Western and non-Western cultures, and on scholarly perspectives about them throughout the 20th and 21st centuries. Enrollment restricted to graduate students. Enrollment limited to 20. T. Merchant

253B. Rhythm, Time, and Form. *

Traditional and experimental rhythmic and temporal systems representing diverse cultures, with emphasis on unmeasured, divisive, additive, and multilayer practices in cultural context. Students examine rhythmic composition, improvisation, and rubato performance in selected cultures, including rhythmic notation and transcription systems. Prerequisite(s): course 200 or the equivalent, or consent of instructor. Enrollment restricted to graduate students. Enrollment limited to 10. B. Carson

253C. Music and Discourse. *

Addresses both song and musical performance as modes of discourse. For song: musical and textual phrase and verse structures and their interrelationships. For musical performances: musical performance as rhetoric and emblem. Enrollment restricted to graduate students. Enrollment limited to 5. The Staff

253D. Issues in the Ethnography of Music. *

Explores ethnography—the description of culture—as it relates to musicology and ethnomusicology, particularly where "culture" and cultural production are historically dynamic and geographically porous. Examines music with sensitivity to such complexities of context, and the disciplinary points of reference from which cultural difference is calculated. Considers the ideological imprint of methodology on cultural analysis: how to study an unfamiliar music in a way that transcends the measure of "difference from the familiar," and, conversely, how to conduct an "objective" study of a familiar music. Enrollment restricted to graduate students. Enrollment limited to 10. D. Neuman

254C. Performance Theory and Practice. *

"Performance" can describe activities in the arts, humanities, and social sciences. Recognizing the mappings of this concept, this course examines selected performances and performative behavior through theoretical and critical lenses. Emphasis is on investigating the act and practice of musical performance in multicultural context, and on analyzing scholarly writing as performative discourse. Enrollment restricted to graduate students. Enrollment limited to 10. N. Treadwell

254D. Organology and Acoustics. *

Comprehensive study of musical instruments including, but not limited to, physical and engineering concepts; theory and methods of description, analysis, systematic, and cultural classifications; physiology and performance techniques; cultural significance; anthropomorphic and zoomorphic symbolism; ritual usage; and more. Previous enrollment in introductory ethnomusicology course (e.g., course 11D) helpful, but not required. Enrollment by interview only, except music M.A. and Ph.D. students. Enrollment restricted to junior and senior music majors, electronic music minors, anthropology majors, or physics majors, and graduate students. Enrollment limited to 15. The Staff

254E. Asian Resonances in 20th-Century American and European Music. *

Explores the influence of Asian musics on Western composers from Debussy to Britten to American experimentalists such as Harrison, Cage, Riley, and Rudyard. Questions of cultural appropriation and originality are addressed through specific examples and critical readings. Enrollment restricted to graduate students. Enrollment limited to 10. L. Miller

254I. Empirical Approaches to Art Information. *

Reading and practice in empirical methods, as applied to the study of music, visual art, multimedia production, and performance arts. Topics include semiotics, critiques of empiricism, cultural determinants and contingents of perception, the psychophysics of information, sensory perception (visual and auditory), memory, pattern recognition, and awareness. Students apply existing knowledge in the cognitive sciences to a developing creative project, or develop and conduct new experiments. (Also offered as Digital Arts and New Media 254I. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 17. May be repeated for credit. B. Carson

254J. Jazz Historiography. *

Introduces the ways jazz history has been conceptualized, evaluated, and transmitted.

Examines the social, intellectual, and cultural formations that have influenced this historiography. Considers the interdisciplinary project of "new jazz studies" in relation to established and alternative historical narratives. Enrollment restricted to graduate students. Enrollment limited to 10. The Staff

254K. Music, Gender, and Sexuality. *

Seminar focuses on musicological and ethnomusicological work incorporating feminist and queer theories published since the late 1980s. Cross-cultural approach to the examination of music, gender, and sexuality, drawing examples from both Western and non-Western traditions. Enrollment restricted to graduate students. Enrollment limited to 10. T.

Merchant

254L. John Cage: Innovation, Collaboration, and Performance Technologies. *

In-depth examination of John Cage's interdisciplinary work, his pioneering activity in live electronic technology, and his influence in current multimedia creativity. Approximately one-half of the seminary is devoted to student research and creative projects and reflect Cage's legacy. (Also offered as Digital Arts and New Media 254L. Students cannot receive credit for both courses.) Enrollment restricted to juniors, seniors, and graduate students. Upper-division undergraduates may enroll with permission of instructor. Enrollment limited to 12. A. Beal

254M. Music in San Francisco, 1850–1950. *

Explores San Francisco's musical life during the city's first century, including opera, symphony, Chinese music, musical theater, and other genres. Considerable emphasis on music and society, including issues of race. Enrollment restricted to graduate students.

Enrollment limited to 15. L. Miller

254N. Cruising the Postcolony. F

Drawing on Jose Esteban Munoz's suggestion that queer politics is most radical when it is looking to the possibilities of the future rather than the pragmatics of the present, this course interrogates the radical vision of postcolonial and queer music-making. Enrollment restricted to graduate students. Enrollment limited to 18. N. Hammond

254Q. Dialogues and Questions in Digital Arts and Culture. S

Students engage in dialogues at the intersection of theory and practice with the goal of producing a pre-thesis proposal and essay. Readings and seminar discussions inform the development of project proposals and essays, which theoretically contextualize students' work. (Formerly Digital Arts and New Media 203.) (Also offered as Digital Arts and New Media 202. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. The Staff

261. Graduate Applied Instruction (3 credits). F,W,S

One hour of individual instrumental or vocal instruction for graduate students. Repertory, technique, and performance practice. A minimum of nine hours per week of individual practice is required. Students are billed a course fee. Admission by audition with the instructor prior to first class meeting; see the enrollment conditions section of the quarterly Schedule of Classes. May be repeated for credit. The Staff

265. Graduate Ensemble Participation (2 credits). F,W,S

Participation by graduate students in ensembles. Enrollment limit appropriate to the size of each ensemble. Admission by audition with the instructor prior to first class meeting; see the enrollment conditions section of the quarterly Schedule of Classes. May be repeated for credit. The Staff

267. Workshop in Computer Music and Visualization (2 credits). F,W,S

Graduate-level techniques and procedures of computer music composition and visualization. Practical experience in the UCSC electronic music studio with computer composition systems and software, including visualization and interactive performance systems. Extensive exploration of music and interactive graphic programs such as Max/MSP/Jitter. Enrollment by permission of instructor; appropriate graduate experience required. Enrollment restricted to graduate students. (Also offered as Digital Arts and New Media 267. Students cannot receive credit for both courses.) Enrollment limited to 12. May be repeated for credit. L. Polansky

295. Directed Reading. F,W,S

Directed reading, which does not involve a term paper. May be repeated once for credit.
Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Independent study, creative work, or research for graduate students who have not yet begun work on their thesis. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

298. Graduate Recital. F,W,S

A public performance in the student's primary area of interest, related to the thesis or dissertation project, under the supervision of a faculty member. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. The Staff

299. Thesis Research. F,W,S

A thesis consisting of a substantive and original creative or scholarly work, related to the graduate recital, under the supervision of a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Oakes College

[2014-15 General Catalog](#)[College Office](#)

(831) 459-2558

<http://oakes.ucsc.edu>

For college description and list of faculty, see [colleges](#).

Lower-Division Courses

10. Academic Success (2 credits). S

Provides opportunity to assess and revise methods of and purposes in studying. Critical, effective approaches to reading, writing, participating in lectures and sections, taking exams, balancing competing responsibilities, and utilizing campus resources explored. Enrollment by permission of college adviser. The Staff

30. Thesis Writing and Editing (2 credits). S

Substantial writing and revision for a piece of writing relevant to a student's field. Focuses on academic research, documentation, editing, and revision. Enrollment restricted to junior and senior college members. Enrollment by permission of instructor. Enrollment limited to 20. May be repeated for credit. The Staff

42. Student-Directed Seminar.

Seminars taught by upper-division Oakes students under faculty supervision. (See course 192.) The Staff

60. Oakes Literary Journal: Further Reflections on a Diverse Society (2 credits). W

For publication in an Oakes College literary journal, students significantly refine an essay from the fall quarter Oakes College core course. Course work includes consideration of a substantive text that engages core course themes and promotes the focus of the essay. Prerequisite(s): course 80A or 80B. Enrollment restricted to first-year students. Enrollment limited to 20. May be repeated for credit. The Staff

67. The Politics of Food: Labor and Social Justice (2 credits). S

Engages the themes of Oakes College (respect for diversity and social justice) and the interests of UCSC's Center for Agroecology and Sustainable Food Systems. Topics include the racial politics of food, farm labor, organic farming, and activism. Prerequisite(s): successful completion of college core course 80A, 80B, 80C, 80D, or 80H. Enrollment restricted to college members. Enrollment limited to 25. May be repeated for credit. R. King, M. Baker

72. Building the Strength to Love and Dream: Oakes Oral History Project. W

Students study the founding and development of Oakes College's first 10 years through oral history. Students immerse themselves in thorough background research and build skills necessary to conduct oral histories with founding Oakes members, revising pieces suitable for publication. Prerequisite(s): satisfaction of Entry Level Writing and Composition

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

- requirements. Enrollment restricted to College members. L. Lopez
- 73A. Oakes College Mentoring: Training Workshop (2 credits). Students discuss texts, write responses, and share ideas as they prepare to become academic peer counselors for Oakes Core students in fall. Prerequisite(s): Oakes College Core course. Enrollment restricted to Oakes College members. Enrollment by permission of instructor. L. Knisely
- 73B. Oakes College Mentoring: Service Learning Practicum (2 credits). F Mentors introduce first-years to campus resources, provide them with academic support, share academic successes and difficulties, and offer guidance on college adjustment. Prerequisite(s): course 73A. Enrollment restricted to Oakes College members. (General Education Code(s): PR-S.) L. Knisely
75. Oakes Student Development and Leadership Theory (2 credits). S Overview of theories, methods, applications, skills, and special topics focusing on college student development and leadership. Uses a variety of learning modes including lecture, discussion, case studies, small group interaction, and presentations. Interview only: see Oakes coordinator for residential education during spring enrollment period. Enrollment restricted to Oakes College members. Enrollment limited to 30. May be repeated for credit. The Staff
- 80A. Introduction to University Discourse: Communicating Diversity for a Just Society. F Explores rhetorical principles and conventions of university discourse providing intensive practice in analytical writing, critical reading, and speaking. Examines historical and contemporary aspects of multiculturalism in the U.S. Explores how social inequality based on ethnicity, race, class, and gender occurs among all levels of society. Students cannot receive credit for this course and course 80B. (Formerly Introduction to University Discourse: Values and Change in a Diverse Society.) Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): T5-Humanities and Arts or Social Sciences, C1, E.) R. Langhout
- 80B. Rhetoric and Inquiry: Communicating Diversity for a Just Society. F Explores intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Examines historical and contemporary aspects of multiculturalism in the U.S. Explores how social inequality based on ethnicity, race, class, and gender occurs among all levels of society. Students cannot receive credit for this course and course 80A. (Formerly Rhetoric and Inquiry: Values and Change in a Diverse Society.) Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. Enrollment limited to 22. (General Education Code(s): T5-Humanities and Arts or Social Sciences, C2, E.) R. Langhout
- 80C. Introduction to University Discourse: Communicating Diversity for a Just Society Writing Intensive 1. F Explores rhetorical principles and conventions of university discourse and provides intensive practice in analytical writing, critical reading, and speaking. Examines historical and contemporary aspects of multiculturalism in the U.S. Explores how social inequality based on ethnicity, race, class, and gender occurs among all levels of society. More writing-intensive than course 80A; prerequisite to course 80D. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. The Staff
- 80D. Introduction to University Discourse: Communicating Diversity for a Just Society Writing Intensive 2. W Continues to provide practice in analytical writing, critical reading, and speaking, and to examine issues relating to multiculturalism, diversity, and power. Prerequisite(s): course 80C. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 22. (General Education Code(s): C1.) The Staff
- 80H. Rainbow Theater Cultural Studies. S Introduction to multicultural theater and multicultural plays that aims to bring cultural awareness to all students interested in theater discipline. Students are required to read and critically analyze contemporary plays of color with emphasis on race and culture in contemporary American society. Enrollment limited to 40. May be repeated for credit. (General Education Code(s): T4-Humanities and Arts, E.) D. Williams

Management UCDC Program Writing Program Theater Arts Yiddish	<p>93. Field Study. F,W,S Supervised off-campus study conducted under the immediate and direct guidance of a faculty supervisor. To be used primarily by lower-division students doing part-time off-campus study. Prerequisite(s): approval of student's adviser, certification of adequate preparation, approval of provost. May be repeated for credit. The Staff</p> <p>94F. Group Tutorial (2 credits). F,W,S A program of independent study arranged between a group of students and a faculty instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>95. Directed Reading. F,W,S Directed reading on selected topics in literature. Students submit petition to sponsoring agency. The Staff</p> <p>99. Tutorial. F,W,S Individual study for lower-division students directed by a fellow of Oakes. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>99F. Independent Study (2 credits). F,W,S Independent study on various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
Teaching and Administrative Staff Appendices Archive of General Catalogs Nondiscrimination Statement Search the Catalog	<h2>Upper-Division Courses</h2> <p>128. Latino Media in the U.S. *</p> <p>Explores the history and practice of Latino media in the U.S. with an emphasis on work created by, for, with, and about Latino constituencies. Course highlights the role that media plays in struggles for social change, political enfranchisement, creative self-expression, and cultural development. Course content varies with instructor. (Also offered as Latin American&Latino Studies 128. Students cannot receive credit for both courses.) Enrollment limited to 39. (General Education Code(s): IM, E.) The Staff</p> <p>150. Queer History and Theory in the United States. S</p> <p>Gives students a broad overview of the historical and social construction of gay and lesbian identities in the United States. The recent emergence of relatively stable LGBTQIA identities in the U.S. presents a compelling historical problem: how can we know about queer people in the past when they were often "hidden from history" or if they identified themselves in ways that may seem strange to us in the present? Students grapple with these questions as they chart the emergence and eclipsing of sexual identities in U.S. history and contribute to the project of documenting queer history in the present. Students also examine how queer theory addresses the meanings that U.S. politics and culture have placed on sexual orientation over time. (Formerly Gays and Lesbians in the United States.) Enrollment restricted to junior and senior Oakes College members. Enrollment limited to 30. P. Longo</p> <p>151A. Corre la Voz: Community Literacies and Power (2 credits). F,W,S</p> <p>Required seminar for Corre la Voz program interns and Oakes students working in English-language learners (ELL) (Spanish English) community-teaching placements. Examines theories and methods that emphasize social connection, leadership, verbal enrichment, multi-modal literacies, and community empowerment. Taken concurrently with field study. Enrollment by interview only, and successful application to the Corre la Voz program or the submission of a teaching-placement agreement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Co-requisite(s): course 151B or 199. Enrollment restricted to sophomore, junior, and senior Oakes College members. May be repeated for credit. L. Lopez</p> <p>151B. Community Literacies Field Study (3 credits). F,W,S</p> <p>Field study for Corre la Voz interns. Intensive on-site training and participation in team teaching of middle grade English-language learners (ELL) (Spanish English) youth. Literacies include mathematics, drama, social-emotional, and digital media. Enrollment by interview only, and successful application to the Corre la Voz program or previous successful quarters in the program. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Concurrent enrollment in course 151A is required during the first quarter after which course 151B may be repeated by itself. Enrollment restricted to sophomore, junior, and senior Oakes College members. Enrollment limited to 15. May be</p>

repeated for credit. (General Education Code(s): PR-S.) The Staff

192. Directed Student Teaching. F,W,S

Teaching a lower-division seminar under faculty supervision. (See course 42.)

Prerequisite(s): upper-division standing in Oakes; a proposal supported by a faculty member willing to supervise. The Staff

193. Field Study. F,W,S

Supervised off-campus study conducted under the immediate and direct guidance of a faculty supervisor. To be used primarily by upper-division students doing part-time off-campus study. Prerequisite(s): approval of student's adviser, certification of adequate preparation, approval of provost. If taking two or more such courses in any one quarter, must obtain approval of academic adviser. The Staff

195. Senior Thesis. F,W,S

Senior thesis related to college-sponsored individual majors. Students submit petition to sponsoring agency. Sponsoring faculty must be member of individual major committee. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

College-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Up to three such courses may be taken for credit in any one quarter. Prerequisite(s): approval of the student's adviser, certification of adequate preparation, and approval by provost. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual study for junior and senior members of Oakes College directed by a fellow of Oakes. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Independent Study (2 credits). F,W,S

Independent study on various topics to be arranged between student and instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Ocean Sciences

[2014–15 General Catalog](#)

A312 Earth and Marine Sciences Building
(831) 459-4730

<http://oceansi.ucsc.edu/>

[Faculty | Program Statement](#)

Lower-Division Courses

1. The Oceans. F

An interdisciplinary introduction to oceanography focusing on biological, chemical, geological, and physical processes. Covers topics such as origins and structure of planet Earth and its oceans, co-evolution of Earth and life, plate tectonics, liquid water and the hydrologic and hydrothermal cycles, salinity and elemental cycles, ocean circulation, primary production and nutrient cycles, plankton and nekton, life on the sea floor, near shore and estuarine communities, future environmental problems our oceans face.

Students may also enroll in and receive credit for Earth Sciences 1. (General Education Code(s): SI, IN, Q.) K. McMahon

80A. Life in the Sea. W

The ecology of plants and animals in oceans and coastal areas. Consideration of life in various marine habitats, including the open ocean, rocky shores, estuaries, and the sea. Includes field trips. High school biology and chemistry courses are recommended prior to taking this course. (General Education Code(s): SI, T-2 Natural Sciences.) M. Sison-Mangus

80B. Our Changing Planet. F,S

Interdisciplinary scientific perspective on Earth system, focusing on human impacts on global environment. Introduces concepts of Earth system science and explores topics such as global warming, ozone depletion, pollution, deforestation, and future climate change. Prerequisite(s): high school chemistry course recommended. (General Education Code(s): PE-E, T2-Natural Sciences.) P. Lam, M. McCarthy

90. Fundaments of Climate. W,S

A quantitative introduction to climate comprising five modules: atmosphere-ocean circulation; atmospheric teleconnections; El-Nino Southern Oscillation; the Pacific Decadal Oscillation; and global warming. Hands-on statistical methods are applied to real-world observations to develop a quantitative understanding of climate. May be repeated for credit. (General Education Code(s): SR.) A. Moore, C. Edwards

Upper-Division Courses

101. The Marine Environment. W

An introduction to the marine environment stressing the interaction of physical, chemical, and geological factors in the ocean. Provides the oceanographic background needed for studies in marine biology. Students taking the prerequisite math courses concurrently may enroll in the course with permission from instructor. Prerequisite(s): Chemistry 1C and

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Mathematics 11B or 19B. Students taking the prerequisite math courses concurrently may enroll in the course with permission from instructor. R. Kudela

102. Oceans and Climate: Past, Present, and Future. *

An introduction to Earth's environment, particularly its oceanic and climatic components. Emphasizes interactions between chemical, physical, biological, and geological processes, and fundamentals of past, present, and future global environmental change. Provides backgrounds for specialized courses in oceanic or climatic change. Prerequisite(s): Chemistry 1C. The Staff

118. Marine Microbial Ecology. S

The study of marine bacteria and their role in the marine ecosystem. Emphasis on biochemistry and physiology in relation to metabolic activity and elemental cycles, trophic interactions, and flows of material and energy in marine food webs. Students cannot receive credit for this course and Ocean Sciences 218. Prerequisite(s): Biology 20C or 21C, and Chemistry 1C. J. Zehr

120. Aquatic Chemistry: Principles and Applications. *

An integrated study of the chemical behavior of natural waters with an emphasis on both principles and applications. Topics include chemical equilibrium, kinetics, acids/bases, oxidation/reduction, complexation, solid dissolution and precipitation, and reactions on solid surfaces. Prerequisite(s): Chemistry 108B or 112C. The Staff

124. Aquatic Organic Geochemistry. *

Introduction to organic geochemistry with emphasis on aquatic environments. Explores how non-living organic matter shapes biogeochemical cycles by carrying and sequestering reduced carbon and major nutrients and examines influence of chemical structure and environmental factors on transport and fate of organic molecules. Provides an introduction to organic biomarkers. Students cannot receive credit for this course and course 224. Prerequisite(s): basic college chemistry (Chemistry 1B, 1C); at least one quarter of college level organic chemistry required (e.g., Chemistry 7). The Staff

130. Biological Oceanography. S

Biological description of the sea, with emphasis on processes and patterns. Topics include microbial dynamics, phytoplankton and zooplankton production, and ecology of marine food webs. Emphasis placed on understanding how physical, chemical, and geological environment shapes biology and ecology of oceans, including such topics as harmful algal blooms, global estimates of productivity, and effects of humans on environment. Students may not receive credit for this course and Ocean Sciences 230. Prerequisite(s): previous course in ocean sciences recommended. Enrollment restricted to juniors (with instructor approval), seniors, and graduate students. R. Kudela

172. Geophysical Fluid Dynamics. *

Introduces fluid motion influenced by rotation. Topics include the Coriolis force, geostrophic flow, potential vorticity, the shallow water model, quasigeostrophic approximation, planetary waves, Ekman theory, thermal wind, models of the large-scale oceanic and atmospheric circulation, and equatorial dynamics. Taught in conjunction with course 272. Students cannot receive credit for this course and course 272. (Also offered as Earth Sciences 172. Students cannot receive credit for both courses.) Prerequisite(s): Physics 107; Mathematics 22 or 23B recommended. Offered in alternate academic years. C. Edwards

199. Independent Study. F,W,S

Students submit petition to sponsoring agency. The Staff

Graduate Courses

200. Physical Oceanography. F

Introduction to the physics of the ocean-atmosphere system. Structure of the ocean and atmosphere. Energy balance and radiative transfer. Atmospheric circulation; weather and climate. Physical properties of seawater, air-sea interaction, mixing, water masses, ocean circulation, waves; CO₂ and global change. Designed for beginning graduate students in ocean sciences and upper-division science majors. Calculus and physics recommended as preparation. C. Edwards

[Management](#)[UCDC Program](#)[Writing Program](#)[Theater Arts](#)[Yiddish](#)[Teaching and Administrative Staff](#)[Appendices](#)[Archive of General Catalogs](#)[Nondiscrimination Statement](#)[Search the Catalog](#)**211. Climate Dynamics. F**

Introduction to the dynamics of the Earth climate system. Topics: climate system components; the global energy balance; radiative transfer; the hydrological cycle; general circulations of the atmosphere and ocean; El Niño; the North Atlantic Oscillation; the Pacific Decadal Oscillation. Enrollment restricted to graduate students. Undergraduates may enroll by permission of instructor. Previous courses in calculus and ocean sciences or earth sciences are recommended. A. Moore

213. Biogeochemical Cycles. *

Overview of biogeochemical cycles, present and past, and geochemical models. Topics include: marine, terrestrial, and global views of the carbon, nitrogen, phosphorus, silicon, sulfur, and oxygen cycles, and the evolution of these cycles and Earth's redox balance through geologic time. (Also offered as Earth Sciences 213. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Upper-division undergraduates may enroll with instructor approval. College-level chemistry and an upper-division course in at least one relevant discipline are recommended. M. McCarthy

215. Predicting the Atmosphere, Ocean, and Climate. *

Introduction to the theory and practice of operational prediction in meteorology, oceanography, and climate. Topics: observations and estimation theory, dynamic adjustment and initialization, estimation theory, data assimilation, forecast verification, predictability, ocean state estimation, seasonal forecasting. Enrollment restricted to graduate students. Undergraduates may enroll with instructor approval. Courses 200, 264, Earth Sciences 272, or equivalents are recommended. A. Moore

218. Marine Microbial Ecology. S

Recent developments in the study of marine bacteria and their role in the marine ecosystem. Emphasis on biochemistry and physiology in relation to metabolic activity and elemental cycles, trophic interactions and flows of material and energy in marine food webs. Exams and research paper required. Students cannot receive credit for this course and course 118 and Biology 171. Biology 20C and Chemistry 1C recommended. J. Zehr

220. Chemical Oceanography. W

A chemical description of the sea; emphasis on the chemical interactions of the oceans with the biosphere, atmosphere, and lithosphere. Topics include biogeochemical cycles and the use of chemical tracers to study oceanic and coastal processes. Course designed for graduate students; available to upper-division science majors. M. McCarthy

224. Aquatic Organic Geochemistry. *

Introduction to organic geochemistry with emphasis on aquatic environments. Explores how non-living organic matter shapes biogeochemical cycles by carrying and sequestering reduced carbon and major nutrients and examines influence of chemical structure and environmental factors on transport and fate of organic molecules. Provides an introduction to organic biomarkers. Students cannot receive credit for this course and course 124. M. McCarthy

230. Biological Oceanography. S

Biological description of the sea, with emphasis on processes and patterns. Topics include microbial dynamics, phytoplankton and zooplankton production, and ecology of marine food webs. Emphasis placed on understanding how physical, chemical, and geological environment shapes biology and ecology of oceans, including such topics as harmful algal blooms, global estimates of productivity, and effects of humans on environment. Students may not receive credit for this course and course 130. Prerequisite(s): previous course in ocean sciences recommended. Enrollment restricted to graduate students. R. Kudela

260. Introductory Data Analysis in the Ocean and Earth Sciences. W

Introduces data analysis methods regularly encountered within the ocean and earth sciences. Topics include: error propagation; least squares analysis; data interpolation methods; empirical orthogonal functions; and Monte Carlo methods applied to problems drawn from oceanographic and earth sciences datasets. Introduces and uses a high-level computing and visualization package, MATLAB. Student project consists of analysis of the student's own dataset. (Also offered as Earth Sciences 260. Students cannot receive credit for both courses.) Prerequisite(s): previous course in ocean or earth sciences is recommended. Enrollment restricted to graduate students; undergraduates with permission of instructor. C. Edwards

272. Geophysical Fluid Dynamics. *

Introduces fluid motion influenced by rotation. Topics include the Coriolis force, geostrophic flow, potential vorticity, the shallow water model, quasigeostrophic approximation, planetary waves, Ekman theory, thermal wind, models of the large-scale oceanic and atmospheric circulation, and equatorial dynamics. Students cannot receive credit for this course and course 172. (Also offered as Earth Sciences 272. Students cannot receive credit for both courses.) Physics 227 is recommended as preparation. Enrollment restricted to graduate students. Offered in alternate academic years. C. Edwards

280. Marine Geology. W

Geology of the marine environment. Topics include controls on the types, origin, and distribution of marine sediments; geology of oceanic crust; evolution of continental margins and plate boundaries; introduction to paleoceanography. Students cannot receive credit for this course and Earth Sciences 102. Enrollment restricted to graduate students. A. Ravelo

285. Past Climate Change. *

Reviews the fundamentals of climate dynamics and explores how Earth's environment is a product of the interaction of its components. Uses examples of climate change from historical and geologic records, and from predictions of the future. Recommended for junior, senior, and graduate students in the sciences. The Staff

286. Introduction to Ocean Modeling. S

Fundamental concepts and ideas that underpin numerical modeling of the ocean. Topics include numerical methods and solutions of partial differential equations (PDEs), ocean circulation, wave dynamics, ocean ecosystem model, and MATLAB programming. Enrollment restricted to graduate students, or to seniors by permission of instructor. A. Moore

290. Proseminar.

Special topics in marine sciences to be offered from time to time by professors and staff members. The Staff

290A. Topics in Chemical Oceanography. *

A weekly seminar series covering recent developments in chemical oceanography. Different topics and approaches will be stressed from year to year. May be repeated for credit. The Staff

290B. Topics in Biological Oceanography. *

Explores different problems of special interest in biological oceanography. Different topics and approaches will be stressed from year to year. May be repeated for credit. The Staff

290C. Topics in Marine Geochemistry. F

Selected topics in geochemistry. Discussion of theoretical models, different approaches, and recent research. Topics vary from year to year. May be repeated for credit. A. Paytan

290D. Topics in Marine Microbiology. *

A weekly seminar series covering topics in environmental microbiology. Topics vary from year to year, and will include research in ecology, methodology, biochemistry and physiology of bacteria. Emphasis on the role of bacteria in biogeochemical cycling from microzone to global scales, with particular focus in marine systems. May be repeated for credit. The Staff

290E. Topics in Climatic and Oceanic Change. *

Weekly seminar series covering recent developments in climatic and oceanic change. Different topics and approaches stressed from year to year. Prerequisite(s): interview with instructor prior to first class meeting. May be repeated for credit. A. Ravelo

290G. Topics in Physical Oceanography. *

Weekly seminar series covering topics in physical oceanography as well as biological-physical interactions in the oceans. Different topics and approaches stressed from year to year. Enrollment restricted to graduate students; undergraduates may enroll with permission of instructor. May be repeated for credit. The Staff

290H. Topics in Ocean Optics. W

Examines recent developments and application of bio-optics to the marine environment, including theory, instrumentation, and remote sensing. Different topics and approaches emphasized from year to year. Prerequisite(s): previous course in ocean sciences recommended. Enrollment restricted to graduate students; senior undergraduates with permission of instructor. May be repeated for credit. R. Kudela

290J. Topics in Marine Organic Geochemistry. S

Examines recent developments in uses of organic geochemistry to trace oceanographic and biogeochemical processes. Focuses on introduction to organic biomarkers, current literature, and evolving applications. Different topics and approaches emphasized from year to year. Prerequisite(s): previous course in ocean sciences and organic chemistry are recommended. Enrollment restricted to graduate students; upper-division undergraduates with instructor's permission. May be repeated for credit. M. McCarthy

292. Seminar (no credit). F,W,S

Weekly seminar on various topics attended by faculty, graduate, and upper-division undergraduate students. M. Sison-Mangus, C. Lamborg, P. Lam

293. Graduate Research Seminar (2 credits). S

Weekly seminar series covering a spectrum of topics in oceanography. Designed for Ph.D. program graduate students in ocean sciences and those in biology, Earth sciences, chemistry, and physics with research interests in oceanography. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Teaching in Ocean Sciences (2 credits). F

For new and/or relatively inexperienced graduate students in pedagogy of ocean sciences. Role and responsibilities of teaching in ocean sciences described and developed. Includes discussions about effective teaching methods; hands-on issues for work in the laboratory; university expectations; and regulations regarding teaching, organizational strategies, time management, and working with instructors and staff. Prerequisite(s): graduate standing or permission of instructor. Enrollment restricted to graduate students. C. Edwards

297. Independent Study.

Independent reading, research, and written reports not related to thesis research. Students submit petition to sponsoring agency. The Staff

299. Thesis Research.

Students submit petition to sponsoring agency. The Staff

* Not offered in 2014-15

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Philosophy

[2014-15 General Catalog](#)

220 Cowell College

(831) 459-2070

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Lower-Division Courses

8. Reason, Logic, and the Idols of Thought. S

Students cultivate their ability to distill and critically assess the barrage of argument and rhetoric with which they are confronted every day--on the Internet, in the media, on campus--and learn to subject their own thoughts to more rigorous, logical standards. (Formerly Logic, Numbers, and Emotion: Thinking Clearly in Everyday Life.) (General Education Code(s): SR, Q.) J. Ellis

9. Introduction to Logic. F,W

A first course in symbolic deductive logic. Major topics include (but are not limited to) the study of systems of sentential logic and predicate logic, including formal deduction, semantics, and translation from natural to symbolic languages. (General Education Code(s): MF, IH, Q.) (F) P. Roth, (W) J. Bowin

11. Introduction to Philosophy. F,W,S

An introduction to the main areas of philosophy through critical reflection on and analysis of both classical and contemporary texts. Focuses on central and enduring problems in philosophy such as skepticism about the external world, the mind-body problem, and the nature of morality. (General Education Code(s): TA, IH.) (S) J. Dinishak, (FW) R. Winther

22. Introduction to Ethical Theory. F,S

A consideration of ethical issues and theories focusing on the foundation of moral value and the principles governing character and behavior. Designed to extend and develop the student's abilities in philosophical reasoning about ethics. (General Education Code(s): CC, IH.) (F) N. Orlandi, (S) D. Guevara

24. Introduction to Ethics: Contemporary Moral Issues. *

An examination of the conceptual and moral issues that arise in connection with a variety of specific ethical issues. Topics vary according to the interests of the instructor, but among those commonly discussed are: abortion, war and violence, euthanasia, world hunger, human rights, and animal rights. The readings are typically drawn from recent philosophical articles on these topics, but earlier sources (important in the history of philosophy) can be considered as well. (General Education Code(s): PE-H, IH.) The Staff

26. Existentialism and After. *

A survey of recent movements in European thought, such as phenomenology,

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existentialism, hermeneutics, critical theory, continental feminism, and poststructuralism, with some attention to their 19th-century precursors. Selections from major philosophical treatises are supplemented with literary works. (General Education Code(s): IH.) The Staff

28. Environmental Ethics. *

This course is an introduction to the moral issues raised by our interactions with nonhuman animals and with the rest of the natural environment. The course will relate traditional moral theories to contemporary literature on the ethics of nature conservation and environmental protection. The course is intended as a first course in philosophy as well as a first course in ethics; therefore, questions concerning the nature of philosophical inquiry and the ways in which philosophical inquiry is different from inquiries conducted within other disciplines will also be addressed. (General Education Code(s): PE-E, IH.) The Staff

80E. Latin American Philosophy. *

Is there a general school of philosophy endemic to Latin America? Would it have to appeal to quintessential Western philosophical questions regarding knowledge, values, and reality? If not, why not, and would it then still count as philosophy? What difference do ethnic and national diversity, as well as strong political and social inequality, make to the development of philosophical questions and frameworks? Course explores a variety of historically situated Latin American thinkers who investigate ethnic identity, gender, and socio-political inequality and liberation, and historical memory, and who have also made important contributions to mainstream analytical and continental philosophy. (Also offered as Latin American&Latino Studies 80E. Students cannot receive credit for both courses.) (General Education Code(s): T4–Humanities and Arts, E.) R. Winther

80G. Bioethics in the 21st Century: Science, Business, and Society. F

Serves science and non-science majors interested in bioethics. Guest speakers and instructors lead discussions of major ethical questions having arisen from research in genetics, medicine, and industries supported by this knowledge. (Also offered as Biomolecular Engineering 80G. Students cannot receive credit for both courses.) (General Education Code(s): PE-T, T6–Natural Sciences or Humanities and Arts.) The Staff

80M. Philosophical Foundations of Science Studies. W

Provides a philosophical perspective concerning the revolution in the understanding of science that generated the so-called "science wars." Introduces the changed philosophical understanding of science shared and presupposed in the fields of science, technology, and society. (Formerly Science and Society.) (General Education Code(s): T5–Humanities and Arts or Social Sciences.) P. Roth

80S. The Nature of Science. *

A survey of what philosophers have said about the nature of science and scientific change. Emphasis is placed on whether science is best characterized as the gradual accumulation of truth or whether truth is irrelevant to scientific change. (General Education Code(s): T6–Natural Sciences or Humanities and Arts.) The Staff

99. Tutorial. F,W,S

The Staff

Upper-Division Courses

100A. Ancient Greek Philosophy. F

Survey of ancient Greek philosophy of the Classical and Hellenistic periods. Begins with Socrates and the pre-Socratics, then undertakes an intensive study of Plato and Aristotle. Course then surveys the main developments that follow: Epicureanism, Stoicism, and Scepticism. (General Education Code(s): W satisfied by taking this course and either course 100B or 100C.) Prerequisite(s): course 9; courses 11 or 22 or 24; and satisfaction of the Entry Level Writing and Composition requirements. J. Bowin

100B. The Rationalists. W

A study of the historical background and the present relevance of Descartes, Spinoza, and Leibniz. (General Education Code(s): W satisfied by taking this course and either course 100A or 100C.) Prerequisite(s): course 9; courses 11 or 22 or 24; and satisfaction of the

Management UCDC Program Writing Program Theater Arts Yiddish	<p>Entry Level Writing and Composition requirements. A. Stone</p> <p>100C. The Empiricists. S A critical study (based on original texts) of Locke, Berkeley, and especially Hume on the nature of knowledge, perception, causation, morality, religion, and political society. (General Education Code(s): W satisfied by taking this course and either course 100A or 100B.) Prerequisite(s): course 9; courses 11 or 22 or 24; and satisfaction of the Entry Level Writing and Composition requirements. A. Stone</p>
Teaching and Administrative Staff	<p>106. Kant. * Intensive study of Kant's philosophy, particularly his epistemology and metaphysics developed in his Critique of Pure Reason. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. Enrollment limited to 70. A. Stone</p>
Appendices	<p>107. Nineteenth-Century Philosophy. * A study of some European philosophers of the 19th century, with particular attention to Hegel, Schopenhauer, and Nietzsche. (Formerly course 108.) Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. J. Hoy</p>
Archive of General Catalogs	<p>108. Phenomenology. * French phenomenology includes primarily the work of Jean-Paul Sartre, Simone de Beauvoir, and Maurice Merleau-Ponty. Additional topics include the nature of consciousness and agency. Course includes discussions of French feminists' reactions to Simone de Beauvoir and Emmanuel Levinas. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. J. Hoy</p>
Nondiscrimination Statement	<p>109. Poststructuralism and After. * The three major poststructuralist philosophers are Michel Foucault, Jacques Derrida, and Gilles Deleuze. After studying their rejection of phenomenological accounts of consciousness and agency—as well as their program for studying power, bio-power, multiplicity, difference, and repetition,—current critics , such as Slavoj Zizek and Judith Butler, are also read for contrast between the methods of phenomenology, genealogy, and critical theory. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. The Staff</p>
Search the Catalog	<p>110. Heidegger. * A close study of early and late texts by Martin Heidegger, especially Being and Time. Prerequisite(s): course 9; and course 11 or 22 or 24; and course 100A or 100B or 100C; and course 106 or 107 or 108 or 109 or 111. The Staff</p>
	<p>111. Continental Philosophy. * Study of recent work in continental philosophy. Topics vary. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Winther</p>
	<p>112. American Philosophy. F Study of classical American philosophers, specifically Emerson, Peirce, James, and Dewey, with emphasis on their views of metaphysics, epistemology, ethics, and philosophy of religion. Some attention is also paid to recent pragmatic tendencies in American philosophy. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Winther</p>
	<p>113. The History of Analytic Philosophy. * Examination of the beginnings and development of analytic philosophy, with primary interest in the reformulation of traditional philosophical problems beginning with Frege. Other figures studied include, but are not limited to, Russell, Carnap, Wittgenstein, Quine, and Sellars. (Formerly The Origins of Analytic Philosophy.) Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. P. Roth</p>
	<p>114. Probability and Confirmation. W Studies the philosophical foundations of probability, induction, and confirmation. Different interpretations of probability studied, and solutions to various problems and paradoxes investigated. Students cannot receive credit for this course and course 214. Prerequisite(s):</p>

course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Otte

115. Formal Methods in Philosophy. *

Study of formal methods commonly used in analytic philosophy. Emphasis is on developing the technical tools to enable one to read and do modern analytic philosophy. Applications of various formal tools to philosophical problems will also be discussed. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Otte

116. Logic, Sets, and Functions. *

Introduction to basic set theory, recursive definitions, and mathematical induction. Provides a bridge between course 9 and courses 117 and 119. Strong emphasis on proving theorems and constructing proofs, both formal proofs and proofs in the customary, informal style used by mathematicians. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. J. Bowin

117. Non-Classical Logic. F

Investigations of non-classical logic. Several non-classical logics, such as various model logics, multi-valued logics, and relevance logics studied. Meta-theoretic results investigated for each logic studied. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Otte

118. Stoic Ethics. *

Surveys Stoic Ethics in the Hellenistic and Roman Periods, attending both to the theoretical writings of early Stoa (e.g., Zeno and Chrysippus) as well as to the therapeutic and protreptic writings of later figures (e.g., Seneca and Epictetus). Prerequisite(s): course 100A or 100B or 100C; or consent of instructor. J. Bowin

119. Intermediate Logic. *

Detailed treatment of the semantics of first order logic and formal computability. Completeness, undecidability of first order logic and Löwenheim–Skolem results also proven. Nature and formal limits of computability and introduction to incompleteness also investigated. Students cannot receive credit for this course and course 219. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Otte

121. Epistemology. S

A sustained look at central problems in epistemology. Topics might include the problem of other minds, the nature of justification and knowledge, skepticism of the external world, the nature and limits of human rationality, the problem of induction. (Formerly Knowledge and Rationality.) Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. Enrollment limited to 98. J. Dinishak

122. Metaphysics. W

Survey of contemporary analytic metaphysics. Topics may include nominalism, metaphysical realism, and the ontological analysis of concrete particulars, including problems of modality and persistence through time. (Formerly Contemporary Analytic Metaphysics.) Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. J. Bowin

123. Philosophy of Language. *

Current theories of the nature and preconditions of language, the nature of meaning, and the nature of truth. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. M. Hicks

125. Philosophy of Science. *

An examination of various topics that arise in thinking about science. Different philosophical problems, such as realism, instrumentalism, confirmation, explanation, space and time, and rational decision making are extensively discussed and criticized. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. R. Winther

126. Philosophy of Social Sciences. S

Examines philosophical concerns regarding the methods and assumptions of the social sciences. For example, must the methods of the social sciences differ in some important ways from those used by the natural sciences? Another issue concerns problems arising

from studying groups where the very notion of rationality appears to vary from culture to culture or over historical periods. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. P. Roth

127. Philosophy of Biology. *

Can developmental processes be reduced to gene expression? Does the history of life exhibit trends (e.g. increasing complexity)? How are we to understand key concepts such as "fitness," "species," "adaptation," and "gene?" Is there such a thing as human nature? Course surveys these and other core philosophical topics in the biological sciences. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. Enrollment limited to 39. (General Education Code(s): W.) R. Winther

133. Philosophy of Mind. W

Focuses on philosophical questions concerning the nature of mind. Central topics include the relation between mind and matter, and the nature of consciousness. Other topics typically explored include: artificial intelligence; animal consciousness and intelligence; and the relation between thought and language. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C, or by consent of instructor. N. Orlandi

135. Philosophy of Psychology. *

Looks at philosophical issues raised by current research on the nature of perception, cognition, and consciousness in psychology and cognitive science. Can there be a science of the mind? Could machines be conscious? Do animals have minds? How did the mind evolve? These and a host of related questions form the subject matter of this course. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C, or by consent of instructor. Enrollment restricted to sophomores, juniors, and seniors. R. Winther

137. Practical Rationality. *

Examines challenges to what has been a dominant understanding of practical rationality: the claim that reason can never guide action in itself; that acting against one's better judgment is necessarily irrational; that emotions disrupt rather than facilitate practical reasoning. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. The Staff

140. History of Ethics. *

A careful study of any one or a number of select primary texts in the history of moral philosophy, with some emphasis on the relation to contemporary issues. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. J. Dinishak

142. Advanced Ethics. *

An examination of central issues in ethical theory including the nature of and justification for the moral point of view, the place of reason in ethics, the status of moral principles, and the nature of moral experience. Prerequisite(s): course 9; course 22, 24, or 28, and course 100A or 100B or 100C. D. Guevara

143. Applied Ethics: Ethics Bowl. *

Intensive application of ethics through debate as preparation to participate in an Ethics Bowl competition. Students develop oral advocacy skills and are given the opportunity to compete for a position on the UCSC Ethics Bowl team. Enrollment by permission of instructor. Enrollment limited to 15. May be repeated for credit. K. Robertson

144. Social and Political Philosophy. *

A study of selected classical and contemporary writings dealing with topics such as the nature and legitimacy of the liberal state, the limits of political obligation, and theories of distributive justice and rights. (Also offered as Legal Studies 144. Students cannot receive credit for both courses.) Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C. Offered in alternate academic years. The Staff

147. Topics in Feminist Philosophy. *

Topics in feminist philosophy, which may include: the nature of feminist philosophy, feminist approaches to philosophical issues, social and political philosophy, theories of knowledge, ethics, aesthetics, and science, technology, and medicine studies. Presupposes

some familiarity with philosophy or feminist scholarship. (Also offered as Feminist Studies 168. Students cannot receive credit for both courses.) Prerequisite(s): course 9; and course 11 or 22 or 24; and course 100A or 100B or 100C. J. Hoy

148. The Holocaust and Philosophy. W

By using the historiography of the Holocaust as a case study, examines the epistemology and ontology of historical knowledge, i.e., how the past is known, and what about it there is to know. Prerequisite(s): course 9; and course 11 or 22 or 24; and course 100A or 100B or 100C. Enrollment restricted to juniors and seniors. P. Roth

152. Aesthetics. *

Problems about form, meaning, and interpretation in art, as found in major aesthetic theories from the philosophical tradition, and also in a variety of encounters between recent philosophy and the arts. Prerequisite(s): course 100A or 100B or 100C. (General Education Code(s): A.) S. Matherne

153. Philosophy of Race. *

Topics include conceptual-analytical and political-social issues. Selected topics may include: the ontology of race; race as real or constructed; scientific understandings of race; race and identity; and color-blind versus color-sensitive theories of justice and political policy. Prerequisite(s): course 9; course 11 or 22 or 24; course 100A or 100B or 100C; or consent of instructor. R. Winther

170. The Interpretation of Religion. *

A study of different philosophical responses to religious belief and practice, from the classical "proofs" of religion, to skeptical critiques of religious experience, to conceptual issues in the interpretation of religious texts. Prerequisite(s): course 9; and course 11 or 22 or 24; and course 100A or 100B or 100C. The Staff

171. Faith and Reason. F

Recent work in analytic philosophy of religion, concentrating on traditional theism. Topics include arguments for and against the existence of God, religious experience, miracles, the relation of faith and reason, and problems such as freedom and divine foreknowledge. Prerequisite(s): course 9; and course 11 or 22 or 24; and course 100A or 100B or 100C. R. Otte

180R. Readings in Philosophy (2 credits). *

Discussion-based course centered on readings in philosophy. Readings change each term and are a mixture of books, chapters from books, and articles. Prerequisite(s): One philosophy course. Enrollment by permission of instructor. Enrollment limited to 20. May be repeated for credit. R. Winther, R. Otte

190. Senior Seminar. F,W,S

Special topics. Format varies each quarter. Prerequisite(s): course 9; course 11 or 22 or 24; and two from courses 100A, 100B, and 100C. Enrollment restricted to senior philosophy majors and by permission of instructor. May be repeated for credit. (F) A. Stone, (F) J. Dinishak, (F) N. Orlandi, (W) R. Otte, (W) R. Winther, (S) J. Ellis, (S) S. Matherne

195A. Senior Essay. F,W,S

Preparation of senior essay (approximately 25 pages) during one quarter. Students submit petition to sponsoring agency. The Staff

195B. Senior Essay. F,W,S

Under exceptional circumstances, a second senior essay continuing the work of the first essay is permitted but only when the first senior essay has been completed. Students submit petition to sponsoring agency. The Staff

199. Tutorial. F,W,S

May be repeated for credit. The Staff

199F. Independent Study (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

202. Topics in Ancient Greek Philosophy. *

Topics will vary each quarter and will focus on some major ancient Greek philosophical figure or work. Enrollment restricted to philosophy graduate students. Enrollment limited to 20. J. Bowin

203. Autism. *

Explores autism and its implications for various fields of inquiry, especially philosophy. Previous familiarity with autism is not presupposed. Some background in philosophy of mind, cognitive science, and psychology recommended. Enrollment restricted to graduate students. Enrollment limited to 25. J. Dinishak

214. Probability and Confirmation. *

Studies the philosophical foundations of probability, induction, and confirmation. Different interpretations of probability studied, and solutions to various problems and paradoxes investigated. Enrollment restricted to graduate students. R. Otte

219. Intermediate Logic. *

Natural deduction and semantics of first order predicate logic. Metatheory, including completeness theorems for propositional and predicate logic. Prerequisite(s): course 9. Enrollment restricted to graduate students. (S) The Staff

222. Metaphysics. *

Advanced introduction to topics in 20th century and contemporary analytic metaphysics. Divided into five main parts dealing, respectively, with issues about the nature of existence, properties, time, change and persistence, and material constitution. Enrollment restricted to philosophy graduate students. J. Ellis, R. Winther, A. Stone

224. Philosophy of Language. *

Advanced introduction to issues in the philosophy of language—primarily concerning the nature of reference, meaning, and truth. Works from such 20th-century figures as Russell, Wittgenstein, Kripke, Lewis, and Putnam discussed. Topics include what it is for a sign or a bit of language to be meaningful, or for it to identify or represent something; what it is for a statement to be truthful; what it is to be a language; and how reference works when attributed to beliefs. Enrollment restricted to philosophy graduate students. M. Hicks

231. Metaphysics and Epistemology. *

Focuses on topic or topics in metaphysics and/or epistemology. May focus on topics such as perception, naturalized epistemology, probabilistic epistemology, theories of justification, a priori knowledge, and memory. Topics might include one or more of causation, possible worlds, identity, necessity, time, realism, universals, and existence. Enrollment restricted to philosophy graduate students. R. Otte

232. Advanced Topics in Value Theory. *

Considers topics central to philosophical questions about value: ethics, normativity, practical reason, relativism, skepticism, responsibility, motivation, emotion, and so forth. In some instances, the investigation will proceed through influential historical figures, ancient to modern. Enrollment restricted to philosophy graduate students. Enrollment limited to 22. D. Guevara

233. Seminar in Philosophy of Mind. *

A study of one or more topics in contemporary philosophy of mind. Enrollment restricted to graduate students. J. Ellis

235. Philosophy of Psychology. F

Looks at philosophical issues raised by current research on the nature of perception, cognition, and consciousness in psychology and cognitive science. Can there be a science of the mind? Could machines be conscious? Do animals have minds? How did the mind evolve? These and a host of related questions form the subject matter of this course. Prerequisite(s): One course in philosophy, psychology, or linguistics. Enrollment restricted to graduate students. J. Ellis

237. Making Up the Mind. *

How does the mind come to be a thing which science can study? Readings focus on how diagnostic categories, for example, multiple personality disorder, attain scientific cachet and what issues surround the "medicalization" of the mind. Enrollment restricted to graduate students. P. Roth

239. Philosophy of Religion. *

Investigation of various topics in philosophy of religion. Enrollment restricted to philosophy graduate students or by permission of instructor. Enrollment limited to 20. May be repeated for credit. R. Otte

252. Poststructuralism. *

French poststructuralism, with particular attention to the main philosophical texts of Jacques Derrida and Michel Foucault. Other representative theorists as well as critics of poststructuralism are studied as time permits. (Also offered as History of Consciousness 252. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. May be repeated for credit. R. Winther

270. Research Seminar. W

A research seminar to develop the skills of the profession with special focus on critical reading, constructing feedback, and philosophical research and writing. Must be completed by the third year. A substantial draft of a paper is required to enroll. Enrollment restricted to philosophy graduate students. Enrollment limited to 10. May be repeated for credit. R. Otte

280. Graduate Colloquia Course (2 credits). F,W,S

This colloquia series sponsors speakers each quarter. Students must attend all colloquia and are encouraged to form discussion groups after each lecture. Enrollment restricted to philosophy graduate students. The Staff

290A. Philosophy of History. S

Examines issues that arise with respect to constructing histories. *Inter alia*, these include: the traditional philosophy of history (e.g., Hegel and Marx); modes of explanation (including narrative); the reality of the past; and underdetermination in history.

Prerequisite(s): Enrollment restricted to graduate students. Enrollment limited to 10. P. Roth

290C. Advanced Topics in Ethics. *

Topics vary but the course focuses on major questions in contemporary ethical theory, or figures influential on contemporary moral philosophy. Examines different foundational ethical principles and arguments for those principles, contrasting accounts of moral action and moral motivation, as well as the epistemological and motivational role of emotions in ethical theory. (Formerly Advanced Topics in Contemporary Ethics.) Enrollment restricted to philosophy graduate students. D. Guevara

290F. Topics in Philosophy of Biology. *

Philosophy of biology is one of the fastest-growing areas of philosophy of science. Course is designed to give seniors and graduate students an overview of many of the diverse topics currently under discussion in modern philosophy of biology and provide a foundation for further research, regardless of previous experience with the biological sciences. Enrollment restricted to graduate students. May be repeated for credit. R. Winther

290H. Environmental Ethics. W

What is our proper moral stance toward the natural environment? This question encompasses our ethical relations to individual non-human animals, to other species of living beings, and toward the biotic community as a whole. It leads us to consider the broader question: What makes anything at all worthy of our moral respect or even our moral consideration? How are we to understand the very idea of the environment, the distinction between the human world, and the natural world, and the relationships between them. Enrollment restricted to graduate students. D. Guevara

290J. Advanced Topics in the History of Ethics. *
Careful study of any one of the main moral theories in the history of philosophy, with some emphasis on the relation to contemporary moral philosophy. Enrollment restricted to graduate students. D. Guevara

290K. Philosophical Matters of Scientific Practice. *
Considers the relevance of philosophical matters to the practice of science. Using quantum physics as a case study, explores historical and contemporary perspectives on issues such as those raised by the Schrodinger cat paradox, Bell's inequalities, and quantum erasers. Enrollment restricted to graduate students. K. Barad, R. Winther

290P. Major Figures in Contemporary Philosophy. F
Focuses on philosophical writings and significance of a single figure in contemporary (20th- and 21st-century) philosophy. May include, but not be limited to, Russell, Whitehead, Wittgenstein, Husserl, Carnap, Murdoch, Quine, Irigaray, Derrida, and Davidson. Enrollment restricted to philosophy graduate students. May be repeated for credit. S. Matherne

290Q. Philosophy of Mathematics. *
Introduction to the problems of contemporary analytic philosophy of mathematics. Do mathematical objects exist? Are mathematical statements true? How can we know? We will examine the historical background to contemporary debates and the positions which have been taken within them. Enrollment restricted to graduate students. R. Winther, A. Stone

290S. Topics in the Philosophy of Science. *
An examination of a topic in current philosophy of science. The material for the course is chosen from topics such as realism and instrumentalism, scientific explanation, space and time, the confirmation of theories, laws of nature, and scientific abstraction. Enrollment restricted to graduate students. R. Winther

290W. History of Consciousness. *
Historical study of philosophical theories of consciousness and self-consciousness. Problems include the relation of self and other, consciousness and body, and self-consciousness and ethical agency. Readings are from Kant, Hegel, Nietzsche, and Heidegger, followed by phenomenologists, poststructuralists, and analytic philosophy. Enrollment restricted to graduate students. R. Winther

294. Teaching-Related Independent Study. F,W,S
Directed graduate research and writing coordinated with the teaching of undergraduates. May be repeated for credit. The Staff

295. Directed Reading. F,W,S
Directed reading which does not involve a term paper. May be repeated for credit. The Staff

295F. Readings in Philosophy (2 credits). F,W,S
Focuses on selected philosophical areas and/or specific philosophers. Students meet with the instructor to discuss readings and deepen their knowledge on a particular subject. Enrollment restricted to graduate students. May be repeated for credit. The Staff

296. Special Student Seminar. F,W,S
A seminar for graduate students arranged between students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297. Independent Study. F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff

297F. Independent Study (2 credits). F,W,S
Students submit petition to course sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S
Enrollment restricted to students who have advanced to candidacy. May be repeated for credit. The Staff



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Lower-Division Courses

5A. Aquatics: Swimming Level I (no credit). F,W,S

Coeducational. Water exploration and primary skills development. Course is designed to teach only "non-swimmers" how to swim. The following is taught: Red Cross swimming instruction in overcoming fears, water adjustment, floating, breath holding, and rhythmic breathing. Skills to be learned are: water entries, sculling, treading, elementary backstroke, freestyle, methods of water safety, and survival techniques. Students pay a course fee.

Prerequisite(s): instructor determines skill level at first class meeting. Enrollment limited to 15. J. Kimball, The Staff

5B. Aquatics: Swimming Level II (no credit). F,W,S

Coeducational. Stroke readiness and development. Course is for those who have completed Swimming Level I or who can swim freestyle and demonstrate elementary backstroke. Skills to be learned are underwater swimming, turns, improvement of freestyle and elementary backstroke, beginning side stroke, backstroke, breaststroke, diving, personal safety skills, and basic rescue techniques. Prerequisite(s): instructor determines skill level at first class meeting: pass Swimming Level I course or demonstrate equivalent skills. Students pay a course fee. Enrollment limited to 20. The Staff, J. McCallum, J. Kimball

5C. Aquatics: Swimming Level III (no credit). F,W,S

Coeducational. Stroke refinement and skill proficiency. Course teaches refinement of basic strokes and introduces butterfly, plus backstroke, surface diving, turns, endurance swimming, and survival techniques. Students pay a course fee. Prerequisite(s): instructor determines skill level at first class meeting: pass in Swimming Level II course or possess equivalent skills in freestyle, sidestroke, elementary backstroke, and breaststroke. Enrollment limited to 30. J. McCallum, The Staff

5D. Aquatics: Swimming Level IV (no credit). F,W,S

Coeducational. Advanced skills. Designed to perfect the techniques and skills of all basic strokes plus butterfly, surface dives, survival swimming, basic diving, endurance swimming, and personal and rescue skills. Students pay a course fee. Prerequisite(s): pass in Swimming Level III course or possess equivalent swimming skill requirements in freestyle, backstroke, sidestroke, or competitive swimming; instructor determines skill level. Enrollment limited to 30. J. McCallum, The Staff

5E. Aquatics: Lifeguard Training (LT) (no credit). F,S

Red Cross certified lifeguard training. Provides the necessary minimum skills training to qualify as a non-surf lifeguard. Certification includes CPR Pro, AED, PDT, D2, ADMIN, and

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Title 22 First Aid. Candidates must successfully pass final skill tests and written final exam with 80 percent score. Students pay a course fee. Prerequisite(s): must have ability to swim 500 yards in ten minutes, tread water for one minute, strong swimming skills in free, back, breast, side, and elementary backstroke; must purchase Red Cross LT text book. Enrollment limited to 10. K. Musch, J. McCallum

5F. Water Safety Instructor (WSI) (no credit). S

Coeducational. A Red Cross course designed to certify students who complete all required work as swimming instructors. Instruction in teaching techniques, stroke analysis, skilled swimming, class organization, pool safety, and pool maintenance. Practice teaching assignments outside of class with practical and written final exams. Screening test given at first class meeting. Prerequisite(s): must be 17 years old, possess valid ARC Instructor Candidate Training card (ICT), and ARC swimmers-level skills. (Emergency Water Safety (EWS), or Lifeguard Training (LT) certificate is highly recommended). Students pay a course fee. Enrollment limited to 10. K. Musch, J. McCallum

5G. Aquatics: Swimming/Conditioning (no credit). F,W,S

Open to all students who wish to explore swimming as a conditioning and fitness exercise. Students should know three competitive strokes, and should be able to swim fifteen minutes without stopping. Short health and fitness lectures precede some classes. Students pay a course fee. Prerequisite(s): instructor determination at first class meeting. Enrollment limited to 40. The Staff, K. Musch, J. McCallum

5H. Aquatics: Competitive Swimming (no credit). W

Emphasis on competitive swimming and conditioning techniques. For students who want instruction at the competitive level of swimming. Three hours per week. Students pay a course fee. Prerequisite(s): instructor determination at first class meeting. Enrollment limited to 50. K. Musch

5R. Aquatics: Basic Scuba Diving (no credit). F,W,S

Coeducational. Sections geared toward the successful completion of NAUI Scuba Diver Certification. The course is divided into three parts: lecture, pool lab, and open water experience. Four open water training dives are offered. Emphasis is on training for open water scuba diving, using the beach as a base of operation. Students pay a course fee. Prerequisite(s): pass swimming skills tests and medical clearance. It is strongly recommended that students enroll in course 5S. Enrollment limited to 24. C. Shin

5S. Aquatics: Advanced Scuba Diving (no credit). F,W,S

Coeducational. Sections are offered to facilitate the development of the basic scuba diver's open water techniques. A minimum of six open water experiences is offered. Course is geared toward successful completion of NAUI Advanced Scuba Diver Certification. Students pay a course fee. Prerequisite(s): course 5R or pass swimming skills test and medical clearance. (Formerly course 5T.) Enrollment limited to 25. C. Shin

5T. Scuba Rescue Diving (no credit). F,W,S

Coeducational. Course geared toward the successful completion of NAUI Rescue Diver Certification. Course consists of lecture, pool laboratory, and open-water experience. Emphasis is on training divers to manage risks and effectively handle limited in-water problems. Students pay a course fee. Prerequisite(s): Scuba certification and medical clearance. Enrollment limited to 10. C. Shin

9B. Boating: Beginning Dinghy Sailing (no credit). F,W,S

Coeducational. Introductory course in practical boating safety using 15-foot sailboats. Includes introduction to rigging, nomenclature, seamanship, proper boat-handling techniques, and general boating and aquatic safety. Satisfactory completion meets prerequisites for intermediate-level dinghy course. Students pay a course fee. Prerequisite(s): swimming ability. (Formerly Boating: Basic Sailing) Enrollment limited to 18. H. Scheer, R. Kingon

9C. Boating: Intermediate Dinghy Sailing (no credit). F,W,S

Coeducational. Course includes a review of basic sailing with an emphasis on the further development and refinement of small-boat sailing techniques. Fifteen-foot sailboats are used with two students per boat. Students pay a course fee. Prerequisite(s): course 9B or equivalent skills. Enrollment limited to 16. H. Scheer, R. Kingon

<p>Management</p> <p>UCDC Program</p> <p>Writing Program</p> <p>Theater Arts</p> <p>Yiddish</p> <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>9D. Boating: Advanced Dinghy Sailing (no credit). F,W,S Coeducational. For students interested in high-performance sailing using Flying Juniors and Coronado 15s. Includes special techniques used in racing conditions. Students pay a course fee. Prerequisite(s): course 9C or equivalent skills. Enrollment limited to 12. H. Scheer, R. Kingon</p> <p>9H. Boating: Basic Rowing (no credit). F,W,S Coeducational. Course designed to cover types of rowing boats, nomenclature, fundamental skills, and specific safety and rescue aspects related to the activity. Students will row singly as well as in groups using 15-foot to 22-foot rowing dories. (Formerly course 9J.) Students pay a course fee. Prerequisite(s): swimming ability. Enrollment limited to 12. R. Kingon</p> <p>9J. Boating: Intermediate Rowing (no credit). F,W,S Coeducational intermediate course designed to cover more advanced rowing techniques and the skills needed for safe open water rowing. Students pay a course fee. Prerequisite(s): basic rowing or permission of instructor. (Formerly course 9H.) Enrollment limited to 11. R. Kingon, The Staff</p> <p>9K. Boating: Ocean Kayaking (no credit). F,S Co-educational course that teaches novice kayakers the skills to safely use UCSC kayaks in the Monterey Bay. Topics include: basic paddling strokes and maneuvers; self and assisted deep-water rescues; beach launching; landing through surf; and marine hazards and navigation. Students pay a course fee. Enrollment limited to 12. R. Kingon, D. Johnston</p> <p>9S. Boating: Beginning Keelboat Sailing (no credit). F,W,S Coeducational. Combines hands-on rigging and docking practice in the harbor and sailing practice on Monterey Bay with instruction in sail-trimming, de-powering, powering-up, person-overboard recovery techniques, boating safety, weather, ocean conditions, sailing theory, rigging, navigation, and the maritime rules of the road. Twenty-seven foot, ultralight, displacement keelboats are used. Students pay a course fee. (Formerly Boating: Intermediate Keelboat Sailing.) Prerequisite(s): course 9C or equivalent skills. Enrollment limited to 16. H. Scheer, R. Kingon</p> <p>9T. Boating: Intermediate Keelboat Sailing (no credit). F,S Coeducational. Further development and refinement of boat-handling techniques, including advanced maneuvering, anchoring, and racing with an introduction to the use of spinnakers. Students pay a course fee. (Formerly Boating: Advanced Keelboat Sailing.) Prerequisite(s): course 9S. Enrollment limited to 12. H. Scheer, R. Kingon</p> <p>9X. Boating: Advanced Keelboat Sailing (no credit). F,W,S Coeducational. Designed for the experienced sailor who desires to bareboat larger vessels in the future. Topics include: ocean navigation; anchoring techniques; boat systems, such as diesel engines; boat plumbing and electronics; and docking. Prerequisite(s): course 9T and 40 or more hours of club keelboat usage. Enrollment by permission of instructor. Students pay a course fee. Enrollment limited to 4. H. Scheer, R. Kingon</p> <p>15B. Court Sports: Basketball (no credit). F,W,S Coeducational. Instruction in fundamentals, offensive and defensive strategies, rules, and conditioning designed primarily for beginning and intermediate level players. Students pay a course fee. Enrollment limited to 20. The Staff</p> <p>15H. Court Sports: Racquetball (no credit). F,W,S Coeducational. The beginning section provides an introduction to the basic knowledge and skills involved in this indoor racquet sport. The advanced beginning section continues the development of the basic skills emphasizing increased shot variety and advanced strategy. The intermediate section offers the opportunity for further skill development and introduces more advanced offensive skills. Students pay a course fee. Enrollment limited to 18. The Staff, C. George, J. Bardos</p> <p>15N. Court Sports: Tennis (no credit). F,W,S Coeducational. The beginning section introduces the basics of forehand, backhand, and serve. Advanced beginning section reviews these basics and introduces the volley, overhead, and lob. The intermediate section reviews all stroke mechanics and covers basic singles and doubles strategy. The advanced section includes use of spins, practice</p>
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principles, detailed stroke analysis, and advanced play situations. Competitive Tennis is a year-long program for members of the intercollegiate tennis teams. Students pay a course fee. Enrollment limited to 24. The Staff

15T. Court Sports: Volleyball (no credit). F,W,S

Coeducational. Beginning/intermediate, intermediate, and advanced sections are offered for students who desire to learn and improve the basic skills, as well as to understand the rules. Competitive section is open to students interested in participation in the UCSC NCAA Women's Volleyball team. It covers information and practice in all aspects of the competitive volleyball season. Students pay a course fee. Enrollment limited to 25. T. Hollenbeck, The Staff

20A. Dance: Ballet (no credit). F,W,S

Coeducational. Sections offered at various technical levels graded from I to III. Emphasis on principles of movement, style, and execution of ballet technique. Section in ballet repertoire where advanced students have the opportunity to perform is offered in the spring quarter. Students pay a course fee. L. Norris, The Staff

20B. International Folk Dance (no credit). F,W,S

Coeducational. International folk dance with an emphasis on Balkan and Israeli dances. Sections are also offered periodically in Mexican dance. Students pay a course fee. R. Cochlin

20C. Dance: Jazz (no credit). F,W,S

Coeducational. Sections offered at various technical levels graded from I to III. Exploration of jazz dance emphasizing basic technique, styling, rhythm, and isolations. Jazz and contemporary music is used as accompaniment. Some background in ballet strongly recommended before continuing to Jazz II or III. Section in jazz dance repertoire where advanced students have the opportunity to perform is offered in spring quarter. Students pay a course fee. Enrollment limited to 40. L. Norris, The Staff

20D. Dance: Modern (no credit). F,W,S

Coeducational. Sections offered at various technical levels graded from I to III. Emphasis on basic techniques and building phrases of movement. Section in choreography and improvisation offered in spring quarter. Section in dance repertoire offered periodically. Students pay a course fee. R. Cochlin, The Staff

20F. Dance: Individual Studies in Dance (no credit). F,W,S

Coeducational. Designed to give students the opportunity of pursuing their particular interests in the field of dance with the support and direction of a faculty member. Prerequisite(s): instructor determination at first class meeting. L. Norris, R. Cochlin

25A. Fencing: Epee (no credit). F,W,S

Coeducational. Basic instruction in the techniques, strategy, and general methodology of modern fencing. Emphasis on épée fencing as a development from the traditional French and Italian dueling sword styles as they have evolved to form the modern electrical game. Students pay a course fee. The Staff

25B. Fencing: Foil (no credit). F,W,S

Coeducational. Instruction in modern competitive French-Italian foil techniques for beginning, intermediate, and advanced levels. Emphasis on physical and mental conditioning leading to improved skill in recreational and competitive areas of involvement. Students pay a course fee. The Staff

25C. Fencing: Sabre (no credit). F,W,S

Coeducational. Instruction and practice in basic offensive and defensive skills of modern Hungarian sabre technique. Emphasis on physical and mental conditioning as a foundation for more advanced levels of instruction. Preparation for recreational and competitive involvement. Students pay a course fee. The Staff

28K. Field Sports: Soccer (no credit). F,W,S

Coeducational/Women's. Sections are offered in field soccer and indoor soccer. Instruction in the basic techniques, tactics, laws of the game, and injury prevention for beginners and advanced players. Students pay a course fee. Prerequisite(s): determination at first class meeting. M. Runeare, The Staff

30G. Fitness Activities: Physical Conditioning (no credit). F,W,S

Coeducational. An exercise course designed to increase the participants' strength, flexibility, coordination, and cardiovascular endurance. Special attention is given to understanding and utilizing sound and safe principles of body alignment and movement. Courses include, but not limited to: Pilates, cardio boxing, stretch and strengthen, and aerobics. Students pay a course fee. The Staff, R. Cochlin, C. Mori

30H. Fitness Activities: T'ai Chi Ch'uan (no credit). F,W,S

Through balanced movement and breath control, T'ai Chi Ch'uan attempts to forestall many processes of aging by cultivating greater strength of body, mind, and spirit. Students pay a course fee. The Staff

30J. Fitness Activities: Strength Training (no credit). F,W,S

Coeducational. An introduction to safe and effective methods of weight training and other personal conditioning activities. Topics covered include proper weight-training techniques, care of body and equipment, and elementary exercise physiology. Students pay a course fee. (Formerly Fitness Activities: Weight Training.) C. Mori, The Staff

30L. Fitness Activities: Yoga Exercises (no credit). F,W,S

Coeducational. Sections offered at beginning, continuing beginning, and advanced beginning levels of Hatha Yoga. Students pay a course fee. The Staff, R. Cochlin, C. Mori, J. Kimball

30N. Self-Defense Basics (no credit). S

Self-defense is a simple, effective approach to maximize personal safety requiring no prior skill, knowledge, or physical fitness. Practice includes basic physical and verbal assertiveness skills appropriate for a wide range of situations including acquaintance and stranger assaults. Physical conditioning is an integral part of the course. (Formerly Women's Self-Defense.) The Staff

43A. Martial Arts: Aikido (no credit). F,W,S

Coeducational. A nonviolent, noncompetitive Japanese martial art emphasizing mind-body harmony, balance, relaxation, and the understanding of vital energy. Aikido self-defense techniques aim toward the creative resolution of conflict and the growth of the individual. Sections offered at beginning and experienced levels. Students pay a course fee. Y. Shibata

43G. Martial Arts: Tae Kwon Do (no credit). F,W,S

Coeducational. Sections offered at the beginning and intermediate/advanced levels. Covering basic skills, knowledge, and philosophy of Tae Kwon Do and providing instruction in the following aspects of martial arts study: fundamental techniques of self-defense, physical conditioning, emotional control, self-discipline, and self-confidence. Students pay a course fee. (Formerly Martial Arts: Tae Kwon Do (Karate).) Enrollment limited to 35. The Staff

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2014–15 General Catalog

211 Interdisciplinary Sciences Building

(831) 459-3744

<http://physics.ucsc.edu/>

[Faculty | Program Statement](#)

Lower-Division Courses

1. Conceptual Physics. S

Topics in classical and quantum physics and their relation to physical phenomena in the world around us, including modern electronics. Concepts are stressed, but some practical calculational techniques are developed. Working knowledge of high school algebra and geometry is essential. (General Education Code(s): SI, IN, Q.) G. Laughlin

2. Elementary Physics of Energy. W

The physics of energy developed in a course accessible to non-science majors as well as science majors. Fundamental principles and elementary calculations, at the level of basic algebra, developed and applied to the understanding of the physics of energy. Topics include fossil fuels, renewable energy, solar cells and waste energy, waste-energy recovery, nuclear power, and global greenhouse effects. (General Education Code(s): PE-E.) S. Carter

5A. Introduction to Physics I. F

Elementary mechanics. Vectors, Newton's laws, inverse square force laws, work and energy, conservation of momentum and energy, and oscillations. Prerequisite(s): concurrent enrollment in course 5L and Mathematics 19A or 20A is required. Enrollment restricted to biochemistry and molecular biology, chemistry, Earth sciences, engineering, and physics majors, minors, and proposed majors. (General Education Code(s): MF, IN, Q.) J. Nielsen

5B. Introduction to Physics II. W

A continuation of 5A. Wave motion in matter, including sound waves. Geometrical optics, interference and polarization, statics and dynamics of fluids. Prerequisite(s): courses 5A/L and Mathematics 19A or 20A; concurrent enrollment in course 5M is required. Corequisite: Mathematics 19B or 20B. (General Education Code(s): SI, IN.) G. Gweon

5C. Introduction to Physics III. S

Introduction to electricity and magnetism. Electromagnetic radiation, Maxwell's equations. Prerequisite(s): courses 5A/L and Mathematics 19B or 20B. Concurrent enrollment in course 5N is required. (General Education Code(s): SI, IN.) A. Sher

5D. Introduction to Physics IV. F

Introduces temperature, heat, thermal conductivity, diffusion, ideal gases, laws of thermodynamics, heat engines, and kinetic theory. Introduces the special theory of relativity and the equivalence principle. Includes the photoelectric effect, the Compton effect, matter waves, atomic spectra, and the Bohr model. (Formerly Heat,

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
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■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Thermodynamics, and Kinetics) Prerequisite(s): courses 5A/L or 6A/L and Mathematics 19B or 20B. T. Jeltema

5I. Introduction to Physics Honors I (2 credits). *

Weekly 90-minute section covering advanced and modern topics. Topics may include the theory of relativity; complicated dynamics (air resistance, planetary dynamics, etc.); fallacies in perpetual-motion machines; the Euler disk and unusual tops; elasticity of materials applied to structures. Concurrent enrollment in course 5A is required. M. Dine

5J. Introduction to Physics Honors II (2 credits). *

Weekly 90-minute section covering advanced and modern topics. Topics may include nonlinear oscillators and chaos; waves in deep water and inside the earth; redshift in astronomy; negative refractive index materials; photons and matter waves; holography; viscosity; and turbulence. Concurrent enrollment in course 5B is required. M. Dine

5K. Introduction to Physics Honors III (2 credits). *

Weekly 90-minute section covering advanced and modern topics. Topics may include atmospheric electricity; shielding; tensor polarization; alternative energy sources; semiconductor devices; particle accelerators and relativistic electrodynamics; Thomson scattering; digital and analog communication. Concurrent enrollment in course 5C is required. The Staff

5L. Introduction to Physics Laboratory (1 credit). F

Laboratory sequence illustrating topics covered in course 5A. One three-hour laboratory session per week. Prerequisite(s): concurrent enrollment in course 5A is required. The Staff

5M. Introduction to Physics Laboratory (1 credit). W

Laboratory sequence illustrating topics covered in course 5B. One three-hour laboratory session per week. Prerequisite(s): courses 5A/L; concurrent enrollment in course 5B is required. The Staff

5N. Introduction to Physics Laboratory (1 credit). S

Laboratory sequence illustrating topics covered in course 5C. One three-hour laboratory session per week. Prerequisite(s): courses 5A/L. Concurrent enrollment in 5C is required. Courses 5B/M recommended. The Staff

6A. Introductory Physics I. F,W,S

Elementary mechanics. Vectors, Newton's laws, inverse square force laws, work and energy, conservation of momentum and energy, and oscillations. Prerequisite(s): Concurrent enrollment in course 6L required. Corequisite(s): Mathematics 11A or 19A or 20A or Applied Mathematics and Statistics 15A. (General Education Code(s): MF, IN, Q.) (S) D. Smith, (FW) A. Steinacker

6B. Introductory Physics II. W,S

A continuation of 6A. Geometric optics; statics and dynamics of fluids; introduction to thermodynamics, including temperature, heat, thermal conductivity, and molecular motion; wave motion in matter, including sound waves; introduction to electricity and magnetism. Prerequisite(s): course 5A/L or 6A/L; and Mathematics 11A or 19A or 20A or Applied Mathematics and Statistics 15A . Corequisite(s): Mathematics 11B or 19B or 20B. (General Education Code(s): SI, IN.) (W) A. Sher, (S) Z. Schlesinger, (S) B. Schumm

6C. Introductory Physics III. F,S

Introduction to electricity and magnetism. Elementary circuits; Maxwell's equations; electromagnetic radiation; interference and polarization of light. Prerequisite(s): courses 5A/L or 6A/L, and Mathematics 11B or 19B or 20B or Applied Mathematics and Statistics 15B. (General Education Code(s): SI, IN.) (F) J. Deutsch, (S) A. Steinacker

6L. Introductory Physics Laboratory (1 credit). F,W,S

Laboratory sequence illustrating topics covered in course 6A. One three-hour laboratory session per week. Prerequisite(s): Previous or concurrent enrollment in course 6A required. The Staff

6M. Introductory Physics Laboratory (1 credit). W,S

Laboratory sequence illustrating topics covered in course 6B. One three-hour laboratory session per week. Prerequisite(s): courses 5A, 6A, or 7A and 5L, 6L or 7L; and previous or concurrent enrollment in course 6B. The Staff

Management UCDC Program Writing Program Theater Arts Yiddish	<p>6N. Introductory Physics Laboratory (1 credit). F,S Laboratory sequence illustrating topics covered in course 6C. One three-hour laboratory session per week. Prerequisite(s): courses 6A and 6L; previous or concurrent enrollment in course 6C; courses 6B and 6M are recommended. The Staff</p> <p>11. The Physicist in Industry (2 credits). W One two-hour meeting per week. Subjects include roles of the physicist in industry, the business environment in a technical company, economic considerations, job hunting, and discussions with physicists with industrial experience. Enrollment by permission of instructor. Priority given to applied physics upper-division students; other majors if space available. Enrollment limited to 15. The Staff</p> <p>42. Student-Directed Seminar. Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff</p> <p>99. Tutorial. F,W,S Students submit petition to sponsoring agency. The Staff</p>
Teaching and Administrative Staff	<h2>Upper-Division Courses</h2>
Appendices	<p>102. Modern Physics. W Topics in quantum physics including the Schrodinger equation; angular momentum and spin; the Pauli exclusion principle; and quantum statistics. Applications in multi-electron atoms and molecules, and in solid-state, nuclear, and particle physics. Prerequisite(s): courses 5A/L, and 5B/M, and 5C/N and 5D; or 6A/L, and 6B/M, and 5D; or equivalent. D. Belanger</p>
Archive of General Catalogs	<p>105. Mechanics. F Particle dynamics in one, two, and three dimensions. Conservation laws. Small oscillations, Fourier series and Fourier integral solutions. Phase diagrams and nonlinear motions, Lagrange's equations, and Hamiltonian dynamics. Prerequisite(s): courses 5A/L and 116A-B. G. Gweon</p>
Nondiscrimination Statement	<p>107. Introduction to Fluid Dynamics. F Covers fundamental topics in fluid dynamics: Euler and Lagrange descriptions of continuum dynamics; conservation laws for inviscid and viscous flows; potential flows; exact solutions of the Navier-Stokes equation; boundary layer theory; gravity waves. Students cannot receive credit for this course and Applied Mathematics and Statistics 217. (Also offered as Applied Math and Statistics 107. Students cannot receive credit for both courses.) Prerequisite(s): Mathematics 107 or Physics 116C or Earth and Planetary Sciences 111. The Staff</p>
Search the Catalog	<p>110A. Electricity, Magnetism, and Optics. W Maxwell's equations, electrostatics, magnetostatics, induction, electromagnetic waves, physical optics, and circuit theory. Prerequisite(s): 116A-B-C. S. Ritz</p> <p>110B. Electricity, Magnetism, and Optics. S Maxwell's equations, electrostatics, magnetostatics, induction, electromagnetic waves, physical optics, and circuit theory. Prerequisite(s): courses 110A and 116C. G. Gweon</p>
	<p>112. Thermodynamics and Statistical Mechanics. W Consequences of the first and second laws of thermodynamics, elementary statistical mechanics, thermodynamics of irreversible processes. Prerequisite(s): course 5D, and course 116C or Applied Mathematics and Statistics 5 or Mathematics 23A/B. Concurrent enrollment in course 101B or 102 or 116A is required. R. Johnson</p>
	<p>115. Computational Physics. S This course will apply efficient numerical methods to the solutions of problems in the physical sciences which are otherwise intractable. Examples will be drawn from classical mechanics, quantum mechanics, statistical mechanics, and electrodynamics. Students will apply a high-level programming language, such as Mathematica, to the solution of physical problems and develop appropriate error and stability estimates. Prerequisite(s): courses 101B or 102, and 105 and 116A-B-C, or equivalent. Basic programming experience in C or Fortran. No previous experience with Mathematica is required. O. Narayan</p>

- 116A. Mathematical Methods in Physics. W
Infinite series, power series and asymptotic series, complex numbers and complex functions, topics in linear algebra including vector spaces, matrices and determinants, systems of linear equations, eigenvalue problems and matrix diagonalization, tensor algebra, asymptotic expansions, and special functions defined by integrals.. Prerequisite(s): Mathematics 23A and 23B. T. Jeltema
- 116B. Mathematical Methods in Physics. S
Fourier series and transforms, ordinary differential equations, calculus of variations, and functions of a complex variable. Prerequisite(s): course 116A and Mathematics 23A and 23B. M. Dine
- 116C. Mathematical Methods in Physics. F
Series solutions of ordinary equations, Legendre polynomials, Bessel functions, sets of orthogonal functions, partial differential equations, probability and statistics. Prerequisite(s): courses 116A-B and Mathematics 23A and 23B. A. Aguirre
120. Polymer Physics. *
Statistical properties polymers; scaling behavior, fractal dimensions; random walks, self avoidance; single chains and concentrated solutions; dynamics and topological effects in melts; polymer networks; sol-gel transitions; polymer blends; application to biological systems; computer simulations will demonstrate much of the above. Students cannot receive credit for this course and course 240. Prerequisite(s): courses 112 and 116B. Offered in alternate academic years. J. Deutsch
129. Nuclear and Particle Astrophysics. *
The standard model of particle physics; general relativistic cosmology; the early universe and Big Bang nucleosynthesis; dark matter and structure formation; formation of heavy elements in stars and supernovae; neutrino oscillations; high-energy astrophysics: cosmic rays and gamma-ray astronomy. (Formerly Nuclear and Particle Physics.) Prerequisite(s): courses 5D, and 101B or 102, and Mathematics 23B; students with equivalent course work may contact instructor for permission to enroll. Offered in alternate academic years. The Staff
133. Intermediate Laboratory. F,W
Demonstration of phenomena of classical and modern physics. Development of a familiarity with experimental methods. Special experimental projects may be undertaken by students in this laboratory. Prerequisite(s): course 101A or 102. (General Education Code(s): SR.) (F) S. Carter, (W) B. Schumm
134. Physics Advanced Laboratory. W,S
Individual experimental investigations of basic phenomena in atomic, nuclear, and solid state physics. Prerequisite(s): courses 133, and 101B or 102. May be repeated for credit. (W) J. Nielsen, (S) D. Smith
135. Astrophysics Advanced Laboratory. *
Introduction to the techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Offered in some academic years as a multiple-term course: 135A in fall and 135B in winter, depending on astronomical conditions. (Also offered as Astronomy and Astrophysics 135. Students cannot receive credit for both courses.) Prerequisite(s): course 133 and at least one astronomy course. Intended primarily for juniors and seniors majoring or minoring in astrophysics. The Staff
- 135A. Astrophysics Advanced Laboratory (3 credits). F
Introduction to techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Intended primarily for juniors and seniors majoring or minoring in astrophysics. Offered in some academic years as single-term course 135 in fall, depending on astronomical conditions. (Also offered as Astronomy and Astrophysics 135A. Students cannot receive credit for both courses.) Prerequisite(s): course 133 and at least one astronomy course. G. Brown
- 135B. Astrophysics Advanced Laboratory (2 credits). W
Introduction to techniques of modern observational astrophysics at optical and radio wavelengths through hands-on experiments. Intended primarily for juniors and seniors majoring or minoring in astrophysics. Offered in some academic years as single-term

course 135 in fall, depending on astronomical conditions. (Also offered as Astronomy and Astrophysics 135B. Students cannot receive credit for both courses.) Prerequisite(s): course 133 and at least one astronomy course. G. Brown

136. Advanced Astronomy Laboratory. S

Introduces the techniques of modern observational astrophysics at optical wavelengths through hands-on experiments and use of remote observatories. Students develop the skills and experience to pursue original research. Course is time-intensive and research-oriented. Prerequisite(s): Earth Sciences 119 and Physics 133. Enrollment restricted to junior and senior astrophysics majors. Enrollment limited to 12. J. Prochaska

139A. Quantum Mechanics. S

The principles and mathematical techniques of nonrelativistic quantum mechanics: the Schrödinger equation, Dirac notation, angular momentum, approximation methods, and scattering theory. Offered in spring. Prerequisite(s): courses 101B or 102, and 116A-B-C. R. Johnson

139B. Quantum Mechanics. F

The principles and mathematical techniques of nonrelativistic quantum mechanics: the Schrödinger equation, Dirac notation, angular momentum, approximation methods, and scattering theory. Offered in fall. Prerequisite(s): courses 101B or 102, and 139A and 116ABC. M. Dine

143. Supervised Teaching (2 credits). *

Supervised tutoring in selected introductory courses. Students should have completed course 101A and 101B as preparation. Students submit petition to sponsoring agency. The Staff

152. Optoelectronics. *

The first half of the course covers the theory of optoelectronics including wave, electromagnetic, and photon optics, modulation of light by matter, and photons in semiconductors. The second half covers applications including displays, lasers, photodetectors, optical switches, fiber optics, and communication systems. Prerequisite(s): courses 101B or 102, and 110A. The Staff

155. Solid State Physics. W

Interatomic forces and crystal structure, diffraction, lattice vibrations, free electron model, energy bands, semiconductor theory and devices, optical properties, magnetism, magnetic resonance, superconductivity. Prerequisite(s): courses 112 and 139A; students with equivalent course work may contact instructor for permission to enroll. Z. Schlesinger

156. Applications of Solid State Physics. S

Emphasizes the application of condensed matter physics to a variety of situations. Examples chosen from subfields such as semiconductor physics, lasers, superconductivity, low temperature physics, magnetism, and defects in crystals. Prerequisite(s): courses 101B or 102. Z. Schlesinger

160. Practical Electronics. *

Provides a practical knowledge of electronics that experimentalists generally need in research. The course assumes no previous knowledge of electronics and progresses according to the interest and ability of the class. Based on weekly lectures. However, with the aid of the instructor, the students are expected to learn mainly through the design, construction, and debugging of electronics projects. Students are billed a materials fee. Prerequisite(s): courses 5C and 5N or 6C and 6N. The Staff

171. General Relativity, Black Holes, and Cosmology. F

Special relativity is reviewed. Curved space-time, including the metric and geodesics, are illustrated with simple examples. The Einstein equations are solved for cases of high symmetry. Black-hole physics and cosmology are discussed, including recent developments. (Also offered as Astronomy and Astrophysics 171. Students cannot receive credit for both courses.) Prerequisite(s): courses 105, 110A, 110B, and 116A/B. H. Haber

180. Biophysics. S

Physical principles and techniques used in biology: X-ray diffraction; nuclear magnetic resonance; statistics, kinetics, and thermodynamics of macromolecules; viscosity and diffusion; DNA/RNA pairing; electrophoresis; physics of enzymes; biological energy

conversion; optical tweezers. (Also offered as Biology: Molecular Cell & Dev 140. Students cannot receive credit for both courses.) Prerequisite(s): course 112; students who have a biochemistry background may contact instructor for permission. Enrollment restricted to juniors and seniors. (General Education Code(s): PR-E.) J. Deutsch

182. Scientific Communication for Physicists. F,W

Explores the communication of physics to a wide range of audiences, including writing articles from the popular to the peer-reviewed level; critically analyzing the communication of scientific discoveries in the media; structuring the physics senior thesis; writing grant applications; assembling a personal statement for job and graduate school application; and assembling and critiquing oral presentations. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to junior and senior majors in physics, astrophysics, applied physics, or physics education. Enrollment limited to 35. (General Education Code(s): W.) (F) D. Belanger, (W) A. Steinacker

191. Teaching Practicum. F,W,S

Designed to provide upper-division undergraduates with an opportunity to work with students in lower division courses, leading discussions, reading and marking submissions, and assisting in the planning and teaching of a course. Prerequisite(s): excellent performance in major courses; instructor approval required; enrollment restricted to senior physics majors. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Prerequisite(s): upper-division standing; submission of a proposal supported by a faculty member willing to supervise. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits).

Tutorial. May be repeated for credit. The Staff

Graduate Courses

205. Introduction to Research in Physics (2 credits). W

Introduction to current research opportunities at UCSC for graduate students. Topics include: elementary particle physics, condensed matter and solid state physics, high energy astrophysics, biophysics, and cosmology. Selected topics related to career development may also be included. Enrollment restricted to graduate students or by permission of instructor. The Staff

210. Classical Mechanics. F

Generalized coordinates, calculus of variations, Lagrange's equations with constraints, Hamilton's equations, applications to particle dynamics including charged particles in an electromagnetic field, applications to continuum mechanics including fluids and electromagnetic fields, introduction to nonlinear dynamics. Enrollment restricted to graduate students only, except by permission of instructor. A. Sher

212. Electromagnetism I. F

Electrostatics and magnetostatics, boundary value problems with spherical and cylindrical symmetry, multipole expansion, dielectric media, magnetic materials, electromagnetic properties of materials, time-varying electromagnetic fields, Maxwell's equations, conservation laws, plane electromagnetic waves and propagation, waveguides and resonant cavities. Enrollment restricted to graduate students only, except by permission of instructor. R. Johnson

214. Electromagnetism II. W

Lorentz covariant formulation of Maxwell's equations, dynamics of relativistic charged particles and electromagnetic fields, scattering and diffraction. Topics in classical radiation theory: simple radiating systems radiation by moving charges, multipole radiation, synchrotron radiation, Cerenkov radiation, bremsstrahlung and radiation damping. Prerequisite(s): course 212. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. O. Narayan

215. Introduction to Non-Relativistic Quantum Mechanics. W

Mathematic introduction; fundamental postulates; time evolution operator, including the Heisenberg and Schrodinger pictures; simple harmonic oscillator and coherent states; one-dimensional scattering theory, including S-matrix resonant phenomena; two-state systems, including magnetic resonance; symmetries, including rotation group, spin, and the Wigner-Eckart theorem; rotationally invariant problems, including the hydrogen atom; gauge invariance, including Landau levels; introduction to path integral. Enrollment restricted to graduate students only, except by permission of instructor. A. Aguirre

216. Advanced Topics in Non-Relativistic Quantum Mechanics. S

Approximate methods: time-independent perturbation theory, variational principle, time-dependent perturbation theory; three-dimensional scattering theory; identical particles; permutation symmetry and exchange degeneracy, anti-symmetric and symmetric states; many-body systems and self-consistent fields: variational calculations; second quantized formalism, including Fock spaces/number representation, field operators and Green functions; applications: electron gas; quantization of the electromagnetic field and interaction of radiation with matter: absorption, emission, scattering, photoelectric effect, and lifetimes. Prerequisite(s): course 215. Enrollment restricted to graduate students only, except by permission of instructor. J. Nielsen

217. Quantum Field Theory I. F

Lorentz invariance in quantum theory, Dirac and Klein-Gordon equations, the relativistic hydrogen atom, Green functions and canonical approach to field theory, quantum electrodynamics, Feynman diagrams for scattering processes, symmetries and Ward identities. Students learn to perform calculations of scattering and decay of particles in field theory. Prerequisite(s): course 216. Enrollment restricted to graduate students only, except by permission of instructor. S. Profumo

218. Quantum Field Theory II. W

Path integral approach to quantum field theory. Theory of renormalization and the renormalization group, introduction to gauge theories and spontaneously broken field theories. Applications to the standard model of strong, weak, and electromagnetic interactions. Prerequisite(s): course 217. Enrollment restricted to graduate students only, except by permission of instructor. H. Haber

219. Statistical Physics. S

The basic laws of thermodynamics, entropy, thermodynamic potentials, kinetic theory of gases, quantum and classical statistical mechanics, virial expansion, linear response theory. Applications in condensed matter physics. Enrollment restricted to graduate students only, except by permission of instructor. S. Shastry

220. Theory of Many-Body Physics. *

Finite temperature Green functions, Feynman diagrams, Dyson equation, linked cluster theorem, Kubo formula for electrical conductivity, electron gas, random phase approximation, Fermi surfaces, Landau fermi liquid theory, electron phonon coupling, Migdal's theorem, superconductivity. Prerequisite(s): courses 216 and 219. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. S. Shastry

221A. Introduction to Particle Physics I. F

First quarter of a two-quarter graduate level introduction to particle physics, including the following topics: discrete symmetries, quark model, particle classification, masses and magnetic moments, passage of radiation through matter, detector technology, accelerator physics, Feynman calculus, and electron-positron annihilation. Prerequisite(s): course 217 or concurrent enrollment. Enrollment restricted to graduate students only, except by permission of instructor. B. Schumm

221B. Introduction to Particle Physics II. *

Second quarter of a two-quarter graduate level introduction to particle physics, including the following topics: nucleon structure, weak interactions and the Standard Model, neutrino oscillation, quantum chromodynamics, CP violation, and a tour of the Stanford Linear Accelerator Center. Prerequisite(s): course 221A; course 217 or concurrent enrollment. Enrollment restricted to graduate students only, except by permission of instructor. J. Nielsen

222. Quantum Field Theory III. *

Focuses on the theoretical underpinnings of the standard model, including the spontaneous symmetry breaking, the renormalization group, the operator product expansion, and precision tests of the Standard Model. Prerequisite(s): courses 218 and 221B. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. T. Banks

224. Particle Astrophysics and Cosmology. *

Particle physics and cosmology of the very early universe: thermodynamics and thermal history; out-of-equilibrium phenomena (e.g., WIMPs freeze-out, neutrino cosmology, Big Bang nucleosynthesis, recombination); baryogenesis; inflation; topological defects. High-energy astrophysical processes: overview of cosmic ray and gamma ray astrophysics; radiative and inelastic processes; astroparticle acceleration mechanisms; magnetic fields and cosmic ray transport; radiation-energy density of the universe; ultrahigh-energy cosmic rays; dark-matter models; and detection techniques. (Formerly Origin and Evolution of the Universe.) (Also offered as Astronomy and Astrophysics 224. Students cannot receive credit for both courses.) Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. T. Jeltema

226. General Relativity. W

Develops the formalism of Einstein's general relativity, including solar system tests, gravitational waves, cosmology, and black holes. (Also offered as Astronomy and Astrophysics 226. Students cannot receive credit for both courses.) Enrollment restricted to graduate students only, except by permission of instructor. S. Profumo

227. Advanced Fluid Dynamics. *

Fundamentals of heat transfer and fluid flow: thermal convection, gravity waves, vortex dynamics, viscous flows, instabilities, turbulence, and compressible flows. Students develop computer program for simulating thermal convection and gravity waves. Vector calculus and computer programming experience required. (Formerly Fluid Dynamics .) An introductory course in fluid dynamics recommended as preparation. Enrollment restricted to graduate students. Offered in alternate academic years. The Staff

231. Introduction to Condensed Matter Physics. F

Crystal structures, reciprocal lattice, crystal bonding, phonons (including specific heat), band theory of electrons, free electron model, electron-electron and electron-phonon interactions, transport theory. Prerequisite(s): course 216. Enrollment restricted to graduate students only, except by permission of instructor. S. Shastry

232. Condensed Matter Physics. W

Magnetism (para, ferro, anti-ferro, ferrimagnetic), spin waves, superconductivity, introduction to semiconductors. Prerequisite(s): course 231. Enrollment restricted to graduate students only, except by permission of instructor. S. Shastry

233. Advanced Condensed Matter Physics. *

A special topics course which includes areas of current interest in condensed matter physics. Possible topics include superconductivity, phase transitions, renormalization group, disordered systems, surface phenomena, magnetic resonance, and spectroscopy. Prerequisite(s): course 231. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. S. Carter

234. Soft Condensed Matter Physics. *

A selection of topics from: liquid crystals, biological systems, renormalization group and critical phenomena, stochastic processes, Langevin and Fokker Planck equations, hydrodynamic theories, granular materials, glasses, quasicrystals. Prerequisite(s): courses 219 and 232. Enrollment restricted to graduate students. A. Young, O. Narayan

240. Polymer Physics. *

Statistical properties of polymers. Scaling behavior, fractal dimensions. Random walks, self avoidance. Single chains and concentrated solutions. Dynamics and topological effects in melts. Polymer networks. Sol-gel transitions. Polymer blends. Application to biological systems. Computer simulations demonstrating much of the above. Students cannot receive credit for this course and course 120. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. J. Deutsch

242. Computational Physics. S

This course will apply efficient numerical methods to the solution of problems in the physical sciences which are otherwise intractable. Examples will be drawn from classical mechanics, quantum mechanics, statistical mechanics, and electrodynamics. Students will apply a high-level programming language such as Mathematica to the solution of physical problems and will develop appropriate error and stability estimates. Prerequisite(s): basic programming experience in C or Fortran. No previous experience with Mathematica is required. Enrollment restricted to graduate students only, except by permission of instructor. O. Narayan

250. Mathematical Methods. *

Probability theory with applications to data analysis, complex variables, Cauchy's residue theorem, dispersion relations, saddle-point type asymptotic methods for integrals, integral transforms, ordinary differential equations and orthogonal polynomials, partial differential equations and boundary value problems, and Greens functions. Integral equations also included if time permits. Enrollment restricted to graduate students. A. Young

251. Group Theory and Modern Physics. S

Finite and continuous groups, group representation theory, the symmetric group and Young tableaux, Lie groups and Lie algebras, irreducible representations of Lie algebras by tensor methods, unitary groups in particle physics, Dynkin diagrams, Lorentz and Poincaré groups. Enrollment restricted to graduate students only, except by permission of instructor. Offered in alternate academic years. H. Haber

290. Special Topics. *

A series of lectures on various topics of current interest in physics at UC Santa Cruz. Enrollment restricted to graduate students only, except by permission of instructor. May be repeated for credit. T. Banks

291A. Cosmology (2 credits). F,W,S

Intensive research seminar on cosmology and related topics in astrophysics: nature of dark matter; origin of cosmological inhomogeneities and other initial conditions of the big bang; origin and evolution of galaxies and large scale structure in the universe. Enrollment restricted to graduate students only, except by permission of instructor. J. Primack

291C. Developments in Theoretical Particle Physics (2 credits). F,W,S

Seminar on the current literature of elementary particle physics, ranging from strong and weak interaction phenomenology to Higgs physics, supersymmetry, and superstring theory. Students may present their own research results. Prerequisite(s): course 218; enrollment restricted to graduate students. May be repeated for credit. M. Dine, H. Haber

291D. Experimental High-Energy Collider Physics (2 credits). F,W,S

Seminar on current results in experimental high-energy particle physics. Topics follow recently published results, including design of experiments, development of particle detector technology, and experimental results from new particle searches, quantum chromodynamics, and properties of heavy flavor quarks. Enrollment restricted to graduate students. May be repeated for credit. J. Nielsen

291E. Applied Physics (2 credits). F,W,S

Intensive research seminar on applied physics and related topics in materials science, including semiconductor devices, optoelectronics, molecular electronics, magnetic materials, nanotechnology, biosensors, and medical physics. Students may present their own research results. Enrollment restricted to graduate students. May be repeated for credit. G. Alers, S. Carter

291F. Experimental High-Energy and Particle Astrophysics Seminar (2 credits). F,W,S

Survey of current research in experimental high-energy and particle astrophysics. Recent observations and development in instrumentation for x-rays, gamma rays, and neutrinos, and evidence for dark matter and other new particles. Students lead discussion of recent papers. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. D. Smith

291G. Condensed Matter Physics Research Seminar (2 credits). F,W,S

Weekly seminar series covering topics of current interest in condensed matter physics. Local and external speakers discuss their work. Enrollment restricted to graduate students. May be repeated for credit. A. Young

292. Seminar (no credit). F,W,S

Weekly seminar attended by faculty and graduate students. Directed at all physics graduate students who have not taken and passed the qualifying examination for the Ph.D. program. Enrollment restricted to graduate students only, except by permission of instructor. The Staff

297. Independent Study. F,W,S

Enrollment restricted to graduate students only, except by permission of instructor. The Staff

298. Theoretical and Experimental Research Project. F,W,S

Enrollment restricted to graduate students only, except by permission of instructor. The Staff

299. Thesis Research. F,W,S

Enrollment restricted to graduate students only, except by permission of instructor. The Staff

* Not offered in 2014-15

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2014–15 General Catalog

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Lower-Division Courses

1. Politics: Power, Principle, Process, and Policy. F

Systematic introduction to the nature of politics and government, organized around the dynamic relationship between power, principle, and process in democratic politics. Provides historic and contemporary overview; explores the interactions among government, laws, and societies at the national and international levels. (Formerly Democratic Politics.)
(General Education Code(s): PE-H, IS.) D. Wirls

3. Keywords: Concepts in Politics. *

Introduces key concepts in political discourse and key debates generated by contested terms such as "powers," "ideology," and "multiculturalism." Students read from canonical texts, feminist scholarship, historical materials, and contemporary cultural and postmodernist writings. (General Education Code(s): IS.) The Staff

4. Citizenship and Action. W

What does a citizen do? Uses political theory to answer this question as it relates to a number of issues, such as voting rights, diversity, gay marriage, and revolution. Draws on texts ranging from Aristotle to contemporary legal and cultural debates, to bear on the relationship of citizen action and identity. Other readings include Thoreau, Ellison, Rousseau, Marx, Arendt, and Socrates. (General Education Code(s): TA, IS.) D. Mathiowetz

10. Nationalism. *

Surveys contemporary academic approaches to the study of nationalism and writings of nationalist theorists from the 18th through 20th centuries. A few historical cases are considered. (General Education Code(s): TA.) M. Thomas

17. U.S. and the World Economy. *

Explores intellectual and empirical trends shaping the U.S. relationship with the global economy. Traces debates about liberalism and interventionism, surveys post-war American foreign economic policy and discusses varieties of capitalism emerging around the world.
(General Education Code(s): IS.) R. Schoenman

20. American Politics. S

Introduces the study of politics through an analysis of the United States political system and processes. Topics vary, but may include political institutions, public policies, parties

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and electoral politics, and social forces. Satisfies American History and Institutions Requirement. (General Education Code(s): TA, IS.) E. Bertram

60. Comparative Politics. F

Introduces the study of politics through the analysis of national political systems within or across regions from the developing world to post-industrial nations. Typical topics include: authoritarian and democratic regimes; state institutions and capacity; parties and electoral systems; public policies; social movements; ethnic conflict; and globalization. (General Education Code(s): CC, IS.) E. Pasotti

65. Introduction to International Relations. *

Surveys major theories of international relations including realism, liberal institutionalism, constructivism, and newer approaches focused on problems of asymmetric warfare. Examines problems of nuclear proliferation, international terrorism, global trade conflict, climate change, and humanitarian intervention. (General Education Code(s): CC.) The Staff

70. Global Politics. S

Can common global interest prevail against particular sovereign desires? Surveys selected contemporary issues in global politics such as wars of intervention, ethnic conflict, globalization, global environmental protection, and some of the different ways in which they are understood and explained. (General Education Code(s): PE-H, IS.) R. Lipschutz

Upper-Division Courses

103. Feminist Interventions. W

Situates ongoing debates around feminist theory and practice within the context of political theory, the role of the state, and the position of women in contemporary (predominantly Western) society. Engages with classical political theory, second wave feminism, and the role of the state on matters pertaining to pornography and prostitution. Enrollment restricted to politics, legal studies, and Latin American and Latino studies/politics combined majors during priority enrollment only. V. Seth

105A. Ancient Political Thought. F

Ancient political ideas in context of tension between democracy and empire, emergence of the psyche, and shift from oral to written culture. Emphasis on Athens, with Hebrew, Roman, and Christian departures and interventions. Includes Sophocles, Thucydides, Socrates, Plato, Aristotle, Stoics, the Bible, and Augustine. (Also offered as Legal Studies 105A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. D. Mathiowetz

105B. Early Modern Political Thought. W

Studies republican and liberal traditions of political thought and politics. Authors studied include Hobbes, Locke, and Rousseau. Examination of issues such as authorship, individuality, gender, state, and cultural difference. (Also offered as Legal Studies 105B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. V. Seth

105C. Modern Political Thought. S

Studies in 19th- and early 20th-century theory, centering on the themes of capitalism, labor, alienation, culture, freedom, and morality. Authors studied include J. S. Mill, Marx, Nietzsche, Foucault, Hegel, Fanon, and Weber. (Also offered as Legal Studies 105C. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. M. Thomas

106. Marxism as a Method. *

Examines Marx's use of his sources in political philosophy and political economy to develop a method for analyzing the variable ways in which social change is experienced as a basis for social action. Provides a similar analysis of contemporary materials. Contrasts and compares Marxian critiques of these materials and readings based on Nietzsche, psychoanalysis, cultural studies, and rational choice materialism. (Also offered as Legal Studies 106. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

109. Orientalism. S

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Studies "Orientalism" as a concept of political theory and as a historical practice. Considers how "Western" views of the peoples, cultures, and governments of 'the East' influenced political, intellectual, and aesthetic projects of the 18th and 19th centuries, with attention to the themes of colonialism, nationalism, language, and gender. Also considers Orientalism as a subject of post-colonial thought. Prerequisite(s): course 105A, or 105B, or 105C, or 105D; or by permission of instructor. Enrollment restricted to politics majors. M. Thomas

110. Law and Social Issues. F

Examines current problems in law as it intersects with politics and society. Readings are drawn from legal and political philosophy, social science, and judicial opinions. (Also offered as Legal Studies 110. Students cannot receive credit for both courses.) Enrollment restricted to politics, legal studies, and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

111A. Constitutional Law. W

An introduction to constitutional law, emphasizing equal protection and fundamental rights as defined by common law decisions interpreting the 14th Amendment, and also exploring issues of federalism and separation of powers. Readings are primarily court decisions; special attention given to teaching how to interpret, understand, and write about common law. (Also offered as Legal Studies 111A. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

112. Women and the Law. *

Interdisciplinary approach to study of law in its relation to category "women" and production of gender. Considers various materials including critical race theory, domestic case law and international instruments, representations of law, and writings by and on behalf of women living under different forms of legal control. Examines how law structures rights, offers protections, produces hierarchies, and sexualizes power relations in both public and intimate life. (Also offered as Feminist Studies 112. Students cannot receive credit for both courses.) Enrollment restricted to politics, feminist studies, legal studies, and Latin American and Latino studies/politics combined majors during priority enrollment only. G. Dent

113. Feminism and the Body.

Introduces the literature on the history of the body. Explores the multiple ways in which the body, in the West, has been the site of cultural and political inscription from the Middle Ages to the 19th century. Topics may include: pornography, criminality, sexuality, art, race, and medicine. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. V. Seth

114. Thinking Green: Politics, Philosophies, and Practices of Sustainability. *

A course on the political and philosophical sources of ecological and social sustainability and how they affect and inflect the design, implementation, and practices of sustainability. Asks whether they offer a "realistic" alternative to liberalism and other political and economic ideologies and practices. (Formerly Thinking Green: Politics, Ethics, Political Economy.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Lipschutz

115. Foundations of Political Economy. F

Examines how ideas about labor, rights, exchange, capital, consumption, the state, production, poverty, luxury, morality, procreation, and markets were woven in political-economic discourse from 1690–1936. Readings include Locke, Mandeville, Smith, Malthus, Mill, Hegel, Marx, Lenin, and Veblen. Particular focus given to theoretical origins of and justifications for poverty and implications of economic interdependence for politics. Prerequisite(s): course 105B, 105C, or 120C. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. D. Mathiowetz

116. Comparative Law. *

Explores legal systems and legal rules around the world, for a better understanding of the factors that have shaped both legal growth and legal change. Particular attention given to differences between common and civil law systems, changes brought about by the European Union, and expansion of legal norms around the globe. (Also offered as Legal

Studies 116. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

117. U.S. Telecommunications Law and Policy. *

Surveys the U.S. telecommunications and broadcasting law and policy from the mid-19th century through the present. Offers a range of perspectives from the vantage point of the telecommunications industry, government, and the media-reform movement. Enrollment restricted to politics majors during priority enrollment only. The Staff

118. Topics in Contemporary Political and Critical Theory. *

Course uses a multidisciplinary approach to the study of politics through significant contemporary authors and approaches in critical theory. Topics include: democracy action, violence, subjectivity, identity, power and resistance, the body, political economy, and post-colonialism. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

120A. Congress, President, and the Court in American Politics. *

Study of political development, behavior, performance, and significance of central governmental institutions of the U.S. Emphasizes the historical development of each branch and their relationship to each other, including changes in relative power and constitutional responsibilities. (Also offered as Legal Studies 120A. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. D. Wirls

120B. Society and Democracy in American Political Development. F

Examines the role of social forces in the development of the American democratic processes and in the changing relationship between citizen and state. Course materials address the ideas, the social tensions, and the economic pressures bearing on social movements, interest groups, and political parties. (Also offered as Legal Studies 120B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. M. Springer

120C. State and Capitalism in American Political Development. W

Examines the relationship between state and economy in the U.S. from the 1880s to the present, and provides a theoretical and historical introduction to the study of politics and markets. Focus is on moments of crisis and choice in U.S. political economy, with an emphasis on the rise of regulation, the development of the welfare state, and changes in employment policies. (Also offered as Legal Studies 120C. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Satisfies American History and Institutions Requirement. E. Bertram

121. Black Politics and Federal Social Policy. *

Examination of changes in the political and economic status of African Americans in the 20th century; particular focus on the role of national policies since 1933 and the significance of racism in 20th-century U.S. political development. (Also offered as Legal Studies 121. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. (General Education Code(s): E.) M. Brown

122. Politics, Labor, and Markets. *

Examines political and social dimensions of recent transformations in the U.S. labor market. Includes classical and contemporary theoretical debates over the nature and functions of work under capitalism. Focuses on shifts in the organization and character of work in a globalizing economy. Addresses recent trends in low-wage and contingent work, job mobility and security, and work/family relations. Includes attention to the roles and responses of business, labor, and government. (Formerly Politics, Labor, and Markets in the U.S.) Enrollment restricted to politics and Latin American and Latino studies/politics combined major during priority enrollment. E. Bertram

124. Economic Inequality in America. F

Examines the sources and implications of economic inequality in the United States. Explores theories of social class and its intersections with race and gender inequalities. Focuses on the role of politics and public policies in diminishing and/or exacerbating

income and wealth inequalities. (Formerly Politics, Poverty, and Inequality in America.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. E. Bertram

125. Political Organizations in American Politics. *

Introduces the literature on interest groups and attempts to answer the question: Do such groups promote or hinder American democracy? Class readings and lectures review and assess the participation of interest groups in the electoral process and in Congress, the executive branch, and the courts. Pays particular attention to the role business and environmental groups play in American politics and policy. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

128. American Elections and Voting Behavior. F

Introduces key concepts pertaining to voting, elections, and political behavior in the United States. Several topics are covered, such as campaigns, electoral institutions, reform, political participation (including but not limited to voting), presidential and congressional elections, partisan identification, and polling. Enrollment restricted to politics majors and Latin America and Latino studies/politics combined majors during priority enrollment only. M. Springer

129. Policies and Politics of American Defense. W

Examines the evolution of the policy and politics of American national security, from the Cold War to the present. Content of military policy explored with analytic focus on formation of policy and interactions between military policies and domestic policies. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. D. Wirls

132. California Water Law and Policy. W

Explores the rich history and fundamental legal concepts surrounding water in California. Students identify, evaluate, and debate some critical water policy questions faced by Californians today and in the future. (Also offered as Legal Studies 132. Students cannot receive credit for both courses.) R. Langridge

133. Law of Democracy. W

Explores the role of law in both enabling and constraining the actions of elected politicians in the U.S. Among issues examined are voting rights, redistricting, and campaign finance. Course asks how the law shapes and limits our ability to choose our elected leaders, and in turn, how the law is shaped by political forces. (Also offered as Legal Studies 133. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Coonerty

134. Congress: Representation and Legislation. *

Examines the United States Congress and the nature of the representative and legislative processes. Topics include: districting and elections; bicameralism; party organization; institutional and behavioral influences on legislative action; and the efficacy of Congress as a legislative body. Focuses on the contemporary Congress with comparisons to other legislative and representative institutions. (Formerly Congress: Representation and Legislation in Comparative Perspective.) (Also offered as Legal Studies 134. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. D. Wirls

135. Immigration Policy and Debate in the U.S.. *

Course charts the history of immigration policy and debate in the U.S., highlighting the ways economic, social, and geopolitical factors influenced the processes and outcomes of immigration debate and policy making. Focuses on interaction between society and state in formulation and implementation of immigration policy, and the ways policy outcomes may differ from expectations. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

139. Market Crisis and the Future of Capitalism. *

Examines the development and role of late 20th- and early 21st-Century financial technologies in modern market crises. Overview of financial markets, modern finance theory, related regulatory institutions, financial crises, financial technologies, and the relation of human behavior. What is the future of market capitalism? Enrollment restricted

to politics and politics/Latin American and Latino studies combined majors. The Staff 140A. Politics of Advanced Industrialized Societies. W Explores the political and economic systems of advanced industrialized societies. In addition to specific comparisons between the countries of western Europe and the United States, covers important themes and challenges, including immigration, globalization, and the crisis of the welfare state. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. E. Pasotti
140C. Latin American Politics. F Overview of major approaches to the study of Latin American politics. Introductory survey of historical and contemporary democratic populist, authoritarian, and revolutionary regimes. Special attention is given to region's recent transitions toward democratic rule, market-based economic models, and decentralized governance. Evaluates institutional arrangements (including presidentialism, electoral rules and party systems), as well as a variety of social movements and strategies of resistance among subaltern social groups and classes. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): E.) K. Eaton
140D. Politics of East Asia. S Explores political and economic development in Northeast and Southeast Asia since WWII. Students apply theoretical and historical concepts to empirical case studies, building an understanding of how democracy and power operate. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. (General Education Code(s): E.) B. Read
141. Politics of China. W Introduces themes of Chinese politics from 1949 to present, including: the establishment and substantial dismantling of socialism; movements and upheavals, such as the Cultural Revolution and 1989; and issues, such as Tibet and Taiwan. Surveys current institutions, leaders, and policies. (Formerly China .) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. (General Education Code(s): E.) B. Read
142. Russian Politics. * Historical-political survey of Russia within the U.S.S.R. is followed by examination of the 1991 revolution, the attempt to recover a national identity and establish a unified Russian state. Highlighted in this course are cultural and political factors central to the Russian experience: personalistic modes of political organization, a remote and corrupt state apparatus, collectivist forms of thought and self-defense. M. Urban
143. Comparative Post-Communist Politics. F Comparative study of revolutionary transformations of East European, Soviet, and former Soviet nations to post-Communist political orders. Focus on reemergence of political society, social and economic problems of transition, and maintenance of many cultural norms and authority patterns associated with previous regime. (Formerly course 140B.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Schoenman
144. Andean Politics. W Examines similar political trends in four Andean countries: Bolivia, Colombia, Ecuador, and Peru. Trends include mobilization of indigenous populations, breakdown of traditional party systems, and reconstruction efforts in post-conflict environments. Students who have taken prior courses in Latin American politics, including course 140C, will be best prepared for this course. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. K. Eaton
145. Democratization, Citizenship, and Human Rights in Latin America. * Examines military regimes, transitions to civilian rule, and politics of democratization in contemporary Latin America. Focuses on the contradictions and legacies of transition politics, the challenges of democratizing political institutions, and the political and social consequences of neoliberalism. Emphasis on human rights, citizens' movements, changing dynamics of civil society, and contemporary efforts to deepen democracy. (Formerly course 150, Democratization, Citizenship, and Human Rights in South America) Enrollment

restricted to politics and Latin American and Latino studies/politics combined majors. The Staff

146. The Politics of Africa. *

Comparative study of contemporary sub-Saharan African states. Selected issues and countries. Internal and external political institutions and processes are studied in order to learn about politics in contemporary Black Africa and to learn more about the nature of politics through the focus on the particular issues and questions raised by the African context. Enrollment restricted to politics majors during priority enrollment only. (General Education Code(s): E.) I. Gruhn

148. Social Movements. *

Overview of social movements by analysis of specific theories and examples. Course connects the study of theories and movements to larger political processes. Topics may include: New Social Movement theory; gender and social movement; democratic, historical, transnational, global and/or local social movements. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff

149. Democratic Transitions. *

Explores democratization processes from a variety of historical and geographical perspectives. Examines the role of foreign influences, economic development, civil society, elites, and institutions in the transition and consolidation of democratic systems.

Enrollment restricted to politics and Latin American and Latino studies/politics majors during priority enrollment only. E. Pasotti

151. Politics of Law. *

Uncovers the important debates in politics and law around the functions of courts, litigation, and rights--and the political nature of law itself. Course is interdisciplinary, and draws from literature in political science, law, and sociology. (Also offered as Legal Studies 151. Students cannot receive credit for both courses.) Enrollment restricted to politics, legal studies, and Latin American and Latino studies/politics combined majors during priority period. M. Massoud

156. The Politics of Memory. F

Examines the intersection of traumatic memories and politics. Memories have historical, social, cultural, psychological, and political dimensions. Focuses most closely on the political consequences of and responses to divisive, troubling histories. (Also offered as Anthropology 156. Students cannot receive credit for both courses.) Enrollment restricted to anthropology and politics majors. D. Linger

160A. Theories of International and World Politics. F

Examination of analytical perspectives on international and world politics, international and global political economy, war and conflict, corporations and civil society. Explores theoretical tools and applications, recurring patterns of global conflict and cooperation, the nexus between domestic politics, foreign policy and international and world politics. This is not a current events course. (Formerly International Politics.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. L. Abdelaaty

160B. International Law. S

Origins and development of international law: international law is examined both as a reflection of the present world order and as a basis for transformation. Topics include state and non-state actors and sovereignty, treaties, the use of force, and human rights. (Formerly course 173.) (Also offered as Legal Studies 160B. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. M. Massoud

160C. Security, Conflict, Violence, War. *

Genesis and theories of conflict and war and their avoidance (past, present, future). Relationship between foreign policy and intra- and interstate conflict and violence. National security and the security dilemma. Non-violent conflict as a normal part of politics; violent conflict as anti-political; transformation of conflict into social and interstate violence. Interrelationships among conduct of war, attainment of political objectives, and the end of hostilities. Civil and ethnic wars. Political economy of violence and war. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. The Staff

- 160D. International Political Economy. W
Introduction to the politics of international economic relations. Examines the history of the international political economy, the theories that seek to explain it, and contemporary issues such as trade policy, globalization, and the financial crisis. (Formerly course 176.) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. R. Schoenman
161. Foreign Relations of China. S
Surveys China's foreign policy from 1949 to today, including the Korean War; Sino-Soviet ties; relations with the United States; tension with Taiwan; and China's rise to geopolitical prominence. Introduces the major theoretical approaches to international relations. (Formerly course 143) Enrollment restricted to politics and politics/Latin America and Latino studies combined majors during priority enrollment. B. Read
163. U.S. Foreign Policy. *
Provides overview of U.S. foreign policy formulation: considers how U.S. political culture shapes foreign policy; examines governmental actors involved: the president, executive branch agencies, and Congress; then considers non-governmental actors: the media, interest groups, and public opinion. (Formerly How U.S. Foreign Policy Gets Made .) Enrollment restricted to politics and politics/Latin American and Latino studies combined majors. The Staff
164. International Politics of Forced Migration. W
Surveys global issues in forced migration, the movement of people displaced by persecution, conflict, disasters, or development. Topics include historical trends, legal regimes, and ethical concerns. Explores the causes and consequences of forced displacement, and responses by state and non-state actors. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. L. Abdelaaty
165. Global Organization. W
Addresses whether and how global organizations are changing the international system. Examines multilateral institutions, regional organizations, and nonstate actors. Overriding aim is to discern whether these global organizations are affecting the purported primacy of the state. (Formerly course 160B.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff
166. Politics of Migration. *
Examines the magnitude and the political, economic, cultural, environmental, and social impact of today's movement of millions of people within and amongst states. Enrollment restricted to politics majors and Latin American and Latino studies/politics combined majors during priority enrollment. (General Education Code(s): CC.) I. Gruhn
167. Politics of International Trade. *
Examines key issues in international trade, including the distribution of gains, fair trading practices, and preferential trade agreements. Focuses on the political dimensions of trade, the rules of the international trade system, and conflicts within countries that international trade generates. (Also offered as Legal Studies 167. Students cannot receive credit for both courses.) Enrollment restricted to politics, and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff
171. Law of War. *
Examines legal regulation of international violent conflict. Students examine development of normative standards within international law and creation of institutions to both adjudicate violations and regulate conduct. (Also offered as Legal Studies 171. Students cannot receive credit for both courses.) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. The Staff
172. Liberalism, the State, and the War on Terror. *
Examines the relation between the liberal State and perceived challenges to State sovereignty posed by transnational terrorism. How does terrorism as both a symbol and empirical phenomenon fit within the horizon of liberal ideology? What claim to sovereignty does the State make in the face of acts of terror? What political logic is required in/for a War on Terror? Students may not take both course 72 and this course for credit in the major. Enrollment restricted to politics and politics/Latin America and Latino studies

majors during priority enrollment. The Staff

174. Political Economy of Global Energy, Environment, and Resources. *

Focus on global environmental "problematique" and how it is being played out in a variety of political economic, and social arenas. Includes technical overview of environmental movements, green economics, energy and resource issues, and sustainable approaches. (Formerly Global Environment Politics) Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Lipschutz

175. Human Rights. S

Embraces an interdisciplinary approach to the study of human rights. Captures the malleable nature of human rights and the contours of its dual role as both law and discourse. (Also offered as Legal Studies 175. Students cannot receive credit for both courses.) Prerequisite(s): Politics or Legal Studies 160B. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment. M. Massoud

177. The United States and the World. *

Examines political, economic, and cultural relationship between the U.S. and the rest of the world, including historical background and foreign policy. Special focus on U.S. involvement in the Middle East and Persian Gulf and the politics of economics of that region. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Lipschutz

178. U.S. Foreign Economic Policy. F

Theoretical and historical survey of U.S. foreign economic policy. First part explores theoretical frameworks and covers historical events in the U.S.'s relationship with world economy. The second part focuses on postwar foreign economic policy; surveys different theoretical approaches to U.S. foreign policy; and examines fundamental developments and issues in trade, monetary, development, and investment policies. Enrollment restricted to politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Schoenman

190. Senior Comprehensive Seminar.

These courses, offered at different times by different instructors, focus on current problems of interest across the discipline. Courses offer a flexible framework within which those mutually interested in specific issues can read, present papers, and develop their ideas. Students who do not meet the restrictions and prerequisites may contact the instructor for permission to enroll. The Staff

190A. State and Revolution. *

Investigates the process of rapid and fundamental political change from the standpoint of both the structures of states in which revolutions have occurred and the structures of states issuing from revolutions. A number of cases are examined, but particular emphasis is given to the "classic" revolutions in France (1789) and Russia (1917). Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors; major restrictions lifted during open enrollment. Enrollment limited to 20. M. Urban

190B. Humanity, Sovereignty, and War. *

Examines how enmity, the state, and war serve as limits for political conceptions of who "we" are, tensions between commitments to diversity and to peace, and liberal and humanitarian efforts to address these tensions. Students examine works written prior to the liberal period (Hobbes), in response to it (Hegel and Schmitt) and finally a 20th-century liberal revival (Rawls), and discuss rights, conscience, political obligation, war, and the state. Prerequisite(s): two of the following: course 103, 105A, 105B, 105C, 105D, 107, 109, or 115. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only. Enrollment limited to 20. D. Mathiowetz

190C. Humanitarian Action in World Politics. F

Examines the global politics of humanitarianism. Topics include the historical evolution of humanitarian principles, key actors in the humanitarian sector, and institutional arrangements. Explores the ethical and practical challenges associated with humanitarian relief, aid, and intervention. Enrollment restricted to senior politics

and politics/Latin American and Latino studies combined majors. Enrollment limited to 20. L. Abdelaaty

190D. Early Anarchist and Socialist Thought. W

Studies in 19th- and early 20th-century anarchist and socialist thought. Themes covered include property, labor, marriage, and the state. Readings drawn from Bakunin, Goldman, Fourier, Kropotkin, Perkins-Gilman, Proudhon, and Stirner. Prerequisite(s): two of the following: courses 103, 105A, 105B, 105C, 105D, 109, or 115; or by permission of instructor. Enrollment restricted to senior politics majors. Enrollment limited to 20. M. Thomas

190E. Transitions in the Information Age. S

Explores the role of new media in political protest; whether and how new media technologies such as social networking, text messaging, Twitter, and YouTube have changed the way opposition movements develop. Enrollment restricted to senior politics and Latin America and Latino studies/politics combined majors. Enrollment limited to 20. R. Schoenman

190G. Issues in International Law. *

Explores theory and reality of international law; how it determines or governs or modifies policies of government. Emphasis on contemporary political and economic forces and international law in nuclear age, competing areas for new law, law of seas, human rights, new international economic issues, the environment. Enrollment restricted to senior legal studies, politics, and Latin American and Latino studies/politics combined majors during priority enrollment only; major restrictions will be lifted during open enrollment. Enrollment limited to 20. The Staff

190H. The Substance of Democracy. F

What is democracy? How can we identify it? How do we understand and identify political participation? What are the factors behind it? What role does protest have in democratic politics? These and similar questions are addressed in this course that focuses on topics of democratic politics in the United States and abroad. Enrollment restricted to senior politics and combined politics/Latin American and Latino studies majors. Enrollment limited to 20. E. Pasotti

190I. Political Ecology and Ecological Politics. *

Examines a range of ecological philosophies and their implications for politics, economics, social action, and the Earth. Themes addressed in relation to political ecology include: liberalism, historical materialism, the nature/culture divide, justice, feminism, and critical theory. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only. R. Lipschutz

190J. Politics and Inequality. *

Considers causes and consequences of inequality in modern societies. Emphasizes empirical analysis of contemporary forms of class, racial, and gender inequality and examination of normative theories of distributive justice. Major restrictions lifted during open enrollment. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only. Enrollment limited to 20. D. Wirls

190K. China in the World Trade Organization. *

Examines the impact that the World Trade Organization (WTO) has had on China's economic reform, lawmaking, and political and social development. Also examines how China has used the WTO to safeguard its interests through the dispute-settlement mechanism and the Doha trade talks. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only. Enrollment limited to 20. The Staff

190L. Poverty Politics. S

Examines theoretical, historical, and contemporary sources of poverty policies in the United States. Explores competing theories of the causes of poverty and the consequences of social provision. Focuses on successive historical reform efforts and contemporary dilemmas of race and urban poverty, gender and family poverty, work, and the politics of welfare reform. Enrollment restricted to senior politics and Latin

American and Latino studies/politics combined majors during priority enrollment only.
Enrollment limited to 20. E. Bertram

190M. Politics in American States. S

State governments affect the lives of Americans every day. This course examines an array of issues pertaining to state politics, such as the foundations of American federalism, institutional organization, elections, political parties, direct democracy, and policy-making. Enrollment restricted to senior politics and combined politics/Latin America and Latino studies majors. Enrollment limited to 20. M. Springer

190P. Race: History of a Concept. *

Examines how we came, by the late 19th century, to classify humanity into racial categories. In an effort to trace emergence of this very modern phenomenon, explores historical shifts that informed Europe's representation of cultural difference from the writings of ancient Greeks to the social Darwinism of 19th-century Britain. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment. Enrollment limited to 20. V. Seth

190Q. Theorizing Modernity. *

Introduces central categories and material implications that underwrite discourses on modernity since the late 18th century. Students read across the disciplines in fields such as political theory, postcolonialism, history, science studies, anthropology, and feminist criticism. Prerequisite(s): any two of the following courses: 105A, 105B, 105C, 105D. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment. Enrollment limited to 20. V. Seth

190R. Comparative Law and Society. *

Interdisciplinary investigation into functions of law across political, historical, and cultural contexts. Examines the international and comparative turn in public law scholarship and the role of law-based strategies in state building. Reviews literature in law, political science and legal anthropology. (Also offered as Legal Studies 190R. Students cannot receive credit for both courses.) Prerequisite(s): course 160B. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors. Enrollment limited to 20. M. Massoud

190S. Empire and After. *

Examines the literature on American empire, beginning with the founding parents (e.g., Jefferson), continuing through the revisionist literatures (e.g., Williams) and more recent work (e.g., Hardt and Negri), and ending with contemporary critiques and predictions. Enrollment restricted to senior politics majors. Enrollment limited to 20. The Staff

190T. Governance and Conflict in East Asia. *

Students read recent books on East Asian countries that engage the long-standing themes of state power and societal resistance. Prerequisite(s): course 141 or 161 or 109, or by permission of instructor. Enrollment restricted to senior politics majors. Enrollment limited to 20. B. Read

190V. Problems in Latin American Politics. W

Research seminar allows advanced students to engage in current scholarly debates in the sub-field of Latin American politics. Students are encouraged to pick a research topic of their own choosing. Recent course themes have included obstacles to democratic consolidation; crime and insecurity; economic reform; lesbian, gay, bisexual, and transgender (LGBT) politics; and public-policy innovations. Prerequisite(s): course 140C or 144. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only. Students with equivalent course work may enroll with permission of instructor. Enrollment limited to 20. K. Eaton

190X. Global Capitalism and War. *

Examines the history and organization of, and relationships among, global capitalism and war, through political economy, with a focus on major historical works and recent writings, especially in relation to the crisis of globalization and the rise of the global economy. (Formerly Global Capital and Capitalism.) Prerequisite(s): One of course 115,

120C, 160A, 160D, or 178. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors during priority enrollment only.

Enrollment limited to 20. The Staff

190Y. Political Theories of Luxury. *

Examines conceptions of luxury as they have appeared in classical, Christian, early modern, and contemporary discourses and debates. How have people sought to define luxury; for what political purposes; and what promise and peril do such definitions have? What is the shape and power of luxury in political communities today? (Formerly Polical Theory of Luxury.) Prerequisite(s): One of the following courses: 103, 105A, 105B, 150C, 106, 109, 113, 115, 118, 124. Enrollment restricted to senior politics and politics/Latin American studies majors. Enrollment limited to 20. D. Mathiowetz

190Z. International Security. *

Examination of selected issues, controversies, and theories relevant to "security" between and among nations. Topics vary, but may include: war, peace, nuclear proliferation, arms control, military and foreign policies, alternative conceptions of security. Enrollment restricted to senior politics and Latin American and Latino studies/politics combined majors . Enrollment limited to 20. The Staff

193. Field Study in Politics. F,W,S

Individual studies undertaken off campus with direct faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Various topics to be announced before each quarter. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194F. Group Tutorial (2 credits). F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Various topics to be announced before each quarter. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195A. Senior Thesis. F,W,S

Preparation of a senior thesis over two or three quarters, beginning in any quarter. The grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

195B. Senior Thesis. F,W,S

Preparation of a senior thesis over two or three quarters, beginning in any quarter. The grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

195C. Senior Thesis. F,W,S

Preparation of a senior thesis over two or three quarters, beginning in any quarter. The grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students submit petition to sponsoring agency. The Staff

198. Independent Field Study. F,W,S

Individual studies undertaken off-campus for which faculty supervision is not in person (e.g. supervision is by correspondence). Students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Individual studies undertaken off-campus for which faculty supervision is not in person, but by correspondence. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

A student normally approaches a member of the staff and proposes to take a course 199 on a subject he or she has chosen which is not offered in other politics courses. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

A student normally approaches a member of the faculty and proposes to take a course 199

on a subject he or she has chosen which is not offered in other politics courses. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

200A. Political and Social Thought Core Seminar. *

Draws on history of political thought, contemporary social and critical theory, and the contributions of legal and institutional analysis of various kinds to engage in critical study of political practices that are experienced or understood as in some way limiting, oppressive, or wrong; to transform our understanding of these practices; to see their contingent conditions; and to articulate possibilities of governing ourselves differently. (Formerly Interpretive Problems in Political Theory: Language and Power.) Enrollment restricted to graduate students. Enrollment limited to 15. M. Thomas

200B. Social Forces and Political Change Core Seminar. W

Concerns transformation of social forces into political ones. Focuses on formation, articulation, mobilization, and organization of political interests and identities, their mutual interaction, and their effects on state structures and practices and vice versa. Major themes are 1) social bases of political action: class, gender, race, and other determinants of social division and political identity and 2) relevant forms of political agency and action, including development of political consciousness and representation of interests and identities in the public sphere. Enrollment restricted to graduate students. Enrollment limited to 15. E. Pasotti

200C. States and Political Institutions Core Seminar. *

Introduces study of political institutions as instruments of collective decision making and action. Explores alternative theoretical approaches to development of political institutions, state and political economy, and security dilemmas. Enrollment restricted to graduate students. Enrollment limited to 15. E. Pasotti

200D. Political Economy Core Seminar. F

Introduction to the theories and methodologies of political economy. Focuses on the relationship between states and markets and considers the politics of economic choices and institutions germane to both national and global political institutions. Addresses origins and development of markets and capitalism; historical evolution of states and their economies; relationship between labor, capital, production, and consumption; regulation of production; macroeconomics and management of economies; and issues of national and global social welfare. Enrollment restricted to graduate students. Enrollment limited to 15. K. Eaton

201. Logics of Inquiry. S

Investigates approaches to study of politics and to enterprise of social science in general. Works from positivist, interpretive, historical, and critical approaches provide examples held up to critical and epistemological reflection. Enrollment restricted to graduate students. Enrollment limited to 15. R. Lipschutz

202. Fundamentals of Political Research. W

Gives students practical tools to transform research questions into viable and well-crafted research designs. Introduces conceptual development, various forms of data, and rules for case selection. The goal is to train students in a range of specific methods, including interviewing, ethnography, and archival work. Enrollment restricted to graduate students. Enrollment limited to 15. M. Massoud

203. Making of the Modern. F

Introduces, at the graduate level, some of the central conceptual categories and material implications that underwrite the world of the modern. Explores concepts including the individual, historicism, contract, and objectivity. Enrollment restricted to graduate students. Enrollment limited to 15. V. Seth

204. Bodies in History. *

The human body has been productive of a wide range of varied and competing discourses. Among the themes covered are sexuality, hygiene, the grotesque, and criminality. Enrollment restricted to graduate students. Enrollment limited to 15. V. Seth

206. Topics in Political Theology. *

Readings focus on the early 20th-century rediscovery of political theology; its use in theorizations of the Holocaust; and its return in 21st-century debates on empires, war, terror, enmity, reconciliation, fanaticism, human rights, political economy, and global catastrophe. Enrollment restricted to graduate students. Enrollment limited to 15. B. Meister

207. Political Economies of Affect. *

Explores the potential in philosophical precursors to recent affect theory, alongside classical political economy and its critics, to develop an alternative epistemology for political economy. Readings include: Aristotle, Spinoza, Deleuze, Hume, Negri, Hardt, Smith, Bergson, and Marx. Enrollment restricted to graduate students. Enrollment limited to 15. D. Mathiowetz

208. Race. *

Considers the subject of race and racism from a political and historical perspective appealing to literatures from history, anthropology, science, and literary studies. Enrollment restricted to graduate students. Enrollment limited to 15. V. Seth

209. Radical Political Thought. *

Focuses on early 19th- through early 20th-century socialist and anarchist thought, excluding Marx. Theorists studied include Saint-Simon, Fourier, Proudhon, Stirner, Bakunin, Kropotkin, Perkins Gilman, and Goldman. Some secondary literature and related contemporary theory is also treated. Enrollment restricted to graduate students. Enrollment limited to 15. M. Thomas

222. Conflict and Change in American Politics and Policy. W

Explores the dynamic and contested interaction between politics and policy in the U.S. context, through examining the historical development of key contemporary policy debates and political conflicts. Introduces recent scholarship, drawing on history, sociology, and political economy that has challenged traditional behavioralist approaches to understanding American politics and policy development. Enrollment restricted to graduate students. Enrollment limited to 15. D. Wirls

232. United States Political History. *

Covers several important themes and sets of readings from the literature on American political development. Topics include the origins and development of American political institutions, the evolution of democratic mechanisms, the rise and fall of social movements, and debates about the sources of policy regimes and political change, including the role of war. Enrollment restricted to graduate students. Enrollment limited to 15. D. Wirls

233. Interrogating Race. *

Critically examines alternative theoretical and methodological approaches to study of race and racism. Considers alternative explanations for origins and persistence of racism and racial inequality and suggests the relevance of a socio-political understanding. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

243. Comparative Methods. *

Introduces the comparative method in social science. Trains students in the use of this method by examining how scholars have used it to compare across national governments, subnational units, public policies, organizations, social movements, and transnational collective action. (Also offered as Latin American&Latino Studies 243. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Enrollment limited to 15. K. Eaton, J. Fox

245. Latin American Politics. *

Surveys the Latin American political literature by studying: 1) critical moments in political development (e.g., state formation, democratization); 2) important political institutions (e.g., presidentialism, party, and electoral systems); and 3) influential political actors (e.g., unions, business associations, social movements). Enrollment restricted to graduate students. Enrollment limited to 15. K. Eaton

247. Comparative Urban Politics. *

Focuses on local government structures and the relationships with other levels of government. Examines institutions and administration; urban political economy (fiscal strain, poverty, inequality, and the efforts to attract economic investment); political

machines; race and ethnicity. Enrollment restricted to graduate students. Enrollment limited to 15. E. Pasotti

249. Politics of Protest. *

Explores topics related to protest and political participation from theoretical and empirical perspectives. Enrollment restricted to graduate students. Enrollment limited to 15. E. Pasotti

255. Comparative Anti-Colonialisms. *

Political thought of anti-colonial movements in comparative, historical perspective, including 18th- to 20th-Century European colonies of America and Asia. Focuses both on the contemporary political thought of these movements as well as on historiographical approaches of secondary literature. Enrollment restricted to graduate students. Enrollment limited to 15. M. Thomas

261. Key Issues in Contemporary Chinese Politics. *

Addresses topics ranging from the core institutions of the party-state to local politics, economic governance, and state-society interactions in multiple realms. Considers China in its own terms while evaluating the relevance of theoretical concepts from various fields in the social sciences. Aims to identify opportunities for new research projects. Enrollment restricted to graduate students. Enrollment limited to 15. B. Read

265. Nationalism. *

Survey of theories of nationalism, with selected nationalist thinkers and case studies. Emphasis on historical analyses and cases. Topics include: origins and typologies of nationalisms, racism, gender, revolution, and the state. Enrollment restricted to graduate students. Enrollment limited to 15. M. Thomas

272. Critical Interventions in IR Theory and Global Political Economy. *

Seminar examines selections from the canonical literature in international relations theory and global political economy through a number of critical lenses, including constructivist, feminist, historical materialist, and subaltern approaches. Enrollment restricted to graduate students. Enrollment limited to 15. R. Lipschutz

275. Contemporary Capitalism. *

Examines genesis of new institutions within the force of social ties and networks. Studies how social and organizational relationships achieve individual or group goals in political and economic life, and influence institutional design. Considers when and what ties contribute to governance and economic performance, and when informal and formal organizations constitute an obstacle. (Formerly New Approaches to the Study of Capitalism.) Enrollment restricted to graduate students. Enrollment limited to 15. R. Schoenman

291. Teaching Assistant Seminar (2 credits). *

Two-hour weekly seminar required of teaching assistants in which pedagogic and substantive issues will be considered. The experience of performing teaching assistant duties constitutes subject matter for discussion. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

292. Professional Development (2 credits). *

Primarily for first- and second-year graduate students. Students learn the norms and expectations of graduate school and a variety of professional roles. Students develop a plan for their graduate career and for establishing a professional network of mentors and peer audiences for their work. Enrollment restricted to graduate students. Enrollment limited to 20. D. Mathiowetz

293. Field Study. F,W,S

Individual study undertaken off campus with direct faculty supervision. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

295A. Research Colloquium (2 credits). *

Weekly venue for Ph.D. students to present current research, exchange information on sources and resources, discuss and critique epistemologies and methods, and to formulate topics for QE field statements and the dissertation. There are no assigned readings. May be repeated for credit twice. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. The Staff

295B. Advanced Research Seminar. *

Weekly seminar for Ph.D. students in which to develop and write extended research papers on selected topics, to present current work, to discuss methods, data sources, and fieldwork, and to receive critiques and assessments from fellow students. May be repeated for credit twice. Enrollment restricted to graduate students. Enrollment limited to 15. May be repeated for credit. The Staff

297. Independent Study. F,W,S

A student approaches a member of the staff and proposes to take a course 297 on a subject he or she has chosen that is not covered in other politics graduate courses or plans a graduate independent study that includes an undergraduate course. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Enrollment restricted to graduate students and permission of instructor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Porter College

[2014-15 General Catalog](#)

College Office

(831) 459-2071

<http://porter.ucsc.edu/>

For college description and list of faculty, see [Colleges](#).

Lower-Division Courses

12. The ArtsBridge Experience (2 credits). *

Weekly meetings on pedagogy in the arts, lesson planning for arts teaching in schools, and submission of teaching portfolio core of this class. Prerequisite(s): permission of instructor; student must be an ArtsBridge scholar. May be repeated for credit. M. Foley

13C. Service Learning: Introduction to National Service/Introduction to Grant Writing (3 credits). W

A fast-paced and academically rigorous exercise in four main sections. First and foremost, participants must locate and support a community-service site for three hours each week. Each student's service commitment requires the student to attend class regularly and share community-service experience with classmates. Students are introduced to the basic requirements of a variety of national service agencies including AmeriCorp, the Peace Corp, City Year, Teach for America, and City Service. Students are required to do community-service work with a member of one of these agencies locally for four hours during the quarter. The last major section of this course teaches students the basics of grant writing and research. (Also offered as Kresge College 12C. Students cannot receive credit for both courses.) Enrollment restricted to college members. (General Education Code(s): PR-S.) F. Williams

14. Jazz Vocal Ensemble (2 credits). *

Study of vocal techniques in the context of ensemble rehearsals, often culminating in public performance. Familiarity with musical notation recommended. Admission by audition. May be repeated for credit. (General Education Code(s): A.) The Staff

19. Chicana/Latina Identity (2 credits). *

An exploration of Chicana/Latina identity within the context of developmental theories and heterogenous cultural influences on identity formation, including the acculturation process. Students explore their own identities within the previously stated context. Enrollment limited to 20. The Staff

20. Dance/Theater Practicum.

The practice of dance/theater in a particular world area (i.e., Philippines, Mexico, U.S.). Students learn the dance or theater art of one world area and study the associated cultural background. The Staff

■ Community Studies
■ Computer Engineering
■ Cowell College
■ Critical Race and Ethnic Studies
■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
■ Hebrew
■ History
■ History of Art and Visual Culture
■ History of Consciousness
■ Italian
■ Japanese
■ Jewish Studies
■ Kresge College
■ Languages
■ Latin
■ Latin American and Latino Studies
■ Legal Studies
■ Linguistics
■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College >
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

- 20A. Filipino Dance Practicum (2 credits). *
Students are introduced to the different folk dances of the Philippine Islands. Folk dances of the tribal mountain region, of the Spanish Era in the Philippines (Maria Clara Era), and dances of the regional and rural countryside are emphasized. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) The Staff
- 20C. Korean Dance Practicum (2 credits). *
Students are introduced to the different dances of Korea related to folk tradition. Movement concepts of music and the relation to culture are explored through demonstration, practice, and performance. Enrollment limited to 15. Offered in alternate academic years. (General Education Code(s): A.) The Staff
- 20D. Dance Improvisation (2 credits). *
Dance practicum emphasizing spontaneous movement in response to diverse media including visual art and music. Special emphasis given to the conceptual approaches taken by American artists such as Merce Cunningham, John Cage, and Robert Rauschenberg. Enrollment limited to 25. (General Education Code(s): A.) The Staff
- 20E. Culture and Dance of Bollywood (2 credits). F
Course is devoted to the culture and dance of Bollywood, a popular genre of film representation of cultures and peoples of India. The course combines both theory and practice by showing films on selected themes and having students learn this dance style and music. (Formerly Crown 40.) Priority given to college members. Other colleges by permission of instructor as space permits. Enrollment limited to 40. (General Education Code(s): PR-C.) A. Pandey
- 20F. Solo Performance Works in the Theater (2 credits). S
Explores solo performance works made for the theater. While all course texts fall within the narrative tradition, some center on performers' lives, others on socio-political issues. Course participants screen video recordings of live performances in class., ultimately creating their own brief solo performances. Enrollment restricted to college members. Enrollment limited to 24. (General Education Code(s): PR-C.) R. Giges
21. Music Practicum.
The Staff
- 21A. Korean Music and Culture (2 credits). *
Introduction to the farmers band tradition. Theory and practice of drumming are emphasized, resulting in a group performance. Enrollment limited to 20. Offered in alternate academic years. (General Education Code(s): A.) The Staff
- 21C. Gospel Choir (2 credits). W,S
Instruction in vocal performance in the tradition of gospel choirs. Music is transmitted aurally rather than by notation. The ensemble prepares a range of traditional and contemporary gospel music for performance. Ensemble performs publicly at least once each quarter. Enrollment limited to 60. May be repeated for credit. (General Education Code(s): PR-C, A.) V. Fiddmont
22. Art Practicum (2 credits). *
The practice of art in a particular world area (i.e., Japan, Pacific Islands, U.S.). Explores the art and craft of one world area and studies the associated cultural background. Enrollment restricted to college members. Enrollment limited to 15. (General Education Code(s): A.) The Staff
- 22A. Day of the Dead (2 credits). *
Day of the Dead: Creating an Exhibition--an exploration of art created to celebrate death in Mexican, Chicano, and American culture. Culminates in the creation of a Day of the Dead ceremony and community altar including students' individual art pieces. Enrollment restricted to college members. Enrollment limited to 25. (General Education Code(s): PR-E, A.) The Staff
- 22F. Vietnamese Festivals (2 credits). *
Vietnamese festivals and the arts they generate, from carving to water puppetry, will be explored for cultural, aesthetic, and iconographic principles, through viewing, discussion and a creative project. Enrollment limited to 20. (General Education Code(s): A.) The Staff

Management UCDC Program Writing Program Theater Arts Yiddish	<p>22G. Literary Magazine Publishing (3 credits). * Learn about and practice basics in publishing a national literary magazine with focus on poetry and the arts. Three-part focus: soliciting/editing, design/publishing, and publicizing/distributing. Students decide which poems published and awarded prizes in the "Viz. 25 and Under Awards" section. Audition for admission at first class with demonstrated experience in related field: creative writing, desk top publishing, art, graphic design, business, etc. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): A.) R. Hamilton</p>
Teaching and Administrative Staff Appendices Archive of General Catalogs Nondiscrimination Statement Search the Catalog	<p>23. Film/Theater Practicum. The practice of film/theater from the perspective of a particular culture, genre, or technical approach. The Staff</p> <p>23A. Film Practicum: Talking in Pictures (2 credits). * Introductory survey of the language of film and television. Considers the roles these media play in the shaping of cultural identity. Creative projects in the conceptual preparation for the making of films and videos. Enrollment limited to 25. (General Education Code(s): A.) The Staff</p> <p>23B. Personal Narratives in Theater and Film (2 credits). * Considers filmmakers and monologue performers as they come to terms with their identity in autobiographical works. Students write responses to texts and create their own brief personal narratives. Priority given to college members. Others by permission of instructor. Enrollment limited to 25. (General Education Code(s): PR-C, A.) R. Giges</p> <p>23C. Documentary/Mockumentary Films (2 credits). * The mockumentary grows out of the documentary tradition, but instead of pretending to truthfully capture reality, it blatantly distorts, revealing the subjectivity inherent in cinematic representation. Includes ethnographic, music, political and Hollywood mockumentaries, and critical readings on documentary film. Priority given to Porter College members. Others by permission of instructor. Enrollment limited to 25. (General Education Code(s): A.) R. Giges</p> <p>28. Sound Art (2 credits). W,S Several composers and performers of contemporary "art music" discuss the processes by which works are conceived in imagination, transcribed in notation, and realized in sound. After a brief introduction to contemporary music aesthetics, students attend a series of related presentations, seminars, and concerts. Enrollment restricted to college members. Enrollment limited to 18. (General Education Code(s): A.) The Staff</p> <p>32A. Queering the Arts (2 credits). S Exploration of the arts as a way to understand and experience how queerness has been expressed, repressed, denigrated, and celebrated in visual arts, music, film, poetry, and dance. Enrollment restricted to college members. Enrollment limited to 30. (General Education Code(s): A.) R. Hamilton</p> <p>33. Seminar in Arts (2 credits). F,W,S Theoretical and historical aspects of the arts from one culture or world area are explored through seminar discussion, library research, and film/video presentations. Priority given to college members. Others by permission of instructor. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): A.) The Staff</p> <p>33A. African Global Art and Music (2 credits). * The theme of "Changing the Global Community Through the Arts" explored in African global art and music through readings, listening sessions, and interactions with academics and performers. Culmination will be the African Global Festival and Symposium in April. Enrollment limited to 25. (General Education Code(s): A.) E. Cameron</p> <p>34B. Fractals, Chaos Theory, and the Arts (2 credits). S A consideration of chaos theory and fractal geometry as applied by 20th-century artists in all media. All necessary math and computer skills are covered. Students complete essays or art projects. Enrollment restricted to college members. Enrollment limited to 25. (General Education Code(s): PR-C, A.) R. Abraham</p> <p>35. Experiencing Live Performance (2 credits). *</p>

Students' attendance at live regional theater performances informed by artists' talks, class lectures, and readings. Students participate in informal performance workshops and write short critical essays. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): A.) The Staff

38. Working in . . . Series.

Writers, directors, technical workers, visual artists, and professionals in a diverse range of media discuss current work, paths that led to their creative endeavors, and constraints to working in the industry. The Staff

38B. Working in TV and Film (2 credits). *

Writers, directors, and technical workers in areas of TV and film discuss current work, paths that led to their creative endeavors, and constraints of working in the industry. Students research aspects of film and TV professional work. Cannot be repeated for credit. Priority given to college members. Others by permission of instructor. (General Education Code(s): A.) The Staff

38C. Introduction fo Laser Cutting, 3D Printng, and Vacuum Forming (2 credits). *

Design functional objects, sculpture, and other digitally inspired forms in a variety of 2D (Illustrator) and 3D applications (Cinema 4D, Ketch UP, or AutoCAD), then produce those models as physical objects with a variety of rapid-prototyping methods including laser cutting, 3D printing, and vacuum forming. Enrollment restricted to Porter College members. Enrollment limited to 25. The Staff

39. Jewish Personal Narratives on Film (2 credits). *

Considers Jewish-American filmmakers as they come to terms with their identity in autobiographical works. Students write responses to texts and create their own brief personal narratives. Enrollment restricted to college members. Enrollment limited to 25. (General Education Code(s): PR-C, A.) R. Giges

80A. Introduction to University Discourse: Writing Across the Arts. F

Explores rhetorical principles and conventions of university discourse, providing intensive practice in analytical writing, critical reading, and speaking. Study, discuss, and write about social, political, and aesthetic issues raised by selected works of literature and art in a variety of media. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. (General Education Code(s): T4-Humanities and Arts, C1.) The Staff

80B. Rhetoric and Inquiry: Writing Across the Arts. F

Explores the intersections between rhetoric (persuasion) and inquiry (investigation) and hones strategies for effective reading, writing, speaking, and research. Read, discuss, research, and write about social, political, and aesthetic issues raised by selected works of literature and art in a variety of media. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. (General Education Code(s): T4-Humanities and Arts, C2.) The Staff

80E. Arts Education in the Community. W

Organized in small teams, participants engage with students from public elementary classrooms to develop fully-staged group performance projects by end of term. Students are guided by instructor's models of teaching techniques, designed to stimulate the imagination, and by diverse readings. Priority given to college members. Others by permission of instructor. Enrollment limited to 30. (General Education Code(s): T4-Humanities and Arts, A.) T. Beal

80G. Making Poetry: Readings/Writing (2 credits). *

Guest poets read work and discuss their approaches to writing. Students develop their own poems and the class culminates in a poetry reading of student work. Priority given to Porter College members. Others by permission of instructor. Enrollment limited to 25. (General Education Code(s): A.) The Staff

80I. Improvisation. W

Theory and practice of improvisation in the performing arts with an emphasis on acting improvisation techniques. Readings and films develop a theoretical and historical understanding of spontaneous invention on stage. Students attend area theater

improvisational performances. Enrollment limited to 25. (General Education Code(s): PR-C, T4-Humanities and Arts, A.) R. Giges

80K. Ways of Knowing. *

Creativity in different disciplines is developed via different ways of knowing. Musical, visual, scientific, and spatial literacy demand understanding which is not primarily logocentric. Explores how practitioners of arts and science develop their work and conceptualize its execution. Enrollment restricted to college members. (General Education Code(s): T6-Natural Sciences or Humanities and Arts.) The Staff

80L. Documenting Oral History. *

Students learn basic techniques of interview and camera work to document oral histories collected from community elders. Students develop their skills in writing, theater, visual art, music, or film to reinterpret oral histories as artwork. Priority given to college members. Others by permission of instructor. Enrollment limited to 30. (General Education Code(s): T5-Humanities and Arts or Social Sciences, A.) T. Beal

80W. Writing Across the Arts. *

Explores the intersections between rhetoric (persuasion) and inquiry (investigation) and hones strategies for effective reading, writing, speaking, and research. Students read, discuss, research, and write about social, political, and aesthetic issues raised by selected works of literature and art in a variety of media. Prerequisite(s): satisfaction of the Entry Level Writing Requirement, and C1 and C2 requirements. Enrollment restricted to college members. Enrollment limited to 22. (General Education Code(s): T4-Humanities and Arts, W.) The Staff

83. Pacific Rim Film Festival: Viewing Across Cultures (2 credits). *

Involves viewing Asian and Pacific films at the annual Pacific Rim Film Festival, participating in post-screening discussions with area experts, and writing on the issues of cross-cultural viewing/reading of film. Enrollment restricted to college members. Enrollment limited to 20. May be repeated for credit. (General Education Code(s): PR-S, A.) M. Foley

99. Tutorial.

Various topics to be arranged. Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits).

Various topics to be arranged. Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

120. Advanced Dance/Theater Practicum (2 credits). *

The practice of dance/theater in a particular world area or culture. Students learn the art of one world area or era and the associated cultural background. Prerequisite(s): audition; prior training in the discipline is required. Enrollment limited to 15. May be repeated for credit. (General Education Code(s): A.) The Staff

121. Advanced Music Practicum (2 credits). *

The practice of music in a particular area of the world at an advanced level. Students learn the music of one world area or culture over the quarter and study the associated cultural background. Enrollment limited. May be repeated for credit. (General Education Code(s): A.) The Staff

121C. Opera Workshop/Music Practicum (2 credits). *

Rehearsal of the principal vocal parts of an opera in preparation for a full production. Consideration of the dramatic aspects of each role and the interrelationships of the characters. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) N. Paiement

126. South Asia Seminar (2 credits). *

South Asian issues in arts, technology, culture, and history will be presented in weekly seminar. Students will attend lectures, read supplementary articles, and write a short paper on a South Asian topic. Enrollment limited to 15. M. Foley

141. New Works Research Laboratory. *

Artists from different disciplines (i.e., art and music, design and creative writing, performance art and dance, etc.) collaborate with students to research and create new

pieces. Students are involved in phases of the development from the conception to presentation of the work. Enrollment limited to 20. May be repeated for credit. The Staff

194. Group Tutorial.

A program of independent study arranged between a group of students and a faculty instructor. The Staff

199F. Tutorial (2 credits).

Individual projects carried out under the supervision of a Porter faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Department of Languages and Applied Linguistics

218 Cowell College

(831) 459-2054

<http://language.ucsc.edu>

[Faculty | Program Statement](#)

Lower-Division Courses

1A. Accelerated Portuguese. F

This course is the first quarter of an accelerated two-quarter series (1A-B), which, taken together, are equivalent to first-year instruction. This intensive class requires no background in the Romance languages, and emphasizes all language skills, including cultural competence. (Formerly Intensive Elementary Portuguese.) The Staff

1B. Accelerated Portuguese. W

This course is sequential to course 1A, and completes first-year accelerated instruction. This intensive class is designed for students with no background in the Romance languages, and emphasizes all language skills, including cultural competence. (Formerly Intensive Elementary Portuguese.) Prerequisite(s): course 1A, or by consent of instructor. The Staff

60A. Accelerated Portuguese for Speakers of Romance Languages. F

The first quarter of accelerated first-year instruction (60A-B). Designed for students with four quarters of college-level Spanish, French, Italian, or Catalan, and native speakers of these Romance languages (including heritage speakers of Portuguese). Emphasizes all language skills, including cultural competence. (Formerly Advanced Beginning and Intermediate Portuguese.) Prerequisite(s): Spanish 4 or Spanish for Heritage Speakers 4 or Spanish for Spanish Speakers 61 or French 4 or Italian 4 or Spanish Placement Examination score of 50 or by consent of instructor. The Staff

60B. Accelerated Portuguese for Speakers of Romance Languages. W

The second quarter of the 60A-B series completes first-year accelerated instruction of Portuguese for speakers of Spanish, French, Italian, or Catalan, and native speakers of these Romance languages (including heritage speakers of Portuguese). Emphasizes all language skills, including cultural competence. (Formerly Advanced Beginning and Intermediate Portuguese.) Prerequisite(s): course 60A, or by consent of instructor. (General Education Code(s): IH.) The Staff

65A. Accelerated Intermediate Portuguese. S

A systematic grammar review is combined with literacy and cultural readings, while communicative exercises focus on improving students' ability to understand and hold sustained conversations. Students expand their vocabulary and knowledge of Brazil and other Portuguese-speaking cultures through films, popular music, and other culturally authentic materials. (Formerly Intermediate Portuguese.) Prerequisite(s): course 1B or 60B,

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or by consent of instructor. (General Education Code(s): CC, IH.) The Staff

65B. Accelerated Intermediate Portuguese. F

Sequential to course 65A, completes second-year accelerated instruction. A systematic grammar review is combined with literacy and cultural readings, while communicative exercises focus on improving students' ability to understand and hold sustained conversations. Students expand their vocabulary and knowledge of Brazil and other Portuguese-speaking cultures through films, popular music, and other culturally authentic materials. (Formerly Intermediate Portuguese.) Prerequisite(s): course 65A, or by consent of instructor. (General Education Code(s): CC, IH.) The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

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273 Social Sciences 2 Building
(831) 459-2002
<http://psychology.ucsc.edu>

[Faculty | Program Statement](#)

Lower-Division Courses

1. Introduction to Psychology. F,W,S
Introduces prospective majors to the scientific study of behavior and mental processes and also provides an overview for non-majors. Emphasizes social, cognitive, developmental, and personality psychology and their interrelations. (General Education Code(s): PE-H, IS.)
(F) M. Callanan, (W) A. Kawamoto, (S) The Staff

2. Introduction to Psychological Statistics. W,S
An introduction to elementary statistical principles and techniques relevant to psychological research. Topics covered include basic parametric and nonparametric statistics, analysis of variance, and simple factorial designs. This course is prerequisite to course 181. Prerequisite(s): course 1 or 20, and Applied Mathematics and Statistics 2 or 3 or 6 or Mathematics 3 or 4 or 11A or satisfactory placement score on math placement exam or CEEB Advanced Placement Calculus AB exam. Enrollment limited to 165. (General Education Code(s): SR, Q.) (W) The Staff, (S) S. Whittaker

10. Introduction to Developmental Psychology. F,W,S
Addresses psychological development from conception to adolescence. Provides an overview of developmental psychology. Prerequisite(s): course 1; Applied Mathematics and Statistics 2 or 3 or 6, or Math 3 or higher Mathematics courses; and course 2 or Applied Mathematics and Statistics 5 or 7/7L. (F) N. Akhtar, (W) The Staff, (S) S. Wang

20A. Cognition: Fundamental Theories. F,S
Introduces basic concepts in cognitive psychology with a focus on theoretical explanations of cognitive functioning. Topics include perception, attention, memory, concepts, language, visual cognition, executive functions, and reasoning processes. (Formerly course 20, Introduction to Cognitive Psychology.) M. Wilson, (F) T. Seymour

20B. Cognition: Applied Issues. *
Introduces basic concepts in cognitive psychology with a focus on applications to real-world issues. Topics include perception, attention, memory, concepts, language, visual cognition, executive functions, and reasoning processes. The Staff

40. Introduction to Social Psychology. F
An analysis of contemporary research in social psychology and of what that research can teach us about the world we live in. Problems of conformity, propaganda, prejudice,

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attraction, and aggression. Focuses on a person's relationship with other people, how he or she influences them and is influenced by them. A. Pratkanis

42. Student-Directed Seminar. F,W,S

Seminars taught by upper-division or graduate students under faculty supervision. (See course 192.) The Staff

60. Introduction to Personality Psychology. W

An overview of major personality theories from Freud to the modern day, and an introduction to contemporary research on personality development and assessment.

Prerequisite(s): course 1. P. Gjerde

65. Introduction to Humanistic Psychology. S

Humanistic psychology is seen here as those contemporary aspects of the field which are explicitly directed toward life-enrichment for members of the culture. The course does not attempt a complete survey of these aspects, but rather explores some of them in depth and attempts to begin working toward an overall theory of the humanistic movement. (General Education Code(s): IS.) R. Quinn

80A. Psychology and Religion. F

Topics covered include myth and the unconscious, the varieties of religious experience, dualism, women and religion, the role of authority, transpersonal experience, conversion, disaffiliation, self and community. (General Education Code(s): T3-Social Sciences.) R. Quinn

Upper-Division Courses

100. Research Methods in Psychology (7 credits). F,W,S

An introduction to research methods used to investigate human psychology. Course emphasizes critical thinking, designing and conducting research, analyzing and interpreting data, and writing a professional research report. (Formerly course 3.)

Prerequisite(s): Entry Level Writing and Composition requirements; Applied Mathematics and Statistics 2 or 3 or 6, or Mathematics 3 or higher level Mathematics course; and course 2 or Applied Mathematics and Statistics 5 or 7/7L. (F) C. Leaper, (W) F. Crosby, (S) The Staff

101. Topics in Developmental Psychology.

These topics, offered at different times by different instructors, examine selected topics in developmental psychology. (Formerly course 100.) The Staff

102. Adolescent Development: Adolescence into Young Adulthood. S

Focuses on individual and relational development from early adolescence into young adulthood. Emphasis on the mutual influences of family relationships and adolescent development, and on the interface of family, peer group, and school experience in cultural contexts. Prerequisite(s): courses 3 or 100 and course 10. M. Azmitia

103. Adult Development and Aging. W

Overview of the cultural, societal, biological, interpersonal, and cognitive processes of adult development and aging. Class discusses how each of these contexts and processes promotes stability and change as adults experience adulthood, reflect on their lives, and prepare for death. Prerequisite(s): courses 3 or 100 and course 10. M. Azmitia

104. Development in Infancy. S

Focuses on psychological development in infancy. Presents research on perceptual, cognitive, and social-emotional development during the first two years of life. (Formerly course 101.) Prerequisite(s): courses 3 or 100, and 10. Enrollment restricted to psychology and cognitive science majors. N. Akhtar

105. Children's Thinking. F,S

Cognition in children from infancy through adolescence. Basic and current research on children's understanding of the social and physical world. Focus on major theoretical perspectives: especially Piaget's constructivist approach and sociocultural approach.

Prerequisite(s): courses 3 or 100 and 10. (F) The Staff, (S) M. Callanan

106. Social and Emotional Development. W

An examination of contemporary theory and research on social and emotional development from infancy through childhood. Prerequisite(s): courses 3 or 100 and 10. C. Leaper

Management UCDC Program Writing Program Theater Arts Yiddish	<p>107. Gender and Development. *</p> <p>Examines the developmental psychology of gender in childhood and adolescence. Prerequisite(s): course 3 or 100, and course 10. Enrollment restricted to psychology majors. C. Leaper</p> <p>108. Educational Psychology. F</p> <p>An overview of psychological theories and principles applied to formal and informal educational settings. Topics include: learning, motivation, cultural diversity, individual differences, and assessment. Students complete a research project. Prerequisite(s): courses 10 and 100. The Staff</p> <p>110. Culture and Human Development (6 credits). W</p> <p>Examines theory, research, and methods of studying the inherent cultural basis of human development and variations and similarities in human lives and activities in different communities worldwide. The approach draws on ideas and observations from psychology, anthropology, linguistics, sociology, and history. Course includes lab exercises using interview and observation methodologies and presentations of library research. (Formerly course 113.) Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and one of the following: course 3 or 100; Anthropology 1 or 2; Education 92A, 92B, or 92C; Latin American Studies 1; or Sociology 1. (General Education Code(s): W, E.) B. Rogoff</p> <p>112. Moral Development. F</p> <p>How and why do children develop into moral beings? This course covers key theories and empirical research about the cognitive, emotional, and behavioral aspects of moral development, including psychoanalytic, behaviorist, constructivist, nativist, and evolutionary approaches. Prerequisite(s): courses 10 and 100. A. Dahl</p> <p>115. Lifespan Developmental Psychopathology. F</p> <p>Examines theory and research on developmental psychopathology. Emphasizes the origin and longitudinal course of disordered behavior. Explores the processes underlying continuity and change in patterns of adaptation and age-related changes in manifestations of disorders. Prerequisite(s): courses 3 or 100, 10, and 170. The Staff</p> <p>118. Special Topics in Developmental Psychology. F,W,S The Staff</p> <p>118A. Children and War. W</p> <p>Examines the development and behavioral ecology of children affected by war. Discusses refugee children, displaced children, abandoned children, orphaned children, children living in protracted conflict, and child soldiers. Reviews child protection strategies and psychosocial intervention for war-affected children. Prerequisite(s): courses 3 or 100 and 10. D. Hoffman</p> <p>118B. Children in Extreme Circumstances. F</p> <p>Reviews child survival in life-threatening contexts. Examines the lives of street children, institutionalized children, orphans, children in extreme poverty, enslaved children, war-affected children, abandoned children, and children whose parents have HIV/AIDS and other life-threatening illnesses. Prerequisite(s): courses 3 or 100 and 10. Enrollment limited to 60. D. Hoffman</p> <p>118C. Theory of Mind. *</p> <p>Reviews recent research on how children come to understand aspects of the human mind, such as desire, belief, goals, and intention. Also discusses the implications of this research on typically and atypically developing children. (Formerly Children's Understanding of the Human Mind.) Prerequisite(s): courses 3 or 100, and 10. Enrollment restricted to psychology majors. Enrollment limited to 60. S. Wang</p> <p>119. Senior Seminars in Developmental Psychology. F,W,S The Staff</p> <p>119A. Development as a Sociocultural Process. F</p> <p>Examines theory and research in sociocultural approaches to how people (especially children) learn and develop through participating in activities of their communities with other people. Emphasizes the organization of social interactions and learning opportunities, especially in communities in the Americas where schooling has not</p>
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historically been prevalent. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): satisfaction of Entry Level Writing, Composition requirements; course 3 or 100, Anthropology 1 or 2, Education 92A, 92B, or 92C, Latin American and Latino Studies 1, or Sociology 1. Enrollment restricted to seniors or by permission. Enrollment limited to 30. (General Education Code(s): W.) B. Rogoff

119D. Cultural Perspectives on Adolescent Development. F
 Examines cultural influences on adolescence from diverse cultural, ethnic, and socioeconomic communities from the perspective of current interdisciplinary theories and research. Topics include: identity development; changes from early adolescence to adulthood; links among family, school, peer, and community experiences; programs for youth; and implications of bridging research, social policy, and community practice. Includes research practicum. Satisfies the seminar requirement. Satisfies the senior comprehensive requirement. Prerequisite(s): courses 3 or 100 and 10 and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior psychology majors or permission of instructor. Enrollment limited to 30. C. Cooper

119E. The World of Babies. *
 Focuses on how infants learn about intuitive physics, naive psychology, and shared culture. Also discusses how learning is facilitated by the community in which infants are brought up. Satisfies the seminar requirement. Satisfies the senior comprehensive requirement. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors and cognitive science majors. Enrollment limited to 30. S. Wang

119F. Language Development. W
 An introduction to language development in young children. Explores current theory and research in language development; and focuses on the preschool years. Satisfies the seminar requirement. Satisfies the senior comprehensive requirement. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements, course 10 and course 3 or 100. Enrollment restricted to senior psychology and cognitive science majors. Enrollment limited to 30. N. Akhtar

119H. Children, Research, and Policy. W
 Explores ways that research in developmental psychology can be used to address "real-world" problems facing children. With an analytical focus on evidence and generalizability, we will investigate research-policy connections in topics of popular interest (e.g., child custody, poverty). Satisfies seminar requirement. Satisfies senior comprehensive requirement. (Formerly Developmental Psychology Research and "Real World" Problems) Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. (General Education Code(s): W.) M. Callanan

119I. Special Topics in Narrative Development. S
 Examines a special topic of current interest in developmental psychology centering on the features of self-identity that develop in the context of telling stories of individual and/or shared experiences, such as self-defining memories or family stories. Satisfies the seminar requirement. Satisfies the senior comprehensive requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 3 or 100; enrollment restricted to senior psychology majors. Course 60 recommended. Enrollment limited to 30. A. Thorne

119M. Identity Development in Social and Cultural Contexts. *
 Senior seminar that focuses on identity development in adolescence and young adulthood. Discusses theory and research on the development of personal and social identities and the sociocultural contexts in which these personal and social identities are negotiated. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 3 or 100; course 102 strongly recommended. Enrollment restricted to senior psychology majors or by permission of instructor. Enrollment limited to 30. (General Education Code(s): W.) M. Azmitia

119P. Children and Technology. *
 Covers current research and theory related to children and technology. Topics include: how

children learn to use new technologies; how technology use impacts children's thinking; computer gaming and aggression; and how children's social relationships are influenced by technology. Satisfies the seminar and comprehensive requirements. Prerequisite(s): courses 1 and 10; and 3 or 100; and satisfaction of Entry Level Writing and Composition requirements. Enrollment restricted to senior psychology majors and cognitive science majors. Enrollment limited to 30. M. Callanan

119S. The Developmental Psychology of Love. S

Drawing upon key theoretical and empirical findings from across psychology's subfields, this course explores how the experience and expression of love evolves across the life course and how the unique contributions of both partners to relationship dynamics contour relationship trajectories. Prerequisite(s): course 100; satisfaction of entry-level writing and composition requirements. Enrollment restricted to senior psychology majors. Enrollment limited to 30. L. Shapiro

119T. Media Contexts of Adolescent and Young Adult Development. S

Focuses on the role of media in adolescents' and young adults' identity development, friendships, and peer relationships. Topics include: globalization; physical/body image; friendships and peer acceptance; and educational and career goals. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, course 10, and course 3 or 100. Course 102 is recommended. Enrollment restricted to senior psychology majors. Enrollment limited to 30. M. Azmitia

120. Visual and Spatial Cognition. W

Focuses on high-level perception and visual, spatial, and other sensorimotor representations as elements of human cognition. Topics include imagery, visual attention, mental models, spatial language, the body schema, near-body space, and brain organization for representing space. Prerequisite(s): course 1 or 20 or 20A, and course 100. Enrollment restricted to cognitive science and psychology majors and minors.

Enrollment limited to 60. The Staff

120D. Deafness and Sign Language. *

Explores what we can learn about human cognition by studying sensory loss and language in a different sensory modality. Topics include brain organization, sensory compensation, working memory, visual cognition, and psycholinguistics. Prerequisite(s): course 1 or 20 or 20A, and course 100. Enrollment restricted to psychology and cognitive science majors and minors. M. Wilson

121. Perception. S

Basic perceptual psychology, emphasizing the relationships between perception, neuroscience, and cognition. Topics include shape, color, and depth; hearing, taste, smell, and touch; and perceiving faces, voices, and language. Prerequisite(s): course 3 or 100 or Biology 70. N. Davidenko

123. Cognitive Neuroscience. W

An examination of the physiological mechanisms of psychological processes, including sensory systems, motor systems, control systems, and memory and learning. Principles of nervous system organization are discussed at each level. (Formerly Behavioral Neuroscience) Prerequisite(s): course 3 or 100 or Biology 70 and one course in statistics (course 2 or Applied Mathematics and Statistics 5 or 7). B. Bridgeman

124. Psychology of Reading. F

Focuses on the cognitive processes that underlie reading in adults. Additional topics include different writing systems, learning to read, and reading deficits. Recommended for upper-division students. Prerequisite(s): course 3 or 100. A. Kawamoto

125. The Psychology of Language. F

An analysis of human communication as a function of psychological, linguistic, and social factors. Focuses on language comprehension and production, including the processing of sounds, words, syntax, semantics, pragmatics, and dialogue. Prerequisite(s): course 3 or 100. J. Fox Tree

126. Aging and the Human Brain. *

How does the brain change as we age? Course covers new developments in research on cognitive neuroscience and aging, with a focus on the consequences for memory, emotion,

	<p>and decision-making. Prerequisite(s): course 3 or 100, and 20, 20A, 121, 123, 129 or Biology 70. The Staff</p> <p>127. Computer Mediated Communication. W Provides an introduction to cognition as it relates to how people communicate using computers and the Internet. Focuses on the cognitive and social aspects of communication. Prerequisite(s): course 3 or 100 or 20 or 20A or consent of instructor. Course 20 highly recommended. S. Whittaker</p> <p>128. Human Factors. S Human factors psychology studies human-machine interaction and computer usability, and involves diverse topics including displays and controls; human error; decision-making; psycholinguistics; and the role of fatigue, environmental stressors, user-interface design, and social/team factors that directly impact human performance. Prerequisite(s): course 3 or 100 . The Staff</p> <p>129. Human Learning and Memory. S Examines basic theories, models, methods, and research findings in human memory. Both traditional and nontraditional topics are covered. Prerequisite(s): course 3 or 100. B. Storm</p> <p>130. Deception, Brain, and Behavior. * Focuses on behavioral and brain manifestations of deception. Topics include developmental changes that allow us to understand and to use deception, physical implications of lying expressed in the face, voice, posture, and brain activity. Also covers mechanical or behavioral techniques used in deceptive behavior, whether in the form of overt behavior or brain activity. Prerequisite(s): course 3 or 100; course 20 or 20A or any upper-division cognitive course strongly recommended. T. Seymour</p> <p>132. Neural Modeling. S Introduces students to the use of computer simulations in experimental psychology. Students use existing software to explore topics in cognition such as learning, memory, and psycholinguistics. One upper-division course in cognitive psychology (courses 120-139) is recommended. Prerequisite(s): course 3 or 100. Enrollment limited to 15. A. Kawamoto</p> <p>134. Technology Assisted Reading Acquisition. * Students achieve an understanding of language and its acquisition. The course evaluates nativist and empiricist views, language comprehension and production, speech and reading, and technological influences in language acquisition and its use. Prerequisite(s): upper-division coursework in psychology, cognitive psychology, linguistics, engineering, or computer science. Enrollment limited to 30. (General Education Code(s): PE-H.) D. Massaro</p> <p>135. Feelings and Emotions. F Focuses on contemporary research in the psychology of human emotions. Special attention given to work in cognitive science, including psychology, linguistics, philosophy, and anthropology, on how emotions are central to understanding human action and mental life. Prerequisite(s): course 3 or 100, or major standing in linguistics, philosophy or anthropology. R. Gibbs</p> <p>137. Mind, Body, and World. * Psychologists primarily view the mind as being separate from the body, and the body as being separate from the external world. This course questions this widely held position and explores the way that minds arise from individuals' bodily interactions with others and the world around them. Particular attention is paid to the role of human embodiment in language use and everyday cognition. Prerequisite(s): course 3 or 100, or major standing in linguistics, philosophy or anthropology. R. Gibbs</p> <p>138. Computer Programming for the Cognitive Sciences. W Offers a practical introduction to computer programming for psychology and cognitive science students. Students learn simple and effective techniques for collecting, parsing, and analyzing behavioral data from behavioral experiments. Students create programs to present visual stimuli, collect keyboard responses, and then write response time and accuracy to datafiles on disk. Students then write new programs to extract information from the datafiles, perform statistical analysis, and present summaries of the findings. The course uses cross-platform languages, such as Python or Xojo, for application</p>
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development. No previous programming experience is necessary. Prerequisite(s): course 1 or 20A or 20B, and 100. Enrollment restricted to psychology and cognitive science majors. T. Seymour

139. Senior Seminars in Cognitive Psychology. F,W,S
The Staff

139A. Cognitive Laboratory. F

Advanced laboratory experience with research methods and phenomena in cognitive psychology. Satisfies the seminar requirement. Satisfies the comprehensive requirement. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors and cognitive science majors. Enrollment limited to 30. B. Storm

139B. Consciousness. F

Provides a psychological study of human consciousness. Aim is to explore the following questions: What is consciousness? Where does consciousness come from? What functions does consciousness have in everyday cognition? How do we best scientifically study consciousness? These issues are examined from the perspective of contemporary research in cognitive science. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology, philosophy, anthropology, linguistics, and cognitive science majors. Enrollment limited to 30. R. Gibbs

139C. The Psychology of Lying and Deception. *

Discusses why and how people lie. Using scientific articles, movies, and our everyday lives as source material, explores the nature of lying; then focuses on various approaches to behavioral and mechanical "lie detection." Satisfies seminar requirement. Satisfies senior comprehensive requirement. Enrollment restricted to psychology and cognitive science majors. Enrollment limited to 30. T. Seymour

139D. Modeling Human Performance. S

Hands-on experience using computational modeling to understand human cognitive-task performance by comparing simulated and human data. Satisfies senior seminar requirement. Satisfies senior comprehensive requirement. Enrollment restricted to junior and senior psychology, cognitive science, computer science, and computer engineering majors, or by permission of instructor. Prerequisite(s): Entry Level Writing and Composition requirements; course 3 or 100, and at least one of the following: course 121 or 123 or 128 or 129; or Computer Science 5C or 5J or 11 or 12A or 13H or 130 or 140. Enrollment limited to 30. T. Seymour

139F. Psychology and Evolutionary Theory. S

Human psychology is examined from the viewpoint of evolutionary theory, including perspectives from ethnology, anthropology, and neuropsychology. Upper-division students from diverse backgrounds are encouraged to enroll. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology, anthropology, biology, philosophy, sociology, cognitive science, and feminist studies majors. Enrollment limited to 30. B. Bridgeman

139G. Conversations. *

Explores how conversations work and how speakers accomplish their goals in an interaction. Topics include conversational structure, turn-taking, variation in language use, and the functions of discourse markers (words like "um," "uh," and "you know"). Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology and cognitive science majors. Enrollment limited to 30. J. Fox Tree

139H. Weird Science. W

Explores the relationship between science and pseudoscience from a cognitive psychological perspective, including discussion of collection and selection of data, statistical assessment of data, cognitive illusions, memory distortions, reasoning, and decision-making. Also highlights the dissemination of scientific knowledge. Satisfies seminar requirement. Satisfies comprehensive requirement. (Formerly course 134.)

Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology and cognitive science majors. Enrollment limited to 30. J. Fox Tree

139J. Forgetting. *

Explores forgetting as an essential and adaptive process in human memory. Topics include: intentional and unintentional forms of forgetting; the (re)constructive nature of memory; and cases of extreme remembering. **Prerequisite(s):** satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology and cognitive science majors. Enrollment limited to 30. B. Storm

139K. Face Recognition. W

To navigate our social world, we need to extract a wealth of information from faces, including identity, expression, gaze, age, and gender. This seminar reviews current topics in face-recognition research, from cognitive, neuroscience, developmental, social, and computational perspectives. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements; and course 1 or 20 or 20A; and course 3 or 100. Enrollment restricted to senior cognitive science, neuroscience, and psychology majors. Enrollment limited to 30. N. Davidenko

140. Topics in Social Psychology.

The Staff

140C. Health Psychology. *

Course examines the psychological aspects of health, illness and healing. Focuses primarily on etiology, treatment and prevention; specific topics include stress and the immune response, social support, compliance, health beliefs, and the healing relationship.

Prerequisite(s): courses 3 or 100. J. Kaupp

140G. Women's Lives in Context. S

Examines gender as a psychological and social factor that influences women's experiences in different contexts. Cuts across other areas of psychology by taking a women-centered approach. Emphasis also placed on understanding how intersections between gender, race and ethnicity, sexual orientation, socioeconomic status, etc., impact women's psychological well-being. **Prerequisite(s):** course 3 or 100, or Sociology 103B, or Feminist Studies 100, or Community Studies 100. Enrollment restricted to junior and senior psychology, feminist studies, sociology, and community studies majors. S. Grabe

140H. Sexual Identity and Society. W

Presents an integrative approach to the study of sexual identity. Focuses on the regulation of sexual desire through medical, psychological, and legal discussions. Examines social movements, social policy, and ongoing debates on the meaning and social organization of desire. P. Hammack

140L. Women's Bodies and Psychological Well-Being. *

Examines how women's bodily experiences (e.g., sexual objectification, violence, menarche, sexual health) are uniquely tied to their subordinate status and impacts their psychological well-being. Theories of gender inequality will address how social control directed at women's bodies through power relations imbedded in societal institutions contributes to women's marginalized status. Enrollment restricted to senior psychology, sociology, feminist studies, and community studies majors. **Prerequisite(s):** satisfaction of the Entry Level Writing and Composition requirements; and courses 3 or 100, or Sociology 103B, or Feminist Studies 100, or Community Studies 100. Enrollment limited to 60. S. Grabe

140Q. Social Psychology of Gender. S

Considers individual, interpersonal, and cultural influences on gender similarities and differences in thinking, motivation, and behavior. Emphasizes factors related to power and status inequalities between women and men. **Prerequisite(s):** courses 3 or 100. C. Leaper

140T. Psychology of Trauma. *

Overview of psychological theory and research on trauma and traumatic stress, including responses to childhood trauma (especially sexual abuse), combat, and natural disasters. Variety of theoretical frameworks presented, including developmental, cognitive, neuropsychological, clinical, and social/contextual. **Prerequisite(s):** course 3 or 100 or permission of instructor. E. Zurbriggen

142. Psychology of Oppression and Liberation. F

Provides theoretical frameworks for understanding interlocking systems of oppression from the perspective of "the oppressed" as well as "the oppressor" nationally and internationally. Goes beyond mainstream (traditional) psychology and emphasizes critical psychological perspectives that include micro- and macro-level theories of oppression; importance of ideology in oppressive systems; and theories of social change and liberation across contexts. Prerequisite(s): course 3 or 100 or declaration of major in one of the following programs: feminist studies, sociology, community studies, or politics. (General Education Code(s): E.) The Staff

143. Intergroup Relations. S

Introduces the study of conflict and intergroup relations. Examines historical and cultural foundations of group psychology and social psychological theory and research on conflict between groups, cultures, and nations. Surveys work on multiculturalism, race relations, and global political conflict. Applies social psychological theories to cases of intergroup conflict. Prerequisite(s): course 3 or 100, or major standing in politics, community studies or anthropology, or by permission of instructor. Enrollment limited to 120. (General Education Code(s): E.) The Staff

145. Social Influence. W

An advanced course for upper-division undergraduates interested in the study of the persuasion process. The course investigates common influence tactics and how those tactics are used in various settings. Prerequisite(s): course 3 or 100. A. Pratkanis

145D. Social Psychology of Autocracy and Democracy. S

Humans are the only animal capable of living in both authoritarian and democratic regimes. Course explores the nature of these forms of social relationships with a goal of promoting democracy. Topics include: obedience to authority, conformity, self-justification, propaganda, power, and conflict resolution. (Formerly course 159G.) Prerequisite(s): course 3 or 100. Enrollment restricted to junior and senior psychology majors. A. Pratkanis

146. The Social Context. *

A systematic analysis of the social and contextual determinants of human behavior, with special attention given to concepts of situational control, social comparison, role and attribution theories, as well as the macrodeterminants of behavior: cultural, historical, and sociopolitical context. Prerequisite(s): courses 3 or 100 and course 40; or Sociology 136. The Staff

147A. Psychology and Law. W

Current and future relationships between law and psychology, paying special attention to gaps between legal fictions and psychological realities in the legal system. Topics include an introduction to social science and law, the nature of legal and criminal responsibility, the relationship between the social and legal concepts of discrimination, and the nature of legal punishment. (Also offered as Legal Studies 147A. Students cannot receive credit for both courses.) Prerequisite(s): courses 3 or 100; and course 40 is highly recommended prior to taking this course. Enrollment restricted to psychology, pre-psychology, and legal studies majors. C. Haney

147B. Psychology and Law. S

Continuing discussion of current and future relationships between law and psychology and to contrasting psychological realities with legal fictions. Special attention is given to the criminal justice system including crime causation, the psychology of policing and interrogation, plea bargaining, jury selection and decision making, eyewitness identification, and the psychology of imprisonment. (Also offered as Legal Studies 147B. Students cannot receive credit for both courses.) Prerequisite(s): course 147A. C. Haney

149. Community Psychology: Transforming Communities. F

Introduction to community psychology, a discipline that blends social psychology, sociology, and anthropology. Class topics include levels of analysis, ecologies, prevention, intervention, feminism, empowerment, sense of community, coalition building, and social justice and action. Prerequisite(s): course 3 or 100. Enrollment restricted to juniors and seniors. R. Langhout

150. Social Psychology of Flimflam. F

Why do we believe strange things? This course investigates such flimflams as beliefs in the

Loch Ness Monster, quack health care, and racial superiority to illustrate the underlying social psychological principles that lead us to adopt weird attitudes. (Formerly course 159I.)
Prerequisite(s): course 3 or 100. (General Education Code(s): SI.) A. Pratkanis

153. The Psychology of Poverty and Social Class. W

Examines how social class shapes attitudes, beliefs, and behaviors. Emphasis is placed on structural barriers and their impact on the well-being of low-income groups. Strategies for reducing classist discrimination, improving interclass relations, and strengthening social policy are discussed. Prerequisite: course 3 or 100, or major standing in anthropology, community studies, economics, legal studies, politics, sociology, or feminist studies. H. Bullock

155. Social-Community Psychology in Practice. W

This service-learning course requires time in the classroom and the field. Students gain a deep understanding of social justice paradigms, community-based collaborative research, ethics, field-based research, reflexivity, and socio-cultural development modes.

Prerequisite(s): Courses 3 or 100; courses 149 and 182 are recommended prior to taking this course. Admission by application and interview only. (Formerly course 159P.)

Enrollment limited to 15. (General Education Code(s): PR-S.) R. Langhout

159. Senior Seminars in Social Psychology. F,W,S

The Staff

159A. Sexual Identity. S

Considers the experience of lesbian, gay, bisexual, and transgender individuals from a psychological perspective. Reviews theory and research on compulsive heterosexuality, heterosexism and homophobia, culture and sexual-identity diversity, issues of history and community of LGST individuals, and perspectives on sex, gender, and sexuality from queer theory. Satisfies the seminar requirements. Satisfies the senior comprehensive requirement.

Prerequisite(s): course 3 or 100, and satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior psychology majors. Enrollment limited to 30. P. Hammack

159D. Psychology of Sexual Aggression. *

An overview of psychological theory and research related to sexual aggression, focusing on both perpetration and victimization. Includes a discussion of the social construction of masculinity and femininity, media representations of sexual violence, and alternative (non-aggressive) visions of sexuality. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): Entry Level Writing and Composition requirements; and course 3 or 100. Enrollment restricted to senior psychology or feminist studies majors or permission of instructor. Enrollment limited to 30. E. Zurbriggen

159E. Peace Psychology. F,W

Is war inevitable? What is peace? Is it more than the absence of violence? Explore how psychology—the study of human behavior—can help to decrease violence and enhance cooperation at multiple levels including the personal, interpersonal, community, and international arenas. Satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): Entry Level Writing and Composition requirements; and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. The Staff

159F. Culture and Identity. *

Considers the relationship between culture and identity in the "local" context of multiculturalism in the United States and the "global" context of conflict and identity politics. Examines concept of "culture," "ethnicity," "race," and "identity" in social science literature. Considers issues of power, social justice, and identity pluralism in both domestic and international contexts. Satisfies seminar requirement. Satisfies the senior comprehensive requirement. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. P. Hammack

159H. Community-Based Interventions. *

Topics include: what makes a successful intervention; what happens before the formal intervention begins; the ethics involved with interventions; different methods for assessing interventions; and different praxis models. Satisfies the seminar requirement. Satisfies the

senior comprehensive requirement. A service component is involved. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. R. Langhout

159X. Psychology of Social Activism. S

Covers social-psychological scholarship relevant to social justice activism that receives limited academic attention in conventional psychology. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, and course 3 or 100. Enrollment restricted to senior cognitive science and psychology majors. Enrollment limited to 30. S. Grabe

165. Systems of Psychotherapy. W

A review of the most used major methods of psychotherapy, with attention to the underlying assumptions about personality, health, and disease. Prerequisite(s): course 3 or 100; course 60 or 170 recommended. V. Tonay

166. Personality Assessment. S

How do we really know a person? Course provides hands-on experience with assessing such individual differences as intimacy motivation, dominance, paranoia, and well-being. Students construct their own personality test and learn to critique the kinds of self-report, observational, and interview techniques that are used in organizational and clinical contexts. Prerequisite(s): course 3 or 100; course 60 highly recommended as preparation. V. Tonay

167. Clinical Psychology. W

Serves as an in-depth introduction to the field of clinical psychology. Covers issues of clinical assessment, interviewing, testing, and a range of therapeutic modalities. Prerequisite(s): courses 3 or 100, and 60 or 65; course 170 is recommended as preparation. R. Quinn

168. The Study of Dreams. *

An overview of dream studies by several major theorists and researchers of the 20th century, including Freud, Jung, and Hall. An emphasis on studies that reveal cognitive conceptions and personal concerns through quantitative and qualitative analyses of sets of dreams from individuals and groups. Other topics covered more briefly include dream recall, children and dreams, and the role of dreams within cultures. Prerequisite(s): course 3. G. Domhoff

169. Community Mental Health. F

Examines theory and research on outreach and prevention for application with various populations in community settings (e.g., victims of violence, immigrants, severely mentally ill); presents characteristics of successful agencies and agency development. Surveys interventions currently used in community mental health. Prerequisite(s): course 3 or 100. Courses 60 or 170 recommended. V. Tonay

170. Abnormal Psychology. F,S

Survey of theory, research, and intervention in human psychopathology. Covers psychological, biological, developmental, and socio-cultural approaches. Prerequisite(s): course 3 or 100; course 60 highly recommended as preparation. D. Hoffman

171. Childhood Psychopathology. F

A critical and intensive exploration of a wide variety of specific disorders within their biological, developmental, and social contexts. Concepts of psychopathology in childhood, major and minor diagnostic systems, and a variety of theories of etiology are explored. General intervention strategies and a wide range of specific psychotherapy systems for treatment are closely examined and demonstrated. Prerequisite(s): courses 3 or 100; and course 10. Course 170 strongly recommended. D. Saposnek

175. Personality, Relationships, and Emotions. *

Explores the nature, origins, and development of human personality as it relates to emotions in the context of close relationships. Prerequisite(s): course 3 or 100. Courses 10 and 60 recommended as preparation. K. Cardilla

179. Senior Seminars in Personality Psychology. F,W,S

The Staff

179A. Theories of Moral Psychology. W

A seminar course with focus on theories of moral development from the psychoanalytic, social learning, cognitive-developmental, and humanistic perspectives. Students confront and discuss moral dilemmas from the four perspectives, working toward their own individual theories of pro-social behavior. Course satisfies seminar requirement. Satisfies senior comprehensive requirement. Prerequisite(s): essay required on a moral issue or dilemma relevant to the student's life. Prerequisite(s): Entry Level Writing and Composition requirements; and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. R. Quinn

179B. Children and Divorce. S

Explores history and psychology of divorce and the short- and long-term effects of divorce on children. Examines wide range of findings that have drawn diametrically opposed conclusions; delves into social attitudes and legal structures that have impeded and enhanced divorce transitions for children and parents; investigates future models for divorcing that are child-friendly and consistent with findings from newly emerging longitudinal research on children and divorce. Satisfies seminar and senior comprehensive requirements. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. D. Saposnek

179D. Psychological Interpretation. F

Seminar explores ego, Jungian, and object relations interpretive systems in-depth, applying them to film, music, literature, dreams, art, as well as traditional psychological measures, such as the TAT and interview protocols. Interprets psyche of author, audience, and engendering culture. Prerequisite(s): courses 3 or 100, and course 60; course 165 recommended; satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to senior psychology majors. Enrollment limited to 30. V. Tonay

179G. Child, Youth, and Family Assistance in the Community. *

Allows students in psychology field study to conduct senior capstone projects on topics related to their service learning (field study). The seminar is devoted to creating projects related to community systems that address the needs of at-risk child, youth, and families. Students in the seminar should be pre-enrolled in course 193. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements and course 3 or 100. Enrollment restricted to senior psychology majors. Enrollment limited to 30. D. Hoffman

181. Psychological Data Analysis. S

Intermediate statistical methods widely used in psychology (e.g., ANOVA, ANCOVA, multiple-comparisons, bivariate correlation, multiple regression, repeated-measures), corresponding SPSS or R programs, and elements of measurement theory. Prerequisite(s): course 3 or 100. (General Education Code(s): Q.) The Staff

182. Qualitative Research Methods. W

Designed to equip students with the ability to evaluate, conceive, and carry out psychological research. A variety of techniques (observational, ethnographic, and field) examined and experienced. Students carry out research projects. (Formerly Advanced Research Methods.) Prerequisite: course 3 or 100. Enrollment limited to 30. (General Education Code(s): PR-E.) R. Langhout

183. History and Systems of Psychology. *

An overview of the history of psychology. Examines issues of paradigm and philosophy of science. Reviews central paradigms in the history of the discipline. Assumes a critical-historical approach, linking scientific knowledge produced to prevailing societal beliefs about mind and behavior. (Formerly course 180) Prerequisite(s): course 3 or 100. P. Hammack

190. Senior Seminars.

Special topics with a format varying each quarter. The Staff

191. Teaching College Psychology.

A series designed to provide undergraduates at the upper-division level with an opportunity to participate in planning and teaching college-level psychology. May not be repeated for credit. The Staff

191A. Introduction to Teaching Psychology. F,W,S Students lead discussion groups and provide one-to-one tutoring for courses 1 or 3 or 100. Admission requires essay describing interest in becoming a course assistant, copies of psychology evaluations, and a letter of recommendation from a psychology faculty member; completion of some upper-division psychology courses prior to enrollment in this course. Prerequisite(s): course 3 or 100. Enrollment restricted to psychology majors. (Formerly "Introduction to Psychology.") Enrollment limited to 20. (F) M. Callanan, (W) A. Kawamoto
192. Directed Student Teaching. F,W,S Teaching of a lower-division seminar (course 42) under faculty supervision. Available only to upper-division or graduate students. Students submit petition to sponsoring agency. The Staff
193. Field Study. F,W,S Series designed to provide advanced psychology undergraduates opportunity to apply what they have learned in the classroom to direct experience in a community agency. Students earn academic credit by working as interns at a variety of psychological settings where they are trained and supervised by a professional within the agency. Faculty also supervise the students' academic work by providing guidance and helping them integrate psychological theories with their hands-on intern experience. A two-quarter commitment. Students submit petition to sponsoring agency. Prerequisite(s): courses 3 or 100. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. (General Education Code(s): PR-S.) The Staff
193A. Developmental Field Study. F,W,S Work in a community-based setting while completing self-directed academic work focused in the developmental area under the guidance of a faculty member. Students submit petition to sponsoring agency; applications due one quarter in advance to the Psychology Field Study Office. Prerequisite(s): courses 3 or 100. Enrollment restricted to junior and senior psychology majors. Enrollment limited to 100. May be repeated for credit. (General Education Code(s): PR-S.) The Staff
193B. Cognitive Field Study. F,W,S Work in a community-based setting while completing self-directed academic work focused in the cognitive area under guidance of a faculty member. Students submit petition to sponsoring agency; applications due one quarter in advance to the Psychology Field Study Office. Prerequisite(s): courses 3 or 100. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. (General Education Code(s): PR-S.) The Staff
193C. Social Field Study. F,W,S Work in community-based setting while completing self-directed academic work focused in the social area under guidance of a faculty member. Students submit petition to sponsoring agency; applications due one quarter in advance to the Psychology Field Study Office. Prerequisite(s): courses 3 or 100. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. (General Education Code(s): PR-S.) The Staff
193D. Clinical/Personality Field Study. F,W,S Work in community-based setting while completing self-directed academic work focused in clinical or personality area under guidance of a faculty member. Students submit petition to sponsoring agency; applications due one quarter in advance to the Psychology Field Study Office. Prerequisite(s): courses 3 or 100. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. (General Education Code(s): PR-S.) The Staff
194. Advanced Research in Special Topics. Provides a means for a small group of students to do research on a particular topic in consultation with a faculty sponsor. The Staff
194A. Advanced Developmental Research. F,W,S Provides students with intensive experience conducting current research in developmental psychology. Students submit petition to sponsoring agency. May be repeated for credit. The Staff
194B. Advanced Cognitive Research. F,W,S Provides students with intensive experience conducting current research in cognitive

psychology. Students submit petition to sponsoring agency. May be repeated for credit.

The Staff

194C. Advanced Social Research. F,W,S

Provides students with intensive experience conducting current research in social psychology. Students submit petition to sponsoring agency. May be repeated for credit.

The Staff

195A. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students contemplating a senior thesis should have a superior academic record and be well prepared with a suitable background of previous course work or independent study for performing their proposed research. Students must file a petition with the Psychology Office the quarter in which they would like to begin the thesis. Senior thesis petitions are available in the Psychology Department Office. Check with office for enrollment conditions. The Staff

195B. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students contemplating a senior thesis should have a superior academic record and be well prepared with a suitable background of previous course work or independent study for performing their proposed research. Students must file a petition with the Psychology Office the quarter in which they would like to begin the thesis. Senior thesis petitions are available in the Psychology Department Office. Check with office for enrollment conditions. The Staff

195C. Senior Thesis. F,W,S

Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. When taken as a multiple-term course extending over two or three quarters, the grade and evaluation submitted for the final quarter apply to each of the previous quarters. Students contemplating a senior thesis should have a superior academic record and be well prepared with a suitable background of previous course work or independent study for performing their proposed research. Students must file a petition with the Psychology Office the quarter in which they would like to begin the thesis. Senior thesis petitions are available in the Psychology Department Office. Check with office for enrollment conditions. The Staff

198. Independent Field Study. F,W,S

Provides psychology majors with the opportunity to apply what has been learned in the classroom to direct experience in a community agency outside the local community. Students earn academic credit by working as interns at a variety of psychological settings, where they are trained and supervised by a professional on site. Faculty also supervise the students' field study, providing guidance and help integrating psychological theories with their hands-on experience. Two-quarter commitment required. Admission requires completion of lower-division psychology major requirements; students submit petition to sponsoring agency. Applications are due one quarter in advance to the Psychology Field Study Office. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual directed study for upper-division undergraduates. Students must file a petition with the Psychology Office the quarter in which they would like to take the tutorial.

Petitions may be obtained in the Psychology Department Office. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Specialized study with individual faculty as psychology peer advisors. May not be applied toward major requirements. Students submit petition to sponsoring agency. Application and interview required during the previous quarter. Enrollment restricted to junior and senior psychology majors. May be repeated for credit. The Staff

199G. Tutorial (3 credits). F,W,S

Specialized study with individual faculty. May not be applied toward major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

204. Quantitative Data Analysis. F

Intermediate statistical methods widely used in psychology (e.g., ANOVA, ANCOVA, multiple-comparisons, repeated-measures, correlational analyses) and corresponding SPSS or R programs. Enrollment restricted to graduate students. Enrollment limited to 20. D. Bonett

210. The Experimental Method in Social Psychology. *

Explores the philosophy and practice of the experimental method in social psychology. Enrollment restricted to graduate students. E. Zurbriggen

211A. Proseminar: Social Justice and the Individual. F

Provides an introduction to social psychology, focusing on various individual-level social justice topics, including the self, social comparison, individual and collective identity, social historical and social structural determinants of behavior and various policy and social change-related issues. Enrollment restricted to psychology graduate students; undergraduates planning graduate work in social psychology may enroll with permission of instructor. Enrollment limited to 15. P. Hammack

211B. Social Justice, Society, and Policy. W

Provides an introduction to social psychology, focusing on empirical and theoretical developments related to social justice and group and intergroup dynamics. Topics include: prejudice and discrimination, power, collective action, and psychology's relationship to social policy. (Formerly Proseminar: Groups in Society.) Enrollment restricted to psychology graduate students. Undergraduates planning graduate work in social psychology may enroll with permission of instructor. Enrollment limited to 20. C. Haney

213. Special Topics in Social Psychology. W

Focuses on particular issues of theoretical and practical importance in social psychology. Topics vary from year to year and often concentrate on issues of social justice, social identity, intergroup relations, and social policy. Enrollment restricted to graduate students. May be repeated for credit. The Staff

214A. Multivariate Techniques for Psychology. W

Introduces multiple regression (MR) and multivariate analysis of variance (MANOVA). Both methodological and statistical aspects of multivariate data analysis are discussed. Practical problems in estimating and testing regression and general linear models are addressed. Students gain experience in carrying out and interpreting analyses using SPSS or R. Prerequisite(s): course 204. Enrollment limited to graduate students. Enrollment limited to 20. D. Bonett

214B. Advanced Multivariate Techniques for Psychology. S

Introduces factor analysis and structural equation modeling (SEM). Develop skills in defining, estimating, testing, and critiquing models. Topics include the rationale of SEM, model identification, goodness of fit, and estimation. Learn how to use relevant software packages (R, SAS, LISREL, EQS, or AMOS) to conduct exploratory and confirmatory factor analyses and latent variable path analyses. Prerequisite(s): course 214A. D. Bonett

215. Production and Comprehension of Spontaneous Communication. S

Seminar on spontaneous communication. Typical topics include discourse markers (including historical origins, cross-linguistic borrowing, second-language learning, children's acquisition), enquoting devices, backchannels, and spontaneous written communication. (Formerly Production and Comprehension of Spontaneous Speech.) Enrollment restricted to psychology graduate students. J. Fox Tree

220. Special Topics in Human Memory. *

Topics announced when offered. Seminars involve discussion and critical evaluation of current, historical, and interdisciplinary readings relevant to topic. Emphasis on development of research ideas. Enrollment restricted to graduate students. Enrollment limited to 12. The Staff

221. Visual Perception. *

Seminar to study human perception, its methodology, and driving issues as illustrated by selected research topics (e.g., adaptation to unusual sensory environments). Where

possible, parallels with other areas of psychology are drawn. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

222. Topics in Lexical Organization. *

The recognition of words is a critical step in natural language processing. Discusses a range of contemporary issues related to the representation of a word and the access of this information from the perspective of psychology, linguistics, and artificial intelligence.

Enrollment restricted to psychology graduate students; undergraduates who have completed course 124 may enroll with permission of instructor. Enrollment limited to 10.

A. Kawamoto

224A. Proseminar: Cognitive I. F

A proseminal reviewing current topics in cognitive psychology, designed to introduce new graduate students to the field. Enrollment restricted to psychology graduate students.

Enrollment limited to 10. B. Storm, S. Whittaker

224B. Proseminar: Cognitive II. W

A proseminal reviewing current topics in cognitive psychology, designed to introduce new graduate students to the field. Enrollment restricted to psychology graduate students.

Enrollment limited to 10. T. Seymour, J. Fox Tree

225A. Introduction to Developmental Research I (3 credits). F

Surveys the rationale and techniques of research in developmental psychology. Students build skills in evaluating published research, in translating theoretical ideas into researchable hypotheses, and in selecting appropriate research designs, measurement, and statistical approaches for research problems. Multiple-term course; students receive 6 credits in the second quarter of attendance; the grade and evaluation submitted for the final quarter applies to both quarters. Enrollment restricted to psychology graduate students or with instructor's permission. May be repeated for credit. A. Thorne

225B. Introduction to Developmental Research II. S

Focuses on drawing reasonable conclusions from research findings by focusing on students' first-year research projects and critiques of existing research. Enrollment restricted to psychology graduate students. S. Wang

227. Contemporary Issues in Psychology of Language. *

Special topics in thought and language are examined from the perspectives of cognitive science. Particular attention given to embodied experience and higher-order cognition. Enrollment restricted to graduate students. May be repeated for credit. R. Gibbs

230. Research in Cognitive Psychology Seminar. F,W,S

Colloquium series to study and critique research in cognitive psychology and cognitive science. Enrollment restricted to psychology graduate students. May be repeated for credit. (F) B. Storm, (W) T. Seymour, (W) J. Fox Tree

231. Research in Social Psychology Seminar. F,W,S

Seminar to study, critique, and develop research in social psychology. Enrollment restricted to psychology graduate students. May be repeated for credit. (S) E. Zurbriggen, (FW) The Staff

232. Evolution of Cognition. *

Explores current research on evolution of human cognition, drawing on findings from other species and from the archaeological record. Topics include language, working memory, episodic memory, numerical abilities, and social cognition. Enrollment restricted to graduate students. The Staff

235. Infant Development in Contexts. *

Seminar on how contextual factors influence the development in infancy, especially on cognitive domains. Discusses at least four types of contextual factors: cultural, experiential, event, and interpersonal contexts. Enrollment restricted to psychology graduate students. S. Wang

236. Paradigms of Culture. *

Integrative seminar on the relationship between individual psychological experience and its social, cultural, and institutional context. Explores various paradigms of "culture" in social science literature, including psychoanalytic theory, culture and personality, cultural

psychology, Marxism, symbolic interactionism, poststructuralism, postcolonial theory, narrative, and Vygotsky's sociocultural theory. (Formerly Person, Culture, Society.) Enrollment restricted to graduate students. Enrollment limited to 10. P. Hammack

242. Research in Developmental Psychology Seminar. F,W,S
 Seminar to study, critique, and develop research in developmental psychology. Enrollment restricted to psychology graduate students. May be repeated for credit. (F) B. Rogoff, (W) A. Thorne, (S) The Staff

244A. Proseminar I: Cognitive and Language Development. F
 Explores major theories and research in the fields of cognitive development and language development. Begins with classic theorists, such as Piaget and Vygotsky, and proceeds to theories and research on topics of current interest, such as the relation between culture and cognitive and language development. Enrollment restricted to graduate students. M. Callanan

244B. Proseminar II: Social and Personality Development. W
 An examination of contemporary theory and research on social and personality development across the lifespan. Enrollment restricted to graduate students. M. Azmitia

245. Computational Models of Discourse and Dialogue. W
 Focuses on classic and current theories and research topics in the computational modeling of discourse and dialogue, with applications to human-computer dialogue interactions; dialogue interaction in computer games and interactive story systems; and processing of human-to-human conversational and dialogue-like language such as e-mails. Topics vary depending on the current research of the instructor(s) and the interests of the students. Students read theoretical and technical papers from journals and conference proceedings and present class lectures. A research project is required. (Also offered as Linguistics 245. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. May be repeated for credit. M. Walker

246. Cultural Diversity in Human Development. S
 Examines cultural influences in development from the perspective of current theories and empirical research in developmental psychology and related fields (including social psychology, anthropology, sociology, history, education, and social policy). Focuses on understanding development in diverse cultural, ethnic, and socioeconomic communities by examining the interplay of social, cultural, institutional, and psychological processes.
 Enrollment restricted to graduate students. Enrollment limited to 20. B. Rogoff

247. Special Topics in Developmental Psychology. *
 Focuses on particular issues of theoretical importance in developmental psychology. Topics vary from year to year. Particular issues in language, culture, cognitive, social, and personality development may be covered. Enrollment restricted to graduate students.
 Enrollment limited to 15. May be repeated for credit. The Staff

248. Survey Methods. *
 Practicum to give students hands-on experience with survey methods by conducting their own survey on the topic of their choice. Course requires the survey to be conducted off campus at a local agency or program chosen by student with approval of instructor.
 Enrollment restricted to graduate students. Enrollment limited to 10. S. Grabe

249. Field Methodologies and Social Ethnography. *
 Designed to train graduate students in applied field methods. Emphasis is on gaining knowledge and experience with actual field methods, by conducting social ethnography in the community. Field research in community placements required. Enrollment restricted to graduate students. Enrollment limited to 10. Offered in alternate academic years. C. Haney

250. Prejudice and Social Relations. *
 Examines the ways in which the various branches of psychology have approached the issue of prejudice. Attention paid to the assumptions underlying each approach and their relation to core psychological ideas such as the self and emotion. Enrollment restricted to graduate students. The Staff

251. Feminist Theory and Social Psychology. *
 Course bridges feminist theory and social psychological research to explore connections

between theory covered and empirical studies on various topics in social psychology. Seminar format allows students opportunity for extensive discussion. (Also offered as Feminist Studies 251. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. The Staff

252. Special Topics in Cognitive Psychology. F,W

Focuses on particular issues in cognitive psychology. Topics vary from year to year. Particular issues in language, memory, perception, cognitive modeling, cognitive neuroscience, and more are covered. Enrollment restricted to graduate students. May be repeated for credit. (F) N. Davidenko, (W) B. Storm

253. Theory and Research in Intergroup Relations. *

Examines, compares, and contrasts a variety of theories in intergroup relations while examining relevant empirical research. The relevance of both theory and research findings to contemporary social issues is explored. Enrollment restricted to psychology graduate students; undergraduates considering graduate work in social psychology are encouraged to enroll with permission of instructor. Enrollment limited to 12. Offered in alternate academic years. The Staff

254. Psychology of Gender. *

Course reviews recent theory, research, and applications in the psychology of gender. Developmental, social-psychological, cultural, and feminist approaches are emphasized. Enrollment restricted to graduate students. C. Leaper

256. Psychology of Social Class and Economic Justice. *

Course examines the social psychological antecedents, correlates, and consequences of economic inequality in contemporary U.S. society. The impact of social class on attitudes, beliefs, and behaviors is assessed. Strategies for reducing classist discrimination, improving interclass relations, and strengthening social policy are discussed. Enrollment restricted to graduate students. Enrollment limited to 10. H. Bullock

261. Participatory Action Research. S

Participatory Action Research (PAR) is a theoretical standpoint and collaborative methodology that is designed to ensure that those affected by the research project have a voice in that project. Topics include philosophies of science; defining and evaluating PAR; ethics; and reflexivity. Enrollment restricted to graduate students. Enrollment limited to 10. R. Langhout

264. Transnational Feminism, Development, and Psychology. *

A transnational feminist lens examines international development as linked to broader ideologies that transform gender relations and enhance women's empowerment. A social-psychology framework brings theoretical and practical import to the issues and examines how research can contribute to social justice and women's human rights. Enrollment restricted to graduate psychology students, or by permission of instructor. S. Grabe

290. Proseminar.

Various topics to be offered throughout the year. The Staff

290B. Advanced Developmental Research and Writing (2 credits). F,W,S

Tailored to graduate students' interests among topics involving research and scholarship in sociocultural approaches to development, methods for research design, data collection, coding, and analysis, and preparing and reviewing grant proposals and journal manuscripts. Multiple-term course; students receive 6 credits in the third quarter of attendance; the performance evaluation and grade submitted for the final quarter applies to all three quarters. Enrollment restricted to graduate students. May be repeated for credit. B. Rogoff

290C. Professional Development (3 credits). *

Designed to aid advanced psychology graduate students with development of competence in professional activities (e.g., preparing a vita, making job and conference presentations, submitting and reviewing manuscripts and grant proposals, professional communication, career decisions). Multiple-term course; students receive 6 credits in the second quarter of attendance; the grade and evaluation submitted for the final quarter applies to the previous quarter. Enrollment restricted to advanced psychology graduate students. May be repeated for credit. A. Thorne

290E. Grant Writing for Psychologists. *

Discusses how to write and put together a grant proposal for psychological research, culminating in a completed proposal. Enrollment restricted to psychology graduate students. J. Fox Tree

293. Field Study. F,W,S

Student-designed and student-conducted research carried out in field settings. The Staff

297. Independent Study. F,W,S

Independent study and research under faculty supervision. The Staff

299. Thesis Research. F,W,S

The Staff

* Not offered in 2014-15

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Department of Languages and Applied Linguistics
218 Cowell College
(831) 459-2054
<http://language.ucsc.edu>

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Lower-Division Courses

1. First-Year Russian. F
Aural comprehension, speaking, reading, and writing. Recitation and laboratory. Elementary sequence (1–2–3) begins in the fall quarter only. (Formerly Instruction in the Russian Language.) The Staff

2. First-Year Russian. W
Aural comprehension, speaking, reading, and writing. Recitation and laboratory. Students interested in this course who have not taken the prerequisite should meet with the instructor prior to the first class meeting. (Formerly Instruction in the Russian Language.) Prerequisite(s): course 1 or by consent of instructor. The Staff

3. First-Year Russian. S
Aural comprehension, speaking, reading, and writing. Recitation and laboratory. Students interested in this course who have not taken the prerequisite should meet with the instructor prior to the first class meeting. (Formerly Instruction in the Russian Language.) Prerequisite(s): course 2 or by consent of instructor. The Staff

4. Second-Year Russian. F
Second-year courses designed to improve functional competence in speaking, listening, reading, and writing by activating basic grammar covered in introductory courses. Grammatical explanations and exercises supplemented with short readings and films. (Formerly Intermediate Russian.) Prerequisite(s): course 3 or by consent of instructor. (General Education Code(s): CC, IH.) The Staff

5. Second-Year Russian. *
Second-year courses designed to improve functional competence in speaking, listening, reading, and writing by activating basic grammar covered in introductory courses. Grammatical explanations and exercises supplemented with short readings and films. (Formerly Intermediate Russian.) Prerequisite(s): course 4 or by consent of instructor. (General Education Code(s): CC, IH.) The Staff

6. Second-Year Russian. *
Second-year courses designed to improve functional competence in speaking, listening, reading, and writing by activating basic grammar covered in introductory courses. Grammatical explanations and exercises supplemented with short readings and films. (Formerly Intermediate Russian.) Prerequisite(s): course 5 or by consent of instructor.

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(General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Upper-Division Courses

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. Enrollment limited to 10. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Upper-Division Courses

160. Introduction to Science Writing. S

A rigorous examination and practice of the skills involved in writing articles about science, health, technology, and the environment for the general public. Covers the essential elements of news writing and explanatory journalism, including developing a story idea, interviewing scientists, fact checking, composition, and editing of multiple drafts about scientific research. (Also offered as Biology:Ecology & Evolutionary 188. Students cannot receive credit for both courses.) Prerequisite(s): satisfaction of the Entry Level Writing and C1, C2 requirements. Enrollment restricted to junior and senior physical and biological sciences majors. Enrollment limited to 18. (General Education Code(s): W.) R. Irion

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. The Staff

Graduate Courses

201A. Reporting and Writing Science News. F

A survey of the conventions of newspaper journalism and the special application of those conventions to scientific and technological subjects. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. R. Irion, E. Check Hayden

201B. The Science Feature. W

A survey of selected feature articles in the current national science magazines, with attention to strategy, level of complexity, explanation technique, and style. Writing assignments include a publishable feature article. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. R. Irion

201C. Profile and Essay Writing. W

A survey of science and nature profiles and essays. Purpose, content, form, and style are considered. Writing assignments include original profiles and essays on current issues in science, technology, and society. (Formerly The Science Essay.) Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. E. Strauss

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201D. Policy and Investigative Reporting. S

Rigorous examination of techniques for reporting topics where science and technology meet public policy and society. Covers essential skills of investigative reporting, including obtaining documents through Public Records Act requests, using online reporting resources, and writing about ethical and legal issues. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. P. Aldhous, M. Mendoza

201E. Multimedia Science News. S

Introduces web-media tools for reporting science stories and enhancing coverage for broad audiences, including video packages, narrated slideshows, podcasts, blogs, and still photography. Laboratory sections address skills for handling equipment and online editing. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. M. Miller, R. Irion

202. Writing and Editing Workshop. F

Theory and practice of writing and editing articles on scientific, medical, environmental, and technological subjects for newspapers, magazines, and special publications directed at non-technical readers. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. May be repeated for credit. K. McLaughlin, M. Desjardins

297. Independent Study. F,W,S

A media internship is completed with faculty tutorial assistance, to satisfy a need for the student when a regular course is not available. Enrollment restricted to graduate students formally accepted into the writing track of the Science Communication Program. May be repeated for credit. The Staff

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Graduate Courses

200. Approaches to Social Documentation. F

Comprehensive review and analysis of documentary strategies aimed at societal critique and social change, evaluating changes in argument, evidence, and process over development of the discipline. Enrollment restricted to graduate students. Enrollment limited to 15. B. Rich

202. Practice of Social Documentary. F

Introduction to social documentary genres including video, photography, new media and other mediums, which addresses social-scientific research and methodology in the context of these processes. Enrollment restricted to social documentation graduate students.

Enrollment limited to 15. J. Taylor

204. Ways of Seeing and Hearing. *

Graduate-level advanced seminar explores ways that seeing, hearing, and knowing are influenced by culture, power, race, and other factors. Readings emphasize how documentary subjects are constituted and known, addressing questions of epistemology, social constructivism, objectivity, and method. (Also offered as Feminist Studies 204. Students cannot receive credit for both courses.) Enrollment restricted to graduate students. M. Ochoa

208. Social Science Research and Social Representation. W

Designed to acquaint students with how social science research represents social reality and how social documentarians represent social reality. Designed to encourage comparison among different modes of social science research and between social science and different modes of social documentation representations of social life. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

220. Oral History. *

Introduction to the theory and practice of oral history. Seminar participants read foundational texts in oral history, historical memory, public history, and social documentary. Students conduct two oral-history interviews; write synthesis essays; and complete a seminar paper. Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

270. Project Planning for the Social Documentary. S

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■ Cowell College
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■ Crown College
■ Digital Arts and New Media
■ Earth and Planetary Sciences
■ Ecology and Evolutionary Biology
■ Economics
■ Education
■ Electrical Engineering
■ Environmental Studies
■ Feminist Studies
■ Film and Digital Media
■ French
■ German
■ Greek
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■ History
■ History of Art and Visual Culture
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■ Music
■ Oakes College
■ Ocean Sciences
■ Physical Education
■ Physics
■ Politics
■ Porter College
■ Portuguese
■ Psychology
■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
■ Spanish
■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Workshop seminar in project planning focusing on the form and content of the documentary project; research and preproduction; technical, financial, and logistical plans; and coordination with subjects and resources. Enrollment restricted to social documentation graduate students. Enrollment limited to 15. J. Leanos

280. Video Production of the Social Documentary. W

Intensive directing and producing course that covers conceptualization, research, treatment and proposal writing, interview technique, camera, editing, production, and distribution. Enrollment restricted to social documentation graduate students. Open to qualified undergraduates with permission of instructor. Enrollment limited to 15. J. Taylor

290. Special Topics in Social Documentation. F

Designed to provide supplemental instruction on specific topical and/or technical matters related to social documentation. Topics include technical standards and innovations within the field of social documentation, documentary subjects, location production, and/or the work of individual professional documentarians. Enrollment restricted to social documentation graduate students. Enrollment limited to 15. May be repeated for credit.

The Staff

292. Special Topics (2 credits). F,W,S

Provides supplemental instruction on specific topical and/or technical matters related to social documentation. Topics include technical standards, artistic strategies, and innovations within the field of social documentation, documentary subjects, and/or work of individual professional documentarians. Enrollment restricted to graduate students.

Enrollment limited to 15. May be repeated for credit. The Staff

293. Studies and Practice for Social Documentation, Filmmaking, and New Media. W

This thematic, graduate-level, hybrid, production/critical studies course provides opportunities to learn specific technical skills while engaging in the analysis and critical interpretations of cinema, social documentary, animation, art, television, and new media. Technical topics may include animation; motion graphics; interactive web media; and installation, editing, cinematography, and sound. (Also offered as Film and Digital Media 233. Students cannot receive credit for both courses.) Enrollment restricted to graduate students in social documentation. Graduate students from other programs may enroll by permission of the instructor. Enrollment limited to 15. J. Leanos, L. Andrews

294A. Production/Analysis/Editing. F

Workshop seminar oriented toward actual fieldwork, production, and preparation for editing of the thesis project in the student's chosen genre. Techniques of collection and recording, analysis, preparation, and editing taught. Enrollment restricted to social documentation graduate students. Enrollment limited to 15. I. Lusztig

294B. Production/Analysis/Editing. W

Workshop seminar oriented toward the editing and creative assemblage of the thesis project in the student's chosen genre. Techniques of preparation, exhibition, and editing taught. Enrollment restricted to social documentation graduate students. Enrollment limited to 15. B. Rich

294C. Production/Analysis/Editing. S

Social documentation students in the final phase of completing their master's thesis receive guidance in shaping their projects, receive feedback, and are taught key elements of structure and narrative at a time when the demand for clarity and social documentation exposition is crucial. Prerequisite(s): courses 294A and 294B. Enrollment restricted to social documentation graduate students. G. Vazquez

295. Project Completion. F,W,S

Individualized study for second-year graduate students working on and completing their final projects. Limited to students enrolled in the social documentation program during their final quarter of study. May be repeated for credit. The Staff

297. Independent Study. F,W,S

Study either related to a course being taken or a totally independent study. Enrollment restricted to graduate students. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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297F. Independent Study (2 credits). F,W,S

Students submit petition to course-sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

* Not offered in 2014-15

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Lower-Division Courses

1. Introduction to Sociology. F,S

A systematic study of social groups ranging in size from small to social institutions to entire societies. Organized around the themes of social interaction, social inequality, and social change. Fulfills lower-division major requirement. (General Education Code(s): IS.) F. Guerra

10. Issues and Problems in American Society. W

Exploration of nature, structure, and functionings of American society. Explores the following: social institutions and economic structure; the successes, failures, and intractabilities of institutions; general and distinctive features of American society; specific problems such as race, sex, and other inequalities; urban-rural differences. Fulfills lower-division major requirement. (General Education Code(s): IS.) The Staff

15. World Society. F

Introduction to comparative and historical sociology. Focuses on the global integration of human society. Examines social changes such as industrialization, globalization, colonial rule, and the rise of Islamic fundamentalism. Uses social theory (including ideas from Marx, Weber, and Adam Smith) to explore the making of institutions like the nation-state, the World Trade Organization, the World Bank, and the International Monetary Fund. Fulfills lower-division major requirement. (General Education Code(s): CC, IS, E.) S. Mc Kay, B. Crow

30A. Introduction to Global Information and Social Enterprise Studies (3 credits). F

Teaches how to use social-enterprise methodologies to transfer information-communication technologies (ICT) to community and non-governmental organizations. Concepts include: globalization, info-exclusion, social justice, information revolution, global civil-society networks, social entrepreneurship, "open source" resources, web design, databases, networking. Requires organizational assessment. Enrollment limited to 50. K. Eischen

30B. Designing ICT Projects for Social Enterprise (3 credits). W

Covers designing "doable" ICT-based projects to support the goals of community and NGOs. Topics include: social entrepreneurship/enterprise case studies; step-by-step project design; integrating social and technical solutions; project management. Technical topics include: Internet resources; advanced web/database design; computer networks/maintenance. Enrollment limited to 50. R. Lipschutz

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30C. Project Implementation and Grant Writing for Social Entrepreneurs (3 credits). S
Covers conversion of ICT project into a fundable grant proposal for social justice, integration of social activism, entrepreneurship and justice, and implementation of project. Topics include: funders, proposal design, field methods, project assessment, innovative ICT applications, action research methods. Enrollment limited to 50. P. Lubeck

42. Student-Directed Seminar. F,W,S

Seminars on selected topics taught at various times by upper-division students under faculty supervision. (See course 192.) Consult the Schedule of Classes for specific offerings.
The Staff

93. Field Study. F,W,S

Ordinarily call numbers for this course will not be issued after the first week of instruction. Students submit petition to sponsoring agency. The Staff

99. Tutorial. F,W,S

Directed reading and research. Petitions may be obtained from the Sociology Department Office. Ordinarily call numbers for this course will not be issued after the first week of instruction. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Directed reading and research. Petitions may be obtained from the Sociology Department Office. Students submit petition to sponsoring agency. Ordinarily call numbers for this course are not issued after the first week of instruction. May be repeated for credit. The Staff

Upper-Division Courses

103A. Statistical Methods. W

Fundamental concepts in statistics. Introduction to measuring causation. Learn to use computer to analyze data efficiently. Emphasis on practical applications. Enrollment restricted to sociology, proposed sociology, and combined sociology majors. (General Education Code(s): SR, Q.) H. Fukurai

103B. The Logic and Methods of Social Inquiry. S

The first part of the course focuses on basic ethical, political, and logical issues in social scientific inquiry. The second part develops a wide range of skills and methods appropriate to actual research. Course 103A, Statistical Methods, is strongly recommended. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; enrollment restricted to sociology and sociology combined majors, minors and proposed majors. (General Education Code(s): W, Q.) D. Takagi

105A. Classical Social Theory. F

This intensive survey course examines the intellectual origins of the sociological tradition, focusing on changing conceptions of social order, social change, and the trends observed in the development of Western civilization in the modern era. Readings are all taken from original texts and include many of the classical works in social theory with special emphasis on the ideas of Marx, Weber, and Durkheim which constitute the core of the discipline. Required for sociology majors planning on studying abroad (EAP). (Formerly Classical Sociological Theory.) Enrollment restricted to juniors and seniors in sociology, proposed sociology, the combined Latin American and Latino studies/sociology, and the proposed combined Latin American and Latino studies/sociology majors and sociology minors. D. Gould

105B. Contemporary Social Theory. W

Surveys major theoretical perspectives currently available in the discipline including functionalism, symbolic interactionism, ethnomethodology, conflict theory, critical theory, neo-Marxism, feminist theory. (Formerly Contemporary Sociological Theory.) Enrollment restricted to juniors and seniors in sociology, proposed sociology, the combined Latin American and Latino studies/sociology, and the proposed combined Latin American and Latino studies/sociology majors and sociology minors. A. Szasz

111. Family and Society. F

Focuses on the interaction between family and society by considering the historical and

Management UCDC Program Writing Program Theater Arts Yiddish	<p>social influences on family life and by examining how the family unit affects the social world. Readings draw on theory, history, and ethnographic materials. W. Martyna</p> <p>114. Sports and Society. * Explores the interconnections between sports and society using sociological theories and methods. Topics include class, race, and gender; mass media and popular culture; political economy; education and socialization; leisure patterns (participants and spectators); globalization and cross-national comparisons. The Staff</p> <p>115. Green Governance. * Working collaboratively in group interactive laboratories, students assess the effectiveness of various forms of public and private decision-making in the creation of a sustainable future. Electrical Engineering 80S or the College Eight core course recommended as prerequisites. (Formerly Sustainable Design as Social Change.) Enrollment limited to 60. (General Education Code(s): PE-T.) The Staff</p> <p>116. Communication, Media, and Culture. * Examines media institutions, communication technologies, and their related cultural expressions. Focuses on specific ways the media—including media studies and criticism—operates as social and cultural factor. Contemporary theory or equivalent in related fields recommended. (Formerly "Communication and Mass Media.") Enrollment restricted to junior and senior majors, proposed majors, and minors in sociology, global information and social enterprise, and Latin American studies/sociology combined majors. The Staff</p> <p>118. Popular Music, Social Practices, and Cultural Politics. F Considers the role of popular music as a site of contemporary social practices and cultural politics. Examines the institutional organization and production of popular music, its cultural meanings, and its social uses by different communities and social formations. Also examines popular music as a vehicle through which major cultural and political debates about identity, sexuality, community, and politics are staged and performed. Prerequisite(s): course 105A or 105B. Enrollment restricted to juniors and seniors. The Staff</p> <p>119. Sociology of Knowledge. * Focus includes the following three areas: historical examination of sociological theories of knowledge with reference to Durkheim, Weber, Mannheim, and others; examination of black and feminist perspectives within sociology; examination of whether and how "outside" observers can analytically grasp the inner workings of other cultures. Prerequisite(s): course 103B or 105A or 105B. The Staff</p> <p>120. Gender, Sexuality, and Cultural Politics. * Focuses on the role feminist discourses play in cultural politics emphasizing sex, sexuality, and sex work as related to gender, race , and class. Examines the relationship between academic and popular feminisms. Interrogates post-feminism, third-wave feminism, and generational differences in feminisms. (Formerly Feminisms and Cultural Politics .) Prerequisite(s): course 129 recommended. Enrollment restricted to juniors and seniors. J. Bettie</p> <p>121. Sociology of Health and Medicine. * Analysis of the current health care "crises" and exploration of the social relationships and formal organizations which constitute the medical institution. Study of the political, economic, and cultural factors which affect the recognition, distribution, and response to illness. The Staff</p> <p>122. The Sociology of Law. * Explores the social forces that shape legal outcomes and the ways law, in turn, influences social life. Traces the history and political economy of American law; the relation between law and social change; how this relation is shaped by capitalism and democracy; and how class, race, and gender are expressed in welfare and regulatory law. (Also offered as Legal Studies 122. Students cannot receive credit for both courses.) Enrollment restricted to sociology majors and minors. C. Reinerman</p> <p>123. Law, Crime, and Social Justice. * Blends the latest research in criminology with that from social stratification, inequality, and social welfare policy with the objective of exploring the relationship between levels of general social justice and specific patterns of crime and punishment. The focus is primarily</p>
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on the U.S. although many other industrialized democracies are compared. An introductory course in sociology is recommended as preparation. (Also offered as Legal Studies 123. Students cannot receive credit for both courses.) The Staff

124. Visual Sociology. *

Learn to critically consume documentary, ethnographic film, photojournalism, and the genre of realism as these methods are increasingly used to describe the social world. Addresses theoretical, methodological, practical, and ethical issues of creating visual media. Optional media lab teaches students how to create visual products as well. (Formerly Visual Ethnography) Prerequisite(s): Enrollment restricted to juniors and seniors. J. Bettie

124L. Visual Sociology Media Lab (2 credits). *

Teaches the basics of digital narrative/storytelling, basic use of digital video cameras, digital video editing in iMovie and/or Final Cut Pro, and use of microphones and sound. Students use these skills to aid in creation of their final course project. (Formerly Visual Ethnography Media Lab .) Concurrent enrollment in course 124 is required. Enrollment restricted to juniors and seniors. J. Bettie

125. Society and Nature. F

A healthy society requires a stable and sustainable relationship between society and nature. Covering past, present, and future, the course covers environmental history of the U.S., the variety and extent of environmental problems today, and explores their likely development in our lifetimes. (General Education Code(s): PE-E.) The Staff

126. Sociology of Sex. *

Explores social and cultural aspects of human sexuality and reproduction, including how and why meanings and behaviors are contested. Analyzes sexuality and reproduction as forms of social and political control as well as cultural expression and self-determination. Enrollment restricted to upper-division students. Enrollment limited to 90. J. Bettie

127. Drugs in Society. W

Explores the history of the use and abuse of consciousness-altering substances like alcohol and other drugs. Social-psychological theories of addiction are reviewed in tandem with political-economic analyses to identify the social conditions under which the cultural practices involved in drug use come to be defined as public problems. An introductory sociology course is recommended prior to taking this course. (Also offered as Legal Studies 127. Students cannot receive credit for both courses.) Enrollment restricted to sociology majors and minors. C. Reinarman

128. Law and Politics in Contemporary Japan and East Asian Societies. *

Introduction to contemporary analysis of Japan's race relations, ethnic conflicts, and a government's failure to restore remedial justice for war victims in Japan, Asia, and the U.S. Specific issues include comfort women, national or state narratives on Hiroshima, forced labor during World War II, and Haydon legislation that allows war victims to sue Japanese government and corporations in California. (Also offered as Legal Studies 126. Students cannot receive credit for both courses.) Enrollment limited to 30. H. Fukurai

128I. Race and Law. F

An introduction to comparative and historical analyses of the relation between race and law in the U.S. Emphasis on examinations of continuous colonial policies and structural mechanisms that help maintain and perpetuate racial inequality in law, criminal justice, and jury trials. (Formerly Race and Justice) (Also offered as Legal Studies 128I. Students cannot receive credit for both courses.) Enrollment restricted to sophomores, juniors, and seniors. H. Fukurai

128J. The World Jury on Trial. *

Adoption of the jury and its varied forms in different nations provides ideal opportunities to examine differences between systems of popular legal participation. Course considers reasons why the right to jury trial is currently established in Japan or Asian societies, but abandoned or severely curtailed in others. American jury contrasted with other forms of lay participation in the legal process. (Also offered as Legal Studies 128J. Students cannot receive credit for both courses.) Enrollment restricted to sophomores, juniors, and seniors. Enrollment limited to 30. H. Fukurai

128M. International Law and Global Justice. *

Examines war crimes, crimes against humanity, and the evolution and role of the International Criminal Court (ICC). Examines the evolution of the concept of international law, the rationale for its birth and existence, roots of international conflicts and genocides, possible remedies available to victims, mechanisms for the creation and enforcement of international legal order, as well as the role of colonialism, migration, poverty, race/ethnic conflicts, gender, and international corporations in creating and maintaining conflicts and wars. (Also offered as Legal Studies 128M. Students cannot receive credit for both courses.) Enrollment restricted to juniors and seniors. Enrollment limited to 30. H. Fukurai

129. Popular Culture and Cultural Studies. S

Examines the hidden politics of popular pleasure, studying the workings of domination and transgression in popular culture and everyday life. Explores not only media representations but cultural practices as well. Examines both cultural production and consumption. Considers how hegemonic discourses render the politics of resistance invisible. (Formerly Popular Culture.) Enrollment restricted to juniors and seniors. F. Guerra

130. Sociology of Food. *

Following food from mouth to dirt, explores the politics, economy, and culture of eating, feeding, buying, selling, and growing food. Topics cover both the political economy of the food system as well as how body and nature are contested categories at either "end" of this system. The Staff

131. Media, Marketing, and Culture. S

Explores relationship between modern forms of cultural production and the economy and society in which they emerge. Course reads, screens, and discusses variety of the cultural texts: from the historical and theoretical to the commercial, popular, and counter-cultural. (Formerly Culture, Economy, and Power.) Enrollment restricted to juniors and seniors. M. Greenberg

132. Sociology of Science and Technology. S

Reviews social and cultural perspectives on science and technology, including functionalist, Marxist, Kuhnian, social constructionist, ethnographic, interactionist, anthropological, historical, feminist, and cultural studies perspectives. Topics include sociology of knowledge, science as a social problem, lab studies, representations, practice, controversies, and biomedical knowledge and work. Prerequisite(s): course 103B, 105A, or 105B. Enrollment limited to 20. J. Reardon

133. Currents in African American Cultural Politics. S

Takes as its subject, the dialogues, debates, conceptions, and strategies of self representation produced by blacks in the U.S. and Atlantic world in the twentieth and twenty-first centuries. These issues are examined through the insights of feminist theory, cultural studies, media studies, sociology, and African American studies. Enrollment restricted to juniors and seniors. (General Education Code(s): E.) H. Gray

134. Television and the Nation. W

The role of American network television in the production of the post-war American national imagination is our focus. Our approach will explore issues of media power, especially television's industrial apparatus, its network structure, its strategies of representation in relationship to the construction of the image of the nation, and the meaning of citizens, consumers, and audiences. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors. (General Education Code(s): W.) H. Gray

136. Social Psychology. W

Major theories and concepts in sociological study of social psychology. Topics include identity and social interaction, deviance, sociology of emotions, social narratives, and the social construction of reality. (General Education Code(s): PE-H.) W. Martyna

137. Deviance and Conformity. W

Why certain social acts are considered threatening and how individuals or groups become stigmatized. Sociological analysis of the institutions and processes of social control and the experience of becoming deviant and living with a stigmatized identity. Introductory course in sociology recommended. Enrollment is restricted to junior and senior sociology majors, minors, and proposed majors, global information and social enterprise studies minors, and

Latin American and Latino studies/sociology combined majors and proposed majors.

Enrollment limited to 68. (General Education Code(s): PE-H.) F. Guerra

139. Field Research Methods. *

Research practicum which examines methods and problems of qualitative field research both through examining literature published in this tradition and by carrying out directed field exercises. Students also design and carry out their own research project.

Prerequisite(s): course 103B. Enrollment limited to 20. The Staff

140. Social Psychology of Power. F

This course uses historical, sociological, and social psychological materials to introduce students to issues concerning class and power, religion and power, minorities and power, women and power, the rise of the New Right, and the successes and failures of the Left.

Prerequisite(s): course 1, 10, or 15 or Psychology 40. Enrollment restricted to juniors and seniors. G. Domhoff

141. Group Process. *

The study of group development and interpersonal behavior based primarily on observation of the class discussion group. Readings are drawn from psychology and fiction as well as from sociology. Offered in alternate academic years. Enrollment restricted to senior sociology majors. Enrollment limited to 18. The Staff

142. Language and Social Interaction. W

Concerns the routine and taken-for-granted activities that make up our interactions with one another, consisting in large part—but not exclusively—of verbal exchanges. Emphasis on the socially situated character of communication, whether intimacy between two people or dominance of a group. An introductory sociology course is recommended prior to taking this course. Enrollment restricted to sophomores, juniors, and seniors. W. Martyna

143. Conversation Analysis. S

A working seminar, involving the analysis of actual conversations. Covers fundamental ethical, conceptual, and methodological issues that arise in the collection of conversational data, as well as the skills and techniques of conversation analysis. Given our operating assumption, that talk is a primary means of constructing social identities, there is a heavy thematic emphasis on gender, status, and power in conversation. Prerequisite(s): course 142 or by permission of instructor. Enrollment restricted to juniors and seniors. Enrollment limited to 20. C. West

144. Sociology of Women. F

Analysis of the social significance and social production of gender. Some consideration of how sex differences have developed. Major emphasis on the impact of gender as a categorical imperative in the present social context. In this context, the course is also about sexual segregation, sexual inequality, and the dynamics of interpersonal power. Enrollment restricted to juniors and seniors. An introductory sociology course is recommended. C. West

145. Sociology of Men. F

Examines conflicting views on the development and state of modern masculinity as adaptation, transitional phase, or pathology. Did men lose the "gender war"? Do boys need rescuing? What are common and divergent social experiences of men within race, class, gender, culture, era? An introductory sociology course recommended. W. Martyna

146. Sociology of Violence, War, and Peace. *

Explores key issues, theories, and topics in the study of violence, war, and peace.

Addresses aspects of aggression, personal violence, political violence, and war. In addition, various strategies for the prevention of violence and war are examined. The Staff

149. Sex and Gender. W

Modern analyses of sexuality and gender show personal life closely linked to large-scale social structures: power relations, economic processes, structures of emotion. Explores these links, examining questions of bodily difference, femininity and masculinity, structures of inequality, the state in sexual politics, and the global re-making of gender in modern history. Recommended as background: any lower-division sociology course. C. West

150. Sociology of Death and Dying. S

Explores contemporary, historical, cross-cultural and interdisciplinary perspectives on the social psychology of death and dying. Cultural norms and institutional contexts are studied, along with the individual experience, and the ways in which our perspectives on death and dying influence our experiences of life and living. Enrollment restricted to juniors and seniors. W. Martyna

152. Body and Society. F

Critically examines the place of the human body in contemporary society. Focuses on the social and cultural construction of bodies, including how they are gendered, racialized, sexualized, politicized, represented, colonized, contained, controlled, and inscribed. Discusses relationship between embodiment, lived experiences, and social action. Focuses on body politics in Western society and culture, especially the United States. An introductory sociology course is recommended prior to taking this course. Enrollment restricted to juniors and seniors. Enrollment limited to 50. F. Guerra

153. Sociology of Emotions. F

Examines sociological approaches to the understanding of emotions and the application of these approaches to work, learning, interpersonal relationships, health and illness, sports, and other aspects of everyday life. Enrollment restricted to juniors and seniors. W. Martyna

154. Cross-National and Cross-Cultural Research. *

Examines a variety of theoretical, methodological, and substantive approaches to cross-national and cross-cultural research. Focuses on the importance and variety of cross-national and cross-cultural studies. Prerequisite(s): course 103B. Enrollment limited to 20. The Staff

155. Political Consciousness. *

Explores the relationship between consciousness, ideology, and political behaviors from voting to rebellion. Special attention is given to the lived experience and the identity interests that complicate the nexus of class position and political ideology. An introductory sociology course is recommended as preparation. G. Domhoff

156. U.S. Latina/o Identities: Centers and Margins. F

Explores historical and contemporary constructions of Latina/o identities and experiences in U.S. Particular emphasis placed on transcultural social contexts, racial formations, and intersections with other identities including sexuality and gender. Enrollment restricted to juniors and seniors. Enrollment limited to 50. (General Education Code(s): ER, E.) The Staff

157. Sexualities and Society. F

Explores controversies in the sociology of sexuality. Focuses on tensions and disagreements that characterize debates over sex and society, and attempts to identify political and theoretical issues at stake in these debates. Enrollment limited to 30. R. Bryant-Anderson

158. Politics of Sex Work and Erotic Labor. *

Examines sex work in an historical and cultural context, considering how it has changed over time. Considers the relationship of pornography, exotic dance, and selling sex on the Internet to racialization, queer politics, globalization, and tourism. Employs theories and methods of cultural studies in rethinking historical debates on sex work. Enrollment restricted to juniors and seniors. J. Bettie

159. Latinos and Population Change. *

Examines key theories of demographics change (fertility, mortality, and migration) in important policy issues, such as the aging of America, racial categorization, and immigration. Explores political and economic factors that have led to the changing face of the U.S. over the last century and key legislative changes that have changed the experience of immigrants. Students use primary demographic data from the U.S. Census Bureau and learn basic tools for demographic data access and presentation. (Formerly Latin American and Latino Studies 163.) (Also offered as Latin American & Latino Studies 159. Students cannot receive credit for both courses.) Prerequisite(s): course 100A or Sociology 103A or Sociology 105A, or by permission of instructor. Enrollment restricted to sophomores, juniors, and seniors. (General Education Code(s): PE-H, E.) The Staff

160. Project Homeless Connect: The Integration of Theory and Practice. *

Discusses concepts of social research, development, and culture as they relate to

homelessness at both the local and global level. Themes include: the existence of power and resistance in society and the mechanism for social reproduction and change Enrollment by interview only. Enrollment restricted to juniors and seniors. Enrollment limited to 20. The Staff

162. Dutch Society. S

Reviews Dutch history from its religious wars, Golden Age colonial conquests, and state formation through the Nazi occupation, 1960's revolts, and the assassinations after 2000. Focuses on the rise of the Netherlands' famed culture of tolerance and its fall in the face of Islamic immigration. Enrollment limited to 30. (General Education Code(s): CC.) C.

Reinarman

163. Global Corporations and National States. *

Examines the nature and development of the capitalist world system since 1945. Emphasis is on the power of multinational corporations as managers of the world system and the response of states: role of multilateral agencies such as the World Bank, International Monetary Fund, United Nations. H. Shapiro

164. Capitalism and Its Critics. *

Through comparative analysis of texts by several social theorists, explores the rise and consequences of capitalism. How has capitalism affected how humans understand and act in the world? How do oppressions along the lines of race, gender, sexuality, and nations intersection with capitalism? Is resistance desirable and/or possible? Enrollment restricted to junior and senior sociology, global information and enterprise, and combined Latin American and Latino Studies/sociology majors, proposed majors, and minors, or by instructor permission. (General Education Code(s): TA.) D. Gould

164T. Marx and Marxist Theory. *

Along with studying Marx's anatomy of capitalist society, this course also explores the work of Marxist theorists from the early 20th century through the contemporary moment. (Formerly Social Theory and the Marxian Tradition.) Prerequisite(s): course 105A or consent of instructor. D. Gould, B. Crow

165. World Systems Perspective. *

Seminar on the intellectual origins and contemporary exponents of the world-systems perspective in the social sciences: Marx, Braudel, Polanyi, Arrighi, Wallerstein. Prerequisite(s): courses 105A and 105B or permission of instructor. The Staff

166. Economics for Non-Economists. *

Fosters economic literacy among students who are not economics majors but are interested in the political and social ramifications of economic change. Emphasizes economic institutions and policy and is taught by case-study method, which requires active student participation. Enrollment restricted to juniors and seniors. Enrollment limited to 40. H. Shapiro

167. Development and Underdevelopment. W

Examines contemporary debates about development in the Third World: alternative meanings of development, recent work on the impact of colonial rule, how some economies have industrialized, ideas about agrarian change, and recent research on paths out of poverty. Students work in pairs to examine a development in one country since World War II. B. Crow

168. Social Justice. S

What is social justice? People answer this question differently, depending upon their sociological perspective. Using a combination of political philosophy and sociological studies, explore five perspectives on social justice within the Western sociological tradition: utilitarianism, Marxism, liberal egalitarianism, communitarianism, and pluralism. Students pick a topic and learn to articulate different visions of socially just change based on these perspectives. Prerequisite(s): course 105A. Enrollment limited to 60. W. Martyna

169. Social Inequality. S

A survey of theories and systems of social stratification focusing on such phenomena as race, class, power, and prestige. Enrollment restricted to juniors and seniors. (General Education Code(s): E.) D. Takagi

170. Ethnic and Status Groups. W

Examines the enduring and changing status of ethnic and other visible minority groups in the United States, e.g., Latinos, Asian Americans, African Americans, and immigrants, with comparative materials drawn from other societies. An introductory course in ethnicity and race is recommended as preparation. Satisfies American History and Institutions Requirement. (General Education Code(s): E.) The Staff

171. Exploring Global Inequality. *

Seminar focusing on readings of key texts and recent research papers on several dimensions of global inequality (material, health, gender, cultural, migration) to find innovative ways of understanding the connections among different dimensions of inequality and of visualizing inequality in digital media. Students prepare visual presentations on contemporary social inequalities suitable for an online (for example, <http://ucatlas.ucsc.edu/>) or print atlas. Enrollment restricted to seniors. Enrollment limited to 30. B. Crow

172. Sociology of Social Movements. *

Through readings on social movements that span the 20th century, course examines the causes of popular mobilizations, their potential for rapid social change, and the theories developed to understand and explain their role in modern social life. Enrollment restricted to junior and senior majors, proposed majors, and minors in sociology, global information and social enterprise, and Latin American studies/sociology combined majors. Enrollment limited to 40. (General Education Code(s): PE-H.) D. Gould

173. Water. *

Analyzes access to clean water, both in the American West and global South. Reviews water quality, pivotal role of water in settlement and society, history and contemporary inequalities, water supplies, international conflict over water, climate change, and human use of water. Enrollment restricted to juniors and seniors. Enrollment limited to 60.

(General Education Code(s): PE-E.) B. Crow

174. Twenty-First-Century African American Social Structure. *

A sociological overview of African American society in the 21st century. The changing patterns of social/cultural organization, class structure, and modes of political action are analyzed. This analysis is located within the framework of migration, urbanization, and social struggle among black Americans. Prerequisite(s): course 10 or 20. (General Education Code(s): E.) The Staff

176. Women and Work. F

Examines the history of women and work; women's current conditions of work and political, economic, and social factors affecting these conditions; means by which women may shape working conditions including contributing leadership, developing policies, building unity, and creating alliances. Enrollment restricted to juniors and seniors. The Staff

176A. Work and Society. W

Addresses how work is organized and shapes life changes. Covers: the history of paid work; the impact of technology; race/class/gender at work; professional and service work; work and family; collective responses to work; and challenges of work in a globalizing economy. Enrollment restricted to juniors and seniors. S. Mc Kay

177. Urban Sociology. S

Historical and contemporary examination of urban life including community, race, geography, urban and suburban cultures and lifestyles, stratification, housing, crime, economic and environmental issues, demographic changes, and global urbanization. Enrollment restricted to junior and senior sociology majors. Enrollment limited to 60. M. Greenberg

177A. Latinos/as and the American Global City. *

Examines roles of emerging Latino/a majorities in urban centers across the U.S. Explores the "Latinization" of U.S. cities and various factors affecting the life chances of Latinos/as including, but not limited to, immigration, segregation, social movements, and other forms of political participation. Enrollment restricted to juniors and seniors. Enrollment limited to 40. The Staff

177E. Eco-Metropolis: Research Seminar in Urban and Environmental Studies. F

Explores the intersection of cities and the environment through the emerging field of urban

environmental studies. Focuses on varied and often contested efforts at "urban sustainability" in recent history. Draws on literatures in environmental history, environmental and urban sociology, geography, political ecology, and cultural studies. Enrollment restricted to juniors and seniors. M. Greenberg

177G. Global Cities. *

Explores how "global cities" have facilitated increasing integration of the diverse cultures and economies of the world. Using historical, sociological, and comparative methods, analyzes how these spaces both enable and constrain transnational flows of capital, labor, information, and culture. Enrollment restricted to juniors and seniors. M. Greenberg

178. Sociology of Social Problems. *

Views "problems" in society not as given but as social constructs. Examines the ways in which conditions in society become identified and defined as problems and consequences that follow from such a process. The Staff

179. Nature, Poverty, and Progress: Dilemmas of Development and Environment. S

Concerns about environmental change, including global warming, threats to the ozone layer, and industrial pollution, raise questions about Third World development. Simple views of the relation between society and nature, such as blaming population growth, industrialization, or poor people, seem to preclude higher living standards. Uses debates and case studies to explore more subtle and optimistic views of social-natural relations. B. Crow

179L. Nature, Poverty, and Progress Laboratory. *

For enrollees in course 179, this optional lab provides opportunity to research ideas and produce a rough business plan for green enterprise of choice. Examples include compostable packaging, gray water systems, sustainable manufacturing, solar-powered submarines, green consulting, and other enterprises. Concurrent enrollment in course 179 required. Enrollment limited to 20. B. Crow

180. Social Movements of the 1960s. *

Examines the roots, development, and political outcomes of black civil rights organizations during the Sixties. Explores social and structural forces, mobilization of black communities, strategies and tactics used, nature of the relationships between various civil rights organizations, unity and disunity among organizations, leadership gains, and impact on race relations in the U.S. Enrollment restricted to junior and senior sociology and combined sociology/Latin American and Latino studies majors. Enrollment limited to 45. D. Gould

184. Hunger and Famine. *

Why do famines happen? Why are some hungry and some over-fed? Recent advances in the understanding of food crises and chronic undernutrition are the focus of this course. B. Crow

187. Feminist Theory. *

Examination of shifts in 20th- and 21st-century feminist theory and epistemology. Considers various deconstructive challenges to second wave feminism based on the politics of race, ethnicity, nation, sexuality, and class. Focus changes regularly. Prerequisite(s): course 105B, and either course 144 or 149 or Feminist Studies 1 or 100. Enrollment limited to 35. D. Gould

188A. Social Change in the Global Economy. S

Explores local dimensions of globalization, focusing on experiencing more global divisions of labor in both industrialized and developing countries. Themes include: economic integration and dislocation; new forms of governance; globalizing consumption and culture; gender; and popular resistance. Enrollment restricted to juniors and seniors. (General Education Code(s): CC.) B. Crow

190. Proseminar.

The Staff

191. Sociology Teaching Practicum. F,W,S

Under the supervision of the instructor, the student works with a group of students in a lower-division course, leading discussions, explaining material, reading and marking submissions, consulting individually and/or in other ways assisting in the teaching of a course. Interview and selection by professor required. Prerequisite(s): Senior standing and

	<p>excellent performance in core courses in the major. Enrollment restricted to senior sociology majors. The Staff</p>
192. Directed Student Teaching. F,W,S	<p>Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. The Staff</p>
193. Field Study. F,W,S	<p>Provides for (department-sponsored) individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor (as opposed to course 198 where faculty supervision is by correspondence). Up to three such courses may be taken for credit in any one quarter. Ordinarily call numbers for this course will not be issued after the first week of instruction. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
193F. Field Study (2 credits). F,W,S	<p>Provides for department-sponsored individual field study in the vicinity of campus under the direct supervision of a faculty sponsor. May not be counted toward major requirements. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
194. Group Tutorial. F,W,S	<p>Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
194F. Group Tutorial (2 credits). F,W,S	<p>Small group study of a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p>
195A. Senior Thesis. F,W,S	<p>Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. The senior thesis satisfies the comprehensive requirement. Course is for independent thesis research and writing. Courses may be taken consecutively or concurrently. Prerequisite(s): course 103B. Students submit petition to sponsoring agency. The Staff</p>
195B. Senior Thesis. F,W,S	<p>Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. The senior thesis satisfies the comprehensive requirement. Course is for independent thesis research and writing. Courses may be taken consecutively or concurrently. Prerequisite(s): course 103B. Students submit petition to sponsoring agency. The Staff</p>
195C. Senior Thesis. F,W,S	<p>Preparation of a senior thesis over one, two, or three quarters, beginning in any quarter. The senior thesis satisfies the comprehensive requirement. Course is for independent thesis research and writing. Courses may be taken consecutively or concurrently. Completion of course 195C (completion of the thesis) satisfies the W general education requirement. Prerequisite(s): course 103B and satisfaction of the Entry Level Writing and Composition requirements. Students submit petition to sponsoring agency. May be repeated for credit. (General Education Code(s): W.) The Staff</p>
196A. Capstone: The Sociologist as Public Intellectual (3 credits). S	<p>Students hear a selected group of faculty discuss their current research and how that research furthers public understanding and discussion of some vital contemporary social issue. Enrollment restricted to junior and senior sociology majors. J. Bettie</p>
196G. Project Practicum: Global Information and Social Enterprise. F,W,S	<p>Project summary and evaluation are required for completion of minor in global information and social enterprise studies (GISES). Projects require approval in advance by director of GISES. Completed projects must be uploaded electronically on the web site or archive of the global information internship program. Prerequisite(s): courses 30A, 30B, and 30C. May be repeated for credit. The Staff</p>
198. Independent Field Study. F,W,S	<p>Provides for (department-sponsored) individual study program off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Up to three such courses may be taken for credit in any one quarter. Ordinarily call numbers for this</p>

course will not be issued after the first week of instruction. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Advanced directed reading and research. Petitions may be obtained from the Sociology Department Office. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Advanced directed readings and research. Petitions may be obtained from the Sociology Department Office. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

201. The Making of Classical Theory. F

Examines the establishment of "theory" in the discipline of sociology. Introduces students to close readings and analysis of a core selection of social theory. Problematizes the construction, maintenance, and reproduction of a theoretical canon in sociology. Enrollment restricted to graduate students in sociology and by permission number. Enrollment limited to 20. D. Gould

202. Contemporary Sociological Theory. W

Intensive survey of major tendencies in modern social thought, including functionalism, symbolic interactionism, ethnmethodology, critical theory, structuralism, phenomenology, neo-Marxism, and feminist theory. Enrollment restricted to graduate students in sociology and by permission number. C. Reinarmar

203. Sociological Methods. F

Approaches methods as a series of conscious and strategic choices for doing various kinds of research. Introduces students to the epistemological questions of method in social sciences; to key issues in "technique," particularly control, reliability, and validity; and to good examples of social research. Enrollment restricted to graduate students in sociology and by permission number. C. West

204. Methods of Quantitative Analysis. W

Students are provided with intuitive explanation of fundamental concepts in statistics and learn how to use statistics to answer sociological questions. Experience and guidance in using computers to efficiently analyze data are provided. Enrollment restricted to graduate students in sociology and by permission number. Enrollment limited to 20. D. Takagi

205. Field Research Methods. S

Gives students first-hand experience doing fieldwork with an emphasis on participant observation and some interviewing. Students submit weekly field notes and a final project analysis. At seminar meetings, field experiences and relevant literature are examined. Enrollment restricted to graduate students in sociology and by permission number. Enrollment limited to 10. Offered in alternate academic years. The Staff

206. Comparative Historical Methods. *

Overview of research strategies and methods used in historical and social sciences. Students read works exemplifying a variety of analytical approaches. Written assignments cultivate critical skills, weighing of tradeoffs inherent in all methodological choices, and elaboration of hypothetical research designs. Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

208. Writing Practicum. F

Writing intensive course designed to facilitate the completion of the master's thesis, orals field statement, or the dissertation in sociology. The seminar is convened by a faculty member in conjunction with students and their adviser or appropriate committee chair. Students are expected to produce and present drafts of work completed in the seminar. Enrollment restricted to sociology graduate students and by permission number. Enrollment limited to 12. The Staff

209. The Analysis of Cultural Forms. S

Examines material and symbolic forms such as media products, cultural artifacts, language, nonverbal communication and social practices using discourse, textual, content,

interpretive, and conversation analyses as well as ethnography and different channels of communication. Theoretically, relies on cultural studies, communication studies, cultural sociology, film studies, and ethnmethodology. Enrollment restricted to sociology graduate students. J. Bettie

220. Global Transformation: Macrosociological Perspectives. W

Classical concepts and contemporary approaches in macrosociology, the study of large-scale, long term social change. Readings drawn primarily from the Marxian and Weberian traditions (new institutionalism, varieties of neo-Marxism, environmental history, state centrism) as they focus on agrarian and industrial structures and commodity chains; household, village, and neighborhood organization; social movements and revolutions; culture, ideology, and consciousness; policy analysis; comparative urban, national, and civilizational development. Enrollment restricted to graduate students in sociology.

Enrollment limited to 15. S. Mc Kay

222. Political Sociology. *

A survey of major works and themes in the relationship of politics and society, with primary emphasis on the compatibilities and contradictions of pluralist, elite, and class perspectives on the state. Enrollment restricted to graduate students. The Staff

223. Sociology of the Environment. *

Advanced treatment of the dominant ideas of nature and the environment in the West and their relationship to the development of Western capitalism. Leading Western theories of environmental crisis and their relation with ideologies of environmentalism and environmental movements. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. The Staff

224. Globalization: Theories and Social Movements. *

Examines the structures, processes, and movements associated with globalization processes. Reviews political economy theories, cultural theories systems, state industrial policies, and popular responses to globalization. Also assesses contribution of resistance movements informed by class, ethno-nationalism, religion, or gender. Enrollment restricted to graduate students. Enrollment limited to 25. Offered in alternate academic years. May be repeated for credit. The Staff

225. Political Economy for Sociologists. *

Examines rudiments of historical materialism in light of advances in cultural and ecological Marxism. Basic categories of Marxist political economy. Thematic focus on the "first" and "second" contradictions of capitalism in world economy today. Enrollment restricted to graduate students. Enrollment limited to 15. B. Crow

227. Learning from Environmental Historians. *

Looks at several major themes in the sociology of the environment and asks how the works of environmental history address those themes. Includes reflections on how history as a method interrogates social questions. Possible themes include: sustainability; social justice; universalism vs. particularity; city and country; and social movements. Enrollment restricted to graduate students. Enrollment limited to 8. The Staff

229. Work and Labor Markets in the New Economy. *

Focuses on the interaction of work restructuring and existing race/class/gender inequalities. Themes include: the labor process and theories of consent; labor market segmentation; job and occupational segregation; information technologies, flexible work, and post-industrialism; flexible employment relations; and low-wage service and labor markets. Enrollment restricted to graduate students. S. Mc Kay

230. Theory and Method in the Sociology of Marx. *

Examines theoretical and methodological implications of Marxist theory for empirical social research. Analyzes how historians and social scientists apply Marxist method in explaining society, social change, globalization, culture, and late capitalism. Goal is to assist students to employ Marxist theory and method creatively in their research projects. Enrollment restricted to graduate students. Enrollment limited to 12. The Staff

240. Inequality and Identity. S

Explores recent theoretical and empirical studies of race, class, gender, and sexuality with an emphasis on the production of identities and their relationship to processes and

structures of power in a postcolonial context. Enrollment restricted to graduate students in sociology. H. Fukurai

241. Cross-National and Cross-Cultural Research. *

Seminar examining theoretical and methodological issues in doing cross-national and cross-cultural research. In addition to a consideration of different research paradigms and approaches, representative works from each comparative tradition are examined.

Enrollment restricted to graduate students. Enrollment limited to 15. The Staff

242. Feminist Research Seminar. *

Provides scholarly support to students doing feminist research. Examines issues concerning conceptualization of feminism and feminist research. Explores relation of feminist research to intersections of gender, class, and race; to the self; to power; and to transformative social praxis. Students present and are given assistance with their work, as well as listen to, read, and assist with the work of others. Enrollment restricted to graduate students. Enrollment limited to 10. The Staff

244. Race and Ethnicity. *

A critical survey of the theoretical issues of persistence and change, public policy, and recent empirical studies in the field of race and ethnic relations. Readings introduce comparative race relations and a historical background of major theoretical paradigms in the field which purport to explain race and ethnic relations in general and race relations in America specifically. Enrollment restricted to graduate students. Enrollment limited to 15. Offered in alternate academic years. The Staff

245. Feminist Theory. *

Examination of shifts in 20th- and 21st-century feminist theory and epistemology. Explores the decentering of universalist feminist theories and asks what constitutes feminist theory after gender has been decentered. Considers various deconstructive challenges to second-wave feminist theory based on the politics of race, ethnicity, nation, sexuality, and class. Focus changes regularly. Enrollment restricted to sociology graduate students. Enrollment limited to 12. J. Bettie

246. Class, Culture, and Movement. *

Analyzes impact of ethnicity, gender, and religion on the class situation of laboring people in a globalized economy by intensive reading and critique of classic studies, explaining how social movements reflect combinations of social relations and cultural practices. Enrollment restricted to graduate students. Enrollment limited to 15. C. Reinerman

247. Race and Class. *

Introduces the student to the recent literature on race and class. Covers several different theoretical perspectives including internal colonialism, labor market segmentation theories, racial formation, and neo-gramscian cultural analyses. In addition to study of theory, also compares theoretical perspectives to the historical experience of minority groups, in particular, blacks, Hispanics, and Asians. Enrollment restricted to sociology graduate students. The Staff

249. Feminisms and Cultural Politics. *

Focuses on the role feminist discourses play in contemporary cultural politics with the main focus on the politics of sex, sexuality, and sex work. Begins with considerations of (mis)representations of feminisms in popular cultures; considers the relationship between academic and popular feminisms; and interrogates the meaning of terms post-feminism and third-wave feminism . Enrollment restricted to graduate students. J. Bettie

250. Course Design and Grant-Writing Seminar. *

A professional training seminar devoted to the philosophical, conceptual, and practical issues of course design, pedagogy, and grant writing. Topics covered: institutional contexts; curriculum (including syllabi, course content, assignments, evaluation); pedagogy; teaching as work/labor process; grant writing; budgets. Enrollment restricted to sociology graduate students. Enrollment limited to 15. The Staff

252. Symbolic Interactionism and Sociology of Emotions. *

Examines classic and contemporary theories and concepts that play a major role in sociological studies of identity, symbolic and social interaction, and the sociology of emotions. Examines how cultural forms, rules, and rituals define, structure, and mediate

emotions and how identities are situated within social institutions. Enrollment restricted to graduate students. Enrollment limited to 10. The Staff

253. Race, Crime, and Justice. *

An introduction to comparative and historical analyses of relations between race and the criminal justice system. Specific topics include defining race/ethnicity, sentencing disparities, jury nullification, jury selection and decisions, prosecutorial misconduct, government's charging and investigative dispositions, and other racially biased law enforcement practices and criminal court processes. Also covers a number of highly publicized trials that involved unmistakable elements of race and racism such as Chin, King, Simpson, and Unabomber cases. Students are also exposed to World Wide Web (Internet) to learn how to do research in the field of criminal justice. Enrollment restricted to graduate students. Enrollment limited to 15. H. Fukurai

255. Engaging Cultural Studies. *

Examines feminist and ethnic studies production, appropriation, and transformation of cultural studies theories and methodologies. Considers the utility of various theoretical apparatuses and methodological strategies employed in the interdisciplinary site that combines feminist, ethnic, and cultural studies. Enrollment restricted to graduate students. Enrollment limited to 15. J. Bettie

256. Urban Sociology. *

Introduction to core writings and key theoretical paradigms in urban sociology. Examines the history and contemporary conditions of cities in the U.S. and the urban experience. Urbanization, suburbanization, community, social inequality, urban politics, relationship between the built environment and human behavior. Enrollment restricted to graduate students. The Staff

257. Colonialism, International Law, and Global Justice. *

Examines colonialism, war crimes, crimes against humanity, and legal remedies, and the role of the International Criminal Court (ICC); traces the history of colonial expansionism, starting from the Roman Empire to the present American imperial dominance in global politics. Enrollment restricted to graduate students. Enrollment limited to 15. H. Fukurai

258. Global Lay Justice Systems and Direct Democracy. *

Introduces historical analysis of lay justice participation. Examines global exploration of the use of lay judge institutions in citizen's movements and the assumption that juries are a derivative institution of democratic ideals. Focuses on corporate media creation of anti-jury sentiment. Enrollment restricted to graduate students. Enrollment limited to 10. H. Fukurai

260. Culture, Knowledge, Power. F

An introduction to theoretical approaches and exemplary studies of culture, knowledge, and power which critically interrogate the relationship between cultural formations and the production, circulation, and meaning of knowledges, materials, artifacts, and symbolic forms. Explores the concrete ways that power is organized and operates through different forms and sites, how it interpolates with other forms of power, and examines knowledges and culture as specific forms of power and sites of political struggle. Enrollment restricted to sociology graduate students. Enrollment limited to 15. M. Greenberg

261. Sociology of Knowledge. *

Explores three main issues: the social determination of knowledge, including natural science; the character of intellectual labor and intellectuals as a social group; the role of organized knowledge and "knowledge industries" in contemporary social change. Texts examined include class-based theories (Lukacs, Mannheim, Gramsci), feminist standpoint analysis (Smith, Harding, etc.), and theories of postmodern culture (Lyotard, Harvey, etc.). Enrollment restricted to graduate students. Enrollment limited to 20. The Staff

262. Cultural Practice and Everyday Life. *

Examines contemporary debates about the role of mass produced expressive symbols in modern industrial societies, and the circumstances of cultural production for its impact on the creation, organization, and use of cultural artifacts. Concern with the use and experience of popular symbols for the ways that their use involves the creation of meanings and the role of such meanings in the social organization of society. Enrollment restricted to graduate students. Enrollment limited to 10. H. Gray

263. Cultural Politics of Difference. W

Considers the cultural turn and the turn to difference in understanding relations of power and struggles over representation in studies of race, media, and culture. Examines national identity, difference, subjectivity, and authenticity, especially as they bear on quests to create new identifications, alignments, and efforts to protect existing identities. Enrollment restricted to graduate students. Enrollment limited to 10. H. Gray

264. Science, Technology, and Medicine. *

Explores social and cultural perspectives on science, technology, and medicine. Analyzes theoretical approaches that open up "black boxes" of scientific and biomedical knowledge, including the politics of bodies, objects, and health/illness. Links are made to medical sociology. Enrollment restricted to graduate students. J. Reardon

268A. Science and Justice: Experiments in Collaboration. *

Considers the practical and epistemological necessity of collaborative research in the development of new sciences and technologies that are attentive to questions of ethics and justice. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267A, Biomolecular Engineering 268A, and Feminist Studies

268A. Students cannot receive credit for more than one course.) Enrollment limited to 15. J. Reardon

268B. Science and Justice Research Seminar.

Provides in-depth instruction in conducting collaborative interdisciplinary research. Students produce a final research project that explores how this training might generate research that is more responsive to the links between questions of knowledge and questions of justice. Prerequisite(s): Sociology 268A, Biomolecular Engineering 268A, Feminist Studies 268A, or Anthropology 267A. Enrollment by permission of instructor. Enrollment restricted to graduate students. (Also offered as Anthropology 267B, Biomolecular Engineering 268B, and Feminist Studies 268B. Students cannot receive credit for more than one course.) Enrollment limited to 15. J. Reardon

282. Social Policy Research. *

Policy research. Covers a variety of theoretical perspectives found in policy studies. Surveys various methodological approaches used in policy research. Theories and methods linked to research agendas on the various phases of the policy life cycle. Students are required to design a research proposal. Enrollment restricted to graduate students. Enrollment limited to 10. Offered in alternate academic years. The Staff

290. Advanced Topics in Sociological Analysis. *

The topics to be analyzed each year vary with the instructor but focus upon a specific research area. Enrollment restricted to graduate students by consent of the instructor. The Staff

293. Going on the Job Market. *

A seminar devoted to the practical problems of securing a job as a professional sociologist. Topics covered: researching colleges, universities, and public and private organizations that employ sociologists; designing a curriculum vitae; writing an application letter; preparing a "job talk;" handling questions during the interview process; the etiquette of visiting (and its aftermath); finding out about them; and the terms of employment: what is negotiable and what is not. Enrollment restricted to graduate students. C. West

294. Writing for Social Scientists. *

Seminar on the genres of social science writing, and the problems of starting and finishing a publishable thesis, book, or article. For advanced graduate students working on the composition of their dissertations and journal articles. Enrollment restricted to graduate students. Enrollment limited to 10. The Staff

297. Independent Study. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

299. Thesis Research. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Department of Languages and Applied Linguistics

218 Cowell College

(831) 459-2054

<http://language.ucsc.edu>

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Lower-Division Courses

1. First-Year Spanish.

The first-year program is aimed at developing proficiency in Spanish. Listening, speaking, reading, and writing are addressed through classroom practice and supplemented by language laboratory work. Classes are taught entirely in Spanish and are held three days a week. (Formerly Instruction in the Spanish Language.) Prerequisite(s): Placement into Spanish 1 via the online Spanish Placement Examination. The Staff

1A. Accelerated Beginning Spanish. W

The first part of a sequence (courses 1A and 1B) that covers first-year Spanish in two quarters. Taught entirely in Spanish at an accelerated pace. Aimed at developing students' proficiency in speaking, listening, reading, and writing. Prerequisite(s): Placement into Spanish 1 via the online Spanish Placement Examination. The Staff

1B. Accelerated Beginning Spanish. S

The second part of a sequence (courses 1A and 1B) that covers first-year Spanish in two quarters. Taught entirely in Spanish at an accelerated pace. Aimed at developing students' proficiency in speaking, listening, reading, and writing. Prerequisite(s): course 1A. The Staff

2. First-Year Spanish.

The first-year program is aimed at developing proficiency in Spanish. Listening, speaking, reading, and writing are addressed through classroom practice and supplemented by language laboratory work. Classes are taught entirely in Spanish and are held three days a week. (Formerly Instruction in the Spanish Language.) Prerequisite(s): course 1 or placement into Spanish 2 via the online Spanish Placement Examination. The Staff

3. First-Year Spanish.

The first-year program is aimed at developing proficiency in Spanish. Listening, speaking, reading, and writing are addressed through classroom practice and supplemented by language laboratory work. Classes are taught entirely in Spanish and are held three days a week. (Formerly Instruction in the Spanish Language.) Prerequisite(s): course 2 or placement into Spanish 3 via the online Spanish Placement Examination. The Staff

4. Second-Year Spanish.

Includes comprehensive grammar review, composition, readings, and discussion. Reading and audiovisual material deal with various sociopolitical and cultural issues in the Spanish-speaking world. Classes are conducted in Spanish. (Formerly Intermediate Spanish.)

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■ Literature
■ Mathematics
■ Merrill College
■ Microbiology and Environmental Toxicology
■ Molecular, Cell, and Developmental Biology
■ Music
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■ Porter College
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■ Russian
■ Science Communication
■ Social Documentation
■ Sociology
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■ Spanish for Heritage Speakers
■ Stevenson College
■ Technology and Information

Prerequisite(s): course 1B or 3 or placement into Spanish 4 via the online Spanish Placement Examination. (General Education Code(s): CC, IH.) The Staff

5. Second-Year Spanish.

Includes comprehensive grammar review, composition, readings, and discussion. Reading and audiovisual material deal with various socio-political and cultural issues in the Spanish-speaking world. Classes are conducted in Spanish. (Formerly Intermediate Spanish.) Prerequisite(s): course 4 or placement into Spanish 5 via the online Spanish Placement Examination. (General Education Code(s): CC, IH.) The Staff

5M. Medical Spanish.

Students learn medical vocabulary, useful expressions, suitable grammatical structures, and cultural background to be able to interact with Spanish-speaking patients and doctors. Medical Spanish fulfills language requirement for the health sciences and human biology majors. Prerequisite(s): Spanish 4; or Spanish for Spanish Speakers 61 or 62 or 63; or Spanish for Heritage Speakers 4, or 5, or 6, or 125; or placement into Spanish 5 via the online Spanish Placement Examination. Enrollment restricted to health sciences majors. (General Education Code(s): CC, IH.) The Staff

6. Second-Year Spanish.

Increases oral and written proficiency using authentic reading materials which focus on such topics as social class, ethnicity, education, religion, economic, and political developments in the Spanish-speaking world. (Formerly Intermediate Spanish.)

Prerequisite(s): course 5 or 5M or placement into Spanish 6 via the online Spanish Placement Examination. (General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

105. Introduction to Spanish Studies. W

Speaking, reading, and writing proficiency in Spanish is required. Explores the social, cultural, economic, and political changes that connect Latin America, Spain, and the United States Latina/o communities. Satisfies the Modern, Spanish, and World Literature concentrations; also satisfies the Global distribution requirement. (Also offered as Spanish/Latin Amer/Latino Lit 105. Students cannot receive credit for both courses.) Prerequisite(s): course 6 or Spanish for Heritage Speakers 6 or permission of instructor. (General Education Code(s): ER.) J. Poblete

114. Advanced Conversation and Composition. W,S

Advanced conversation and composition based on extensive readings in the humanities and social sciences. Students interested in this course who have not taken the prerequisite should meet with the instructor prior to the first class meeting. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; SPAN 6, or SPAN 56, or SPSS 63, or SPHS 6, or placement into Spanish 114 via the online Spanish Placement Examination The Staff

150. Topics in Hispanic Linguistics: Introduction to Hispanic Linguistics. W

Taught in Spanish. Students learn the major properties of the Spanish language from a linguistics perspective. Topics covered include: phonetics/phonology, morphology, and syntax. (Formerly Languages 150.) Prerequisite(s): Linguistics 50; and Spanish 6 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or equivalent Spanish proficiency. E. Zyzik, M. Gonzalez Pagani

151. Topics in Hispanic Linguistics: Varieties of Spanish. F

Taught in Spanish. Explores the linguistic variety of the Spanish language in the Iberian Peninsula, the former Spanish colonies, and the Americas from a descriptive, synchronic

<p>Management</p> <p>UCDC Program</p> <p>Writing Program</p> <p>Theater Arts</p> <p>Yiddish</p> <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>perspective. Issues of languages in contact, variation in speech communities, and bilingualism are also introduced. (Formerly Languages 151.) Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Heritage Speakers 6 or Spanish for Spanish Speakers 63 or placement into Spanish 151 via the online Spanish Placement Examination. M. Gonzalez Pagani</p> <p>152. Topics in Hispanic Linguistics: Spanish in the U.S. * Taught in Spanish. Serves as a linguistic introduction to the varieties of Spanish that are currently spoken in the United States. Some central topics include: code-switching, language maintenance, and language contact phenomena. (Formerly Languages 152.) Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Heritage Speakers 6 or Spanish for Spanish Speakers 63 or placement into Spanish 152 via the online Spanish Placement Examination. Enrollment limited to 30. E. Zyzik</p> <p>156. Topics in Hispanic Language and Culture. An analytic study of 20th-century Hispanic language and culture as revealed in print and audio visual media. The Staff</p> <p>156A. The Language of Latin America Cinema. W Explores Latin American culture through its cinematic art. Students are exposed to and participate in discussion, analysis, and commentary on important social, historical, and political issues presented in the films. Provides a greater understanding of Latin America, and works toward advanced communicative proficiency and comprehension of linguistic variations in countries such as Cuba, Argentina, México, Bolivia, Chile, and others. Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or placement into Spanish 156A via the online Spanish Placement Examination. (General Education Code(s): CC, E.) C. Caliendo</p> <p>156E. Spanish Culture. * A broad survey of Spanish cultural topics, including history, politics, religions, art forms, music, and films. It is based on extensive conversations, discussion, and composition. Particular emphasis is placed on key changes that have occurred during the 20th century in Spain. Classes conducted through commentary on texts read (or viewed), oral presentations, and debate. Recommended for students preparing to go to Spain with EAP. Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or placement into Spanish 156E via the online Spanish Placement Examination. The Staff</p> <p>156F. El Humor en Espanol. * Topic-oriented language course on sociopolitical and historical issues as seen through humor in different genres and media. Topics include Mafalda and Condorito (comic strips), Rius (collage of comic strips, photographs and original documents), Continflas and Almodovar (cinema), El Teatro Campesino (theater), Ana L., Vega (literature), Les Luthiers (song and music). Course deals with written and oral discourse pertaining to the following Spanish language varieties: Rio de la Plata, Mexican, Caribbean, U.S., and Peninsular. Intensive writing and speaking in Spanish. Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or placement into Spanish 156F via the online Spanish Placement Examination. (General Education Code(s): TA.) M. Gonzalez Pagani</p> <p>156G. Spanish for the Professions. * Taught in Spanish. Students learn vocabulary and expressions as well as pertinent cultural background to understand, speak, read, and write about business and professional situations in connection with the Latino experience. Legal, educational, medical, and business topics are covered. Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or placement into Spanish 156G via the online Spanish Placement Examination. (General Education Code(s): ER.) The Staff</p> <p>156M. Mexico and the Southwest. F An interdisciplinary survey of the cultural history of the Mexican people in both Mexico and the U.S. Southwest. Topics include literature, art, folklore, oral tradition, music, politics, as well as "everyday" cultural manifestations. Conducted in Spanish. May be counted toward fulfillment of upper-division major requirements for Latin</p>
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American and Latino studies and language studies. (Formerly Spanish for Spanish Speakers 125.) Prerequisite(s): Spanish 6 or Spanish 56 or Spanish for Spanish Speakers 63 or Spanish for Heritage Speakers 6 or placement into Spanish 156M via the online Spanish Placement Examination. (General Education Code(s): CC.) The Staff

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

195F. Senior Essay (2 credits). F,W,S

Concurrent enrollment in an approved upper-division Spanish, languages, or Spanish literature concentration course not used for core or concentration credit satisfies the capstone requirement. Students work with a faculty adviser to complete the senior capstone essay in addition to course requirements for the upper-division course. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to Spanish studies majors only. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014-15

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Spanish for Heritage Speakers

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218 Cowell College

(831) 459-2054

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Lower-Division Courses

4. Spanish for Heritage Speakers.

Deals with orthography, lexicon development, morphology, syntax, and other linguistic topics as applied to the development of all language skills (listening, reading, speaking, and writing). Emphasizes reading and writing about well-known and pivotal authentic texts of varying genres and formats from the Spanish-speaking world. Emphasis is on the United States, Mexico, and Spain. Students need to use the self-placement questionnaire posted on the Language Program web page. (Formerly course 61, Spanish for Spanish Speakers.) (General Education Code(s): CC, IH.) The Staff

5. Spanish for Heritage Speakers.

Deals with orthography, lexicon development, morphology, syntax, and other linguistic topics as applied to the development of all language skills (listening, reading, speaking, and writing). Emphasizes reading and writing about well-known and pivotal authentic texts of varying genres and formats from the Spanish-speaking world. Emphasis is on Central America and the Caribbean. (Formerly course 62, Spanish for Spanish Speakers.) Prerequisite(s): SPSS 61 or SPHS 4 or by consent of program coordinator. (General Education Code(s): CC, IH.) The Staff

6. Spanish for Heritage Speakers.

Deals with orthography, lexicon development, morphology, syntax, and other linguistic topics as applied to the development of all language skills (listening, reading, speaking, and writing). Emphasizes reading and writing about well-known and pivotal authentic texts of varying genres and formats from the Spanish-speaking world. Emphasis is on South America. (Formerly course 62, Spanish for Spanish Speakers.) Prerequisite(s): SPSS 62 or SPHS 5. (General Education Code(s): CC, IH.) The Staff

94. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. Enrollment limited to 10. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Upper-Division Courses

194. Group Tutorial. F,W,S

Provides a means for a small group of students to study a particular topic in consultation with a faculty sponsor. Enrollment limited to 10. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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Stevenson College

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College Office

(831) 459-4930

<http://stevenson.ucsc.edu/>

For college description and list of faculty, see [colleges](#).

Lower-Division Courses

10. Skills for College and Beyond (2 credits). F,S

Applications of practical skills for effective, meaningful study in the context of a full, busy life. Topics include learning styles, time management, test preparation, and life balance. Specific techniques for efficient reading comprehension, note-taking, memorization, and self-assessment are introduced. Enrollment restricted to college members and by permission of instructor. Enrollment limited to 15. C. Camblin

16. Stevenson Community Garden (2 credits). *

Hands-on course in ecological horticulture at the Stevenson garden. Students grow the Stevenson community through gardening and projects focused on building a healthy and regenerative local-foods culture. Enrollment by interview only. Enrollment restricted to Stevenson College members. Enrollment limited to 16. D. Shaw

18. Eighteenth Century Kabalistic Thought and Literature (2 credits).

Emphasis on analyzing (translations of) original text to explore critical areas of kabalistic thought, including tzimtzum, the sefirot, theodicy, and hermeneutics. S. Chein

20. The Harder They Come—The Postcolonial Self in Jamaica (2 credits). *

Examines Jamaica's transition to independence: the history of colonialism, its legacy of violence, and how the subaltern incorporate and rework hegemonic tropes of the gunslinger, gangster, preacher, politician, and policeman in literature, music, and film. Enrollment restricted to Stevenson College members. Enrollment limited to 20. The Staff

21. Citizens and Nations: Self and Society in the 19th Century (2 credits). S

A reading seminar focusing on a set of key texts. Examines how the political and industrial revolutions of the 19th century fundamentally transformed the relationships between individuals and their respective societies. Enrollment restricted to Stevenson College members. Enrollment limited to 20. K. Silver

22. Self and Society in Classical Social Theory (2 credits). *

Reading seminar focusing on a set of key texts from classical social theory. Explores the transition from traditional to modern societies. Authors addressed may include Locke, Rousseau, de Tocqueville, Marx, Weber, and Durkheim. Enrollment restricted to Stevenson College members. Enrollment limited to 20. K. Silver

23. Monsters and the Monstrous in the Early British Novel. S

Examines figurations of monsters and the monstrous in the 18th- and 19th-Century British novel to explore the function of monsters as cultural tools for affirming and subverting

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- social boundaries. (General Education Code(s): TA.) S. Sweat
24. Cultural Intelligence: Developing a Higher CQ (Cultural Intelligence) (2 credits). F We begin by examining the three basic facets involved in developing one's cultural intelligence (CQ): cognitive, motivational, and behavioral. Topics include: complexities of intercultural communication; importance of cultural self-identity and filters; power and privilege; and their impact on one's perceptions. (Formerly Cultural Intelligence: Diversity Facilitator Team.) Enrollment limited to 18. D. Smith
- 24B. Developing Facilitation Skills for Cultural Intelligence (2 credits). W Presents six dimensions of facilitation: goal development, cognitive aspects, confronting resistance, managing emotions, methods of learning, and creating a supportive and respectful climate. Students practice different styles of facilitation to learn which one(s) fit their personal styles and goal(s) for any given workshop. The importance of developing "cultural intelligence" is presented as well. Students must be available to facilitate diversity trainings. Enrollment by instructor consent. Enrollment restricted to sophomores, juniors, seniors, and graduate students. Enrollment limited to 20. The Staff
26. Navigating the Research University (2 credits). W Explores critical engagement in education in the context of a research university. Introduces first-year issues and success strategies and ways to participate in the institution's academic life. Investigates strategies for clarifying education goals and devising a plan for success. Enrollment restricted to first-year students. A. Yang
28. Residential Life Leadership (2 credits). S Examines the role and facilitates the development of Stevenson College Residential Advisers. Class themes include an exploration of leadership, resource management, and the process of community building within the college. Course evaluation based on paper writing, participation, engagement with course materials, and a small group final project that requires students to create a year-long program model designed to address an issue facing the Stevenson community. Prerequisite(s): Must have been hired as a Stevenson residential adviser or alternate for the following academic year. Enrollment limited to 30. May be repeated for credit. B. Redding, S. Prather
30. Thesis Writing and Editing (2 credits). W Identifies and examines the assumptions, expectations, and formats of writing in students' fields, with the goal of beginning—or continuing—academic research. Prerequisite(s): satisfaction of the Composition requirement. Enrollment restricted to junior and senior college members and by permission of instructor. Enrollment limited to 25. A. Weaver
33. Self and Society Examined Through Ethical Dilemmas (2 credits). * Examines ethical dilemmas in contemporary topics, such as the status of moral principles during warfare; animal rights and the ethics of eating meat; privacy in the age of the Internet; imprisonment and rehabilitation; legal and illegal immigration; same-sex marriage; and health care. The Staff
35. Everyday Ethics for College Life (2 credits). * Exploration of and reflection on everyday values and virtues such as integrity, open-mindedness, honesty, and community. Objectives include learning how to think about moral dilemmas and how to begin drafting one's own code of ethics. Enrollment restricted to college members. Enrollment limited to 20. C. Camblin
36. Women in the Bible (2 credits). Explores and analyzes many of the biblical narratives pertaining to female characters in the Hebrew Bible. Students are required to read the original texts, pose questions, suggest answers, and explore possible meanings of the narrative. Enrollment limited to 10. The Staff
38. The Prophetic Tradition: The Work and Thought of Norman O. Brown (2 credits). S Continued study of themes of Stevenson Core through the writings of Norman O. Brown. A former UCSC professor, Brown was a classicist and a reader of Marx, Freud, and Nietzsche. Through Brown students deepen their understanding of Core ideas. Enrollment restricted to first-year and sophomore college members. Other students may enroll by permission of the instructor. S. Carter
40. The Self Under Moral Siege: Challenges for the Individual in 20th-Century Totalitarian

Management UCDC Program Writing Program Theater Arts Yiddish	<p>Europe (2 credits). *</p> <p>Examines how individuals and communities confronted dilemmas when laws, state ideology, and war challenged traditional morality. Themes include: ethics, responsibility, victimhood, moral compromise, retribution, and reconciliation. Enrollment priority given to Stevenson College students. Enrollment limited to 22. The Staff</p>
Teaching and Administrative Staff	<p>41. Spirituality in a Modern World (2 credits). *</p> <p>Investigates scientific and pragmatic perspectives on spirituality from William James to Fritjof Capra. Explores spirituality in Western and Eastern traditions from Martin Buber to Pema Chodron. Students analyze, support, and articulate their spiritual positions in a culminating paper. Enrollment restricted to Stevenson College members. Enrollment limited to 20. C. Camblin</p>
Appendices	<p>42. Student-Directed Seminar. F,W,S</p> <p>Seminars taught by upper-division students under faculty supervision (see course 192). The Staff</p>
Archive of General Catalogs	<p>50A. Stevenson Alumni Careers in Law (2 credits). S</p> <p>Online course connecting Stevenson students with alumni who provide practical advice for careers in law. Topics covered include preparing for majors, internships, graduate school, networking, applying for jobs, interviewing, and future employment. Enrollment restricted to Stevenson College members. R. Trumbull</p>
Nondiscrimination Statement	<p>50B. Stevenson Alumni Careers in Science and Technology (2 credits). S</p> <p>Online course connecting Stevenson students with alumni who provide practical advice for careers in science and technology. Topics covered include preparing for majors, internships, graduate school, networking, applying for jobs, interviewing, and future employment. Enrollment restricted to Stevenson College members. R. Trumbull</p>
Search the Catalog	<p>80A. Introduction to University Discourse: Self and Society. F</p> <p>Explores rhetorical principles and conventions of university discourse providing intensive practice in analytical writing, critical reading, and speaking. Stevenson's core course considers the roots of modern society using foundational religious texts and major classical and modern philosophical works. Students cannot receive credit for this course and course 80B. Enrollment restricted to first-year college members who have not satisfied the C1 requirement. Enrollment limited to 25. (General Education Code(s): T5–Humanities and Arts or Social Sciences, C1.) The Staff</p>
	<p>80B. Rhetoric and Inquiry: Self and Society. F</p> <p>Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Stevenson's core course investigates the roots of modern society, using foundational religious texts and classical and modern philosophical works. Students cannot receive credit for this course and course 80A. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year college members. Enrollment limited to 25. (General Education Code(s): T5–Humanities and Arts or Social Sciences, C2.) The Staff</p>
	<p>80F. Self and Society Through Film (2 credits). *</p> <p>Seminar designed to expand upon the discussions begun in the Stevenson Core Course. Course uses documentary and feature films to investigate and discuss all sides of modern conflicts that bring class back to the Core Course theme. Prerequisite(s): completion of two-quarter core course sequence. Enrollment limited to 25. The Staff</p>
	<p>80H. Rainbow Theater: An Introduction to Multicultural Theater. F</p> <p>Introduction to Asian American, Chicano/Latino, and African American plays through reading of major authors, discussion of social and historical context of their work, and development of a production of a one-act play from each cultural group. In-depth examination of key historical context of these three cultural groups. Video presentations followed by class discussion. May be repeated for credit. (General Education Code(s): T4–Humanities and Arts, E.) D. Williams</p>
	<p>80T. Self and Society for Transfer Students. *</p> <p>Condensed version of Stevenson's core course for transfer students. Develops analytical writing, critical reading, and effective speaking by considering influential philosophical works while exploring cultural conflicts in modern society. Themes include imperialism,</p>

racism, and class conflict. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to college members. Enrollment limited to 25. (General Education Code(s): T5–Humanities and Arts or Social Sciences, W, E.) The Staff

81A. Self and Society 2. W

Winter quarter of Stevenson's core course continues development of analytical writing, critical reading, and effective speaking in exploring conflicts inherent in modern society. Investigates themes of colonization, race, gender, class, and cultural conflict. Enrollment restricted to first-year and sophomore college members. Students cannot receive credit for this course and course 81B. Enrollment limited to 25. (General Education Code(s): TA, E.) The Staff

81B. Rhetoric and Inquiry: Self and Society 2. W

Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Winter quarter of Stevenson's core course investigates themes of colonization, race, gender, class, and cultural conflict. Permission of instructor required; selection for this course based on application submitted. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment restricted to first-year and sophomore college members. Students cannot receive credit for this course and course 81A. Enrollment limited to 25. (General Education Code(s): TA, C2, E.) The Staff

90. The Nuclear Pacific. S

Examines the history of nuclear weapons and nuclear power in the Pacific region from 1945 to 2013. Students do research on nuclear science, medicine, energy, and weapons testing and their social, political, demographic, and environmental impacts. Enrollment restricted to first-year Merrill, Kresge, or Stevenson College challenge students. Enrollment limited to 25. Satisfies American History and Institutions Requirement. (General Education Code(s): PE-T.) A. Christy

91F. Challenge Speakers Colloquium (2 credits). F

Eight lectures, six by faculty about research problems in their disciplines. Students attend two dinners with the speakers; respond to research papers in each speaker's field; conduct a research interview with a professor; and investigate a research question. (Also offered as Merrill College 91F. Students cannot receive credit for both courses.) Prerequisite(s): course 90, or Merrill 90, or Kresge 171. E. Abrams

Upper-Division Courses

120. Self and Society: Teaching Practicum. W

Each student facilitates one of the discussion sections of Stevenson 81A or attends lectures, and meets with staff for practicum on the teaching process. Prerequisite(s): qualifications as determined by instructor at first class meeting. Enrollment limited to 5. The Staff

121. Advanced Research and Strategic Planning for Graduate School. W

Guided by a faculty mentor, students engage in an advanced research experience including developing a research proposal, conducting research, and writing and presenting a research paper. Students also prepare for graduate school by practicing the graduate school application process. Enrollment is restricted to students accepted into the Educational Opportunity Programs faculty mentor program. Enrollment also restricted to junior and senior majors in the Divisions of Arts, Humanities, and Social Sciences. Enrollment limited to 20. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision (see course 42). Prerequisite(s): upper-division standing and a proposal supported by a faculty member willing to supervise. The Staff

193. Field Study. F,W,S

Provides for individual programs of study, sponsored by the college and performed off-campus. This course may be counted for up to three courses of credit in any quarter. Prerequisite(s): approval of student's adviser and the academic preceptor, and, in the case of full-time study, the board of studies supervising the major. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

A program of independent study arranged between a group of students and a faculty instructor. Enrollment restricted to members of Stevenson College. Enrollment limited to 12. The Staff

194F. Group Tutorial (2 credits). F,W,S

A program of independent study arranged between a group of students and a faculty instructor. Course designed for members of Stevenson College. Students submit petition to sponsoring agency. Enrollment limited to 10. May be repeated for credit. The Staff

198. Independent Field Study. F,W,S

Provides for college-sponsored individual study programs off campus, for which faculty supervision is not in person (e.g., supervision is by correspondence). Up to three such courses may be taken for credit in any one quarter. Prerequisite(s): approval of the student's adviser, certification of adequate preparation, approval by the academic preceptor. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for college-sponsored individual study programs off campus, for which faculty supervision is not in person (e.g., supervision is by correspondence). Up to three such courses may be take for credit in any one quarter. Students submit petition to sponsoring agency. Requires approval of the student's adviser and academic preceptor. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual projects carried out under the supervision of a Stevenson faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual projects carried out under the supervision of a Stevenson faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014–15

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Baskin School of Engineering
(831) 459-2158

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Lower-Division Courses

20. Innovations and Entrepreneurship Seminar (2 credits). W

Helps students convert their ideas into a viable business. Students must provide their own idea for a new product or company. Local entrepreneurs provide advice and mentoring to each student team. Enrollment limited to 50. (General Education Code(s): PR-E.) S. Desa, B. Haddad

50. Business Information Systems. F,W,S

Addresses the use of information systems (IS) within a business enterprise. Subjects include computer hardware and software concepts, system design and implementation, telecommunications, data management, transaction-based systems, management information systems, and the use of IS to compete. Intended for technology and information management and business management economics majors. J. Musacchio, R. Akella

58. Systems Analysis and Design. W

Students learn how information technology is used to deal with business requirements and/or solve business problems. Provides an understanding of structured computer systems analysis and design methodologies and techniques and their application to business information systems. Intended for technology and information management and business management economics majors. Prerequisite(s): course 50. Enrollment limited to 40. Y. Zhang

80C. Starting a New Technology Company. S

Focuses on the creation and management of technology start-ups and small companies, using case studies and team projects as the basis for learning and applying the course materials. (General Education Code(s): T7-Natural Sciences or Social Sciences.) The Staff

94. Group Tutorial. F,W,S

A means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

94F. Group Tutorial (2 credits). F,W,S

A means for a small group of students to study a particular topic in consultation with a faculty sponsor. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

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99. Tutorial. F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S
Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

101. Management of Technology Seminar (2 credits). F,W,S

Uses weekly talks by leading industry practitioners and university researchers to provide in-depth exposure to the management of technology. Topics covered include product development, operations, strategy, finance, and marketing for technologies such as software and information systems. May be repeated for credit. S. Desa, The Staff

105. Introduction to Management of Technology I. F

An in-depth examination of technological, strategic, marketing, and financial methods and analytical tools for the management of technology to enable cost-effective and rapid development of profitable and high quality technologies. Includes case studies and a comprehensive project. (Formerly Management of Technology I.) Prerequisite(s): Mathematics 19B or 11B or Applied Mathematics and Statistics 11B or Economics 11B. S. Desa

115. Entrepreneurial Organization and Leadership. S

Provides a framework for analysis and practical insights into the issues associated with managing people, including motivation, team creation, and management and managing performance. Entrepreneurial leadership roles are emphasized. Enrollment restricted to juniors, seniors, and graduate students. Enrollment limited to 50. (General Education Code(s): PE-H.) The Staff

125. Introduction to Management of Technology II. W

High-technology enterprises must understand and operate effectively within their technology-business value chains in order to maximize profitability. This course develops and applies methods and tools for the design, optimization, selection, and management of these value chain networks. (Formerly Management of Technology II.) Prerequisite(s): course 105. S. Desa, The Staff

130. Financial Engineering and Management in High Technology Firms. W

Addresses methods and tools for financing technology development and projects. Includes approaches for coordinating finance and accounting with strategy and operations of firms; discounted cash-flow analysis; activity-based costing; financial planning; and elements of financial account and investment science. Prerequisite(s): Economics 113 or Applied Mathematics and Statistics 131 or Computer Engineering 107 or by instructor permission. Enrollment limited to 20. R. Akella

158. Business Strategy and Information Systems. S

Analysis of effective use of information systems within a business enterprise, with emphasis on gaining a competitive advantage. Integration of information systems with business strategy, financial justification, personnel, and organizational considerations are highlighted. Intended for technology and information management majors or senior engineering majors who have a business interest. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 50 or permission of instructor. (General Education Code(s): W.) The Staff

166A. Game Theory and Applications I.

Introduces modern game theory, including applications in social science, biology, and engineering. Topics include extensive form, strategic form, mixed strategies, incomplete information, repeated games, evolutionary games, and simulation techniques. (Also offered as Computer Science 166A and Economics 166A. Students cannot receive credit for more than one course.) Prerequisite(s): Applied Math and Statistics 5 or 7 or Economics 113; and Economics 11B, Applied Math and Statistics 11B, or Mathematics 11B or 19B. Enrollment restricted to juniors and seniors. Enrollment limited to 100. J. Musacchio

193. Field Study. F,W,S

Provides individual programs of study with specific academic objectives carried out under

<p>Management</p> <ul style="list-style-type: none"> ■ UCDC Program ■ Writing Program ■ Theater Arts ■ Yiddish <hr/> <p>Teaching and Administrative Staff</p> <hr/> <p>Appendices</p> <hr/> <p>Archive of General Catalogs</p> <hr/> <p>Nondiscrimination Statement</p> <hr/> <p>Search the Catalog</p>	<p>direction of faculty member of Information Systems Management and a willing sponsor at field site. Uses resources not normally available on campus. Credit based on presentation of evidence of achieving objectives by submitting written and oral presentation. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>193F. Field Study (2 credits). F,W,S Provides individual programs of study with specific academic objectives carried out under direction of faculty member of Information Systems Management and a willing sponsor at field site. Uses resources not normally available on campus. Credit based on presentation of evidence of achieving objectives by submitting written and oral presentation. Cannot normally be repeated for credit. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>194. Group Tutorial. F,W,S A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>194F. Group Tutorial (2 credits). F,W,S A program of independent study arranged between a group of students and a faculty member. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>195. Senior Thesis Research. F,W,S Intended for majors. Students submit petition to sponsoring agency. The Staff</p> <p>195F. Senior Thesis Research (2 credits). F,W,S Intended for majors. Students submit petition to sponsoring agency. The Staff</p> <p>198. Individual Study or Research. F,W,S Intended for majors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>198F. Individual Study or Research (2 credits). F,W,S Intended for majors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff</p> <p>199. Individual Study or Research. F,W,S Individual directed study for upper-division undergraduates. Students submit petition to sponsoring agency. Enrollment restricted to senior information systems management majors. May be repeated for credit. The Staff</p>
	<h2>Graduate Courses</h2> <p>204. Introduction to Optimization in Business. F Covers optimization with emphasis on problems arising in management. Students become proficient at mathematical modeling of business decisions and familiar with a range of techniques and tools used to solve optimization problems. Enrollment restricted to graduate students. The Staff</p> <p>205. Management of Technology I. F Addresses technological, strategic, marketing, financial methods, and analytical tools for management of technology in an integrated manner that enables the cost-effective and rapid development of profitable and high quality technologies. Includes case studies and a comprehensive project. Enrollment restricted to juniors, seniors, and graduate students. S. Desa</p> <p>206. Optimization Theory and Applications. F A first graduate course in optimization with an emphasis on problems arising in management and engineering applications. Objectives are to become experts in problem formulation, comfortable with software for solving these problems, and familiar with analytical methods behind these solver technologies. Prerequisite(s): calculus and linear algebra. Enrollment restricted to graduate students. J. Musacchio</p> <p>207. Random Process Models in Engineering. S A first graduate course in stochastic process modeling and analysis with an emphasis on applications in technology management, information systems design, and engineering.</p>

Enrollment restricted to graduate students. Prerequisite: Computer Engineering 107 or other undergraduate probability course recommended. J. Musacchio

209. Data Mining and Business Analytics in Knowledge Services. F

Provides students with systematic methodology and analytical tools in data and text mining and business analytics. Also provides an integrated perspective and examines use of these methods in the field of knowledge services, such as online marketing, sponsored search, health care, financial services, recommender systems, etc. Includes training in the basic elements of stochastic optimization and other algorithmic approaches, such as stochastic dynamic programming, statistics, constrained optimization, and machine learning with exposure to software tools. These methods enable firms to achieve rapid, effective, and profitable optimization of knowledge-services management. Enrollment restricted to graduate students. Students are expected to have undergraduate preparation in probability and statistics. Undergraduates may enroll with instructor approval. R. Akella

210. Marketing Analytics and Engineering. *

Provides students with a systematic methodology and the corresponding set of methods and analytical tools to address the analytic approaches to marketing in a real-world context. Trains students in the basic elements of statistics decision trees, stochastic optimization, and other algorithmic approaches. Students should have a solid background in the following: probability equivalent to statistics, stochastic methods, calculus, linear algebra, stochastic processes and optimization, and/or mathematical maturity.

Recommended courses: course 207, course 250, Applied Mathematics and Statistics 203, Applied Mathematics and Statistics 205, Computer Engineering 230. Enrollment restricted to graduate students. Enrollment by permission of instructor. The Staff

211. E-Business Technology and Strategy. S

Surveys structure of modern information technology, the relation of that structure to structure of the industry that creates it, and the economic forces that drive the players in the industry. Building on these technological and economic concepts, studies how firms can craft a technology and business strategy to create and capture value in the information technology product and/or services sectors. Enrollment restricted to graduate students. J. Musacchio

215. Organizations and Leadership. W

Addresses organizational and managerial aspects of high-tech enterprises, providing an understanding of various corporate functions. Considers issues of human resources: motivation and rewards, group dynamics, communication, ethics, and leadership. Includes perspectives from behavioral theories and corporate practice/culture. Enrollment restricted to graduate students. The Staff

225. Management of Technology II. W

High technology enterprises must understand and operate effectively within their technology-business value chains in order to maximize profitability. Course develops and applies methods and tools for the design, optimization, selection, and management of these value chain networks. Prerequisite(s): course 205 or consent of instructor. Enrollment restricted to juniors, seniors, and graduate students. The Staff

230. Financial Engineering and Management in High Technology Firms. *

Course provides students with a systematic methodology, and the corresponding set of methods and analytical tools, to address the field of financial engineering and its use in high-tech enterprises in an integrated manner. Covers basic concepts of stochastic optimization and other algorithmic approaches, such as stochastic dynamic programming; decision models and analysis; and binomial trees; and their application in financial engineering in the context of high-tech enterprises. Prerequisite(s): Computer Engineering 107 or Economics 113 or Applied Mathematics and Statistics 131, or instructor approval. Enrollment restricted to graduate students. The Staff

240. Information Technology for Decision Support: An Introduction. *

Introduction to the information technologies useful to IT management. Reviews/surveys four major topics: 1) information systems: from computer technology—systems architecture (hardware and software), multiprocessors and cluster—to client-server, networking and distributed computing, data storage and data servers, file management, database systems, input/output technology, graphics and multimedia; 2) IT as a "service":

commercial and open-course tools for information-system development and knowledge management; 3) managing, searching, and mining of structured and unstructured data; 4) decision-support systems that integrate knowledge with data mining and text mining tools to support decision-making in product development, supply-chain management, marketing, sales and logistics. Enrollment restricted to graduate students. The Staff

245. Data Mining. S

Covers the principles, algorithms, and applications of data mining, including mining sequential data, structured data, stream data, text data, spatiotemporal data, biomedical data, and other forms of complex data. Enrollment restricted to graduate students. Y. Zhang

250. Stochastic Optimization in Business Intelligence: Digital Advertising and Online Marketing. *

Trains students in stochastic optimization and other algorithmic approaches, such as stochastic dynamic programming, to achieve business intelligence (BI) optimization. Special emphasis on digital advertising, and online and computational marketing. Students should have solid background in: probability equivalent to statistics, stochastic methods, calculus, liner algebra, mathematical maturity, stochastic processes, and optimization. First of a sequence of courses in information systems and technology management (ISTM). Provides students with systematic methodology and corresponding set of methods and analytical tools to address the field of ISTM in an integrated manner. Enrollment restricted to graduate students; undergraduates who have completed Computer Engineering (CMPE) 107 or Applied Mathematics & Statistics (AMS) 131 may enroll by permission of instructor. AMS 205A, CMPE 230 recommended. The Staff

251. Large-Scale Web Analytics and Machine Learning. *

Provides a systematic methodology and corresponding set of methods and analytical tools in stochastic models; reinforcement learning; stochastic (neuro-)dynamic programming; Bayesian graphical models; inference; and social networks used for web analytics and machine learning to achieve business intelligence (BI) and support research and applications in computer science, computer engineering, and electrical engineering, applied mathematics and statistics, business, management, and economics. Includes exposure to Hadoop for large-scale computation. Students should have solid background in probability equivalent to statistics, stochastic, methods, calculus, (and preferably) stochastic processes and optimization, or mathematical maturity and exposure to business intelligence and algorithms. Prerequisite(s): Computer Engineering 107 or Applied Mathematics and Statistics 131 or permission of instructor. Enrollment restricted to graduate students. Course 230, 250 ,and Applied Mathematics and Statistics 205A or 205B recommended. The Staff

260. Information Retrieval. *

Course covers major topics of information retrieval, including statistical characteristics of text, several important retrieval models, text clustering, text classification, text filtering, web analysis, information extraction, peer to peer research, distributed search, personalized search, and other related topics. Enrollment restricted to graduate students. Undergraduates may enroll with permission of instructor. The Staff

270. Service Engineering and Management. W

Introduction to service engineering and management, from the role of services in the global economy to analytical models in service operations management. This field is developing rapidly; the material covers the fundamental principles of services as well as recent research. Topics include designing efficient service networks, forecasting, resource allocation, and globalization. Enrollment restricted to graduate students. The Staff

280A. Graduate Research Seminar (2 credits). *

Weekly seminar series in topics of current research in information systems and technology management. Enrollment by permission of instructor. Enrollment limited to 30. May be repeated for credit. The Staff

280I. Seminar on Information Retrieval and Knowledge Management (2 credits). W

Seminar series discussing advanced topics in information retrieval and knowledge management. Current research and literature are presented during each meeting. Enrollment restricted to graduate students. Enrollment limited to 20. May be repeated for credit. Y. Zhang

280M. Sales and Marketing for Technologists and Engineers (2 credits). F
Perspective on the theory, plus examples, and tools useful to technologists and engineers for successfully guiding and supporting sales and marketing endeavors and, thereby, ensuring funding, staffing, product appeal, positive customer relationships, and marketplace success. R. Akella

280S. Seminar Topics (2 credits). W
Weekly seminar series of current research on a special topic in information systems and technology management. The theme of research presented throughout the course selected by the instructor. Topics may include, but are not limited to, knowledge planning, new product development and management of technology. Enrollment with permission of instructor. Enrollment limited to 30. May be repeated for credit. The Staff

283. Special Topics in Technology and Information Management (3 credits). W
Graduate seminar on topics in technology and information management that varies with the particular instructor. Topics may include, but are not limited to: data analytics, information retrieval, recommender systems, technology management, and the economics of information and technology. Enrollment restricted to graduate students. B. Haddad, Y. Zhang, J. Musacchio, P. Mantey

293. Advanced Topics in Technology and Information Management (TIM).
Advanced research topics in TIM (as determined by instructor). Topics include, but are not limited to, approaches and solutions to complex business problems, and development of information-based technology and services. Enrollment restricted to graduate students. Enrollment limited to 25. May be repeated for credit. The Staff

297. Independent Study. F,W,S
Independent study under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

299. Thesis Research. F,W,S
Thesis research under faculty supervision. Students submit petition to sponsoring agency. Enrollment restricted to graduate students. May be repeated for credit. The Staff

* Not offered in 2014-15

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25 Merrill College

(831) 459-2855

politics@ucsc.edu<http://politics.ucsc.edu>[Program Statement](#)

Upper-Division Courses

194A. UCDC Internship Research Seminar. F,W,S

Weekly seminar that focuses on the production of a major research paper or equivalent scholarly undertaking connected to an internship in Washington, D.C., government, non-profit, or private institution. Seminar stresses institutional analysis, the development of bibliographic expertise in the use of Washington-based resources, and participant-observer skills. Required for and enrollment restricted to students participating in the UCDC Program. (Formerly Social Sciences 194A.) Enrollment limited to 22. The Staff

194B. UCDC Internship Seminar (7 credits). F,W,S

A 30- to 36-hour-per-week internship in a Washington, D.C., government, non-profit, or private institution. Required for and enrollment restricted to UCDC program participants. (Formerly Social Sciences 194B, UCDC Internship and Internship Seminar.) Enrollment limited to 22. May be repeated for credit. The Staff

199. Tutorial. F,W,S

A program of directed study arranged with a Social Sciences Division faculty member. Enrollment restricted to participants in the UCDC program. (Formerly Social Sciences 199.) The Staff

199F. Tutorial (2 credits). F,W,S

A program of directed study arranged with participating faculty. Class time is proportionally less than a 5-credit course. Enrollment restricted to participants in the UCDC program. (Formerly Social Sciences 199F.) The Staff

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Writing Program

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(831) 459-2431

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Lower-Division Courses

2. Rhetoric and Inquiry. F,W,S

Explores the intersections of investigation, interpretation, and persuasion and hones strategies for writing and research. Students develop specific, practical ways of improving their writing through sustained critical thinking about diverse issues from multiple points of view. Students cannot receive credit for this course and course 1. Prerequisite(s): satisfaction of the Entry Level Writing and C1 requirements. Enrollment limited to 25. (General Education Code(s): C2.) The Staff

11A. Adjunct Tutorial in Writing (2 credits per quarter) (2 credits). F

A tutorial designed to provide follow-up assistance in writing for students who have passed the Entry Level Writing Requirement, but wish to continue to work on various aspects of their writing. Counts only for academic standing and financial aid purposes, but does not apply toward degree requirements (i.e., counts as workload credit only). Prerequisite(s): approval of the Writing Program; satisfaction of the Entry Level Writing Requirement. May be repeated for credit. The Staff

11B. Adjunct Tutorial in Writing (2 credits per quarter) (2 credits). W

A tutorial designed to provide follow-up assistance in writing for students who have passed the Entry Level Writing Requirement, but wish to continue to work on various aspects of their writing. Counts only for academic standing and financial aid purposes, but does not apply toward degree requirements (i.e., counts as workload credit only). Prerequisite(s): approval of the Writing Program; satisfaction of the Entry Level Writing Requirement. May be repeated for credit. The Staff

11C. Adjunct Tutorial in Writing (2 credits per quarter) (2 credits). S

A tutorial designed to provide follow-up assistance in writing for students who have passed the Entry Level Writing Requirement, but wish to continue to work on various aspects of their writing. Counts only for academic standing and financial aid purposes, but does not apply toward degree requirements (i.e., counts as workload credit only). Prerequisite(s): approval of the Writing Program; satisfaction of the Entry Level Writing Requirement. May be repeated for credit. The Staff

20. The Nature of Written Discourse. W

Explores the dynamics of written language: its relationships to speech, thought, and culture; its uses in different personal, academic, professional, and public contexts; its abuses in jargon and propaganda. Course work includes extensive practice in different kinds of writing. Enrollment restricted to students who have not passed the Entry Level

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Writing Requirement. Open to others by permission of instructor. Enrollment limited to 22. The Staff

21. Meaning and Style: The Sentence in Context. S

Explores, via cross-cultural readings, the nature, uses, and abuses of language. Course work includes extensive writing, both take-home and in-class. Emphasis on revising for power of expression and for variety and accuracy at the sentence level. Enrollment restricted to students who have not passed the Entry Level Writing Requirement. Open to others by permission of instructor. Enrollment limited to 22. The Staff

22A. Grammar and Editing Workshop (3 credits). F

Offers instruction on selected topics in grammar and conventions of written English as needed to strengthen the writing skills of students whose primary language is not standard English. Provides students practice in applying these concepts to editing their own writing. Designed for entering first-year students. Enrollment restricted to first-year students. Enrollment limited to 22. The Staff

22B. Grammar and Editing Workshop (3 credits). W,S

Offers instruction on selected topics in grammar and conventions of written English as needed to strengthen the writing skills of students whose primary language is not standard English. Provides students practice in applying these concepts to editing their own writing. Designed for continuing students who have already taken course 20 and/or 21. Enrollment limited to 22. The Staff

23. Grammar and Rhetoric: Language for Writing. F

Builds on writing skills gained in previous writing courses; focuses on effective language use in academic writing. Students reinforce their written English proficiency by reading, studying, practicing, and writing structures and patterns of written English. Enrollment restricted to fourth-quarter students who have not passed the Entry Level Writing Requirement. Open to others by permission of instructor. Enrollment limited to 22. The Staff

42. Student-Directed Seminar.

Seminars taught by upper-division students under faculty supervision. (See course 192.) The Staff

64. Newswriting Workshop. *

Introduction to the basic techniques of newswriting, including practice in leads, formats, and different kinds of news reporting. Emphasis on developing skills in research, interviewing, and shaping stories. Includes an examination of the contemporary media. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements, instructor determination at first class meeting. Enrollment limited to 22. (General Education Code(s): W.) The Staff

70. Communication and Rhetoric: An Introduction. *

This course introduces the field of contemporary communication studies, locating its roots in rhetoric and showing how key concepts play out in mass media and other settings as well as in everyday life. Prerequisite(s): satisfaction of the Entry Level Writing requirement. The Staff

93. Field Study. F,W,S

For lower-division students: supervised study within commuting distance of campus. May include internships at magazines, newspapers, publishing houses, or newsletters of corporations, and civic or service organizations. Prerequisite(s): satisfaction of the Entry Level Writing requirement; certification of adequate preparation; approval of Writing Program. May be repeated for credit. The Staff

93F. Field Study (2 credits). F,W,S

For lower-division students: supervised study within commuting distance of campus. May include internships at magazines, newspapers, publishing houses, or newsletters of corporations, and civic or service organizations. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99. Tutorial. F,W,S

Individual, directed study for lower-division students in expository writing, editing, or

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journalism. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

99F. Tutorial (2 credits). F,W,S

Individual, directed study for lower-division students in expository writing, editing, or journalism. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Upper-Division Courses

101. Introduction to the History, Theory, and Practice of Rhetoric. W

A survey of classical and contemporary ideas about rhetoric which explores, practically and theoretically, "the best means of persuasion in any situation whatsoever" and will consider the nature of human discourse in diverse areas of knowledge. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to college members. (General Education Code(s): W.) The Staff

102. The Rhetoric of the Social Sciences. *

Develops rhetorical facility in disciplinary writing for upper-division social science majors. Requires critical and disciplinary reading, writing in modes appropriate to social science disciplines, and a substantial research or critical paper within the student's own discipline. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): W.) The Staff

103. Rhetoric of the Natural Sciences. *

This course explores writing genres within the natural sciences. Emphasis is on the relationships between good science and good writing, clear thinking and clear writing. Frequent papers and substantive revisions required. Prerequisite(s): completion of 10 units coursework in the natural sciences, satisfaction of the Entry Level Writing and Composition requirements. Enrollment restricted to juniors and seniors during priority enrollment. Enrollment limited to 30. (General Education Code(s): W.) The Staff

104. Writing in the Arts. *

A writing course focusing on the purposes and composition of various genres of writing about and in the performing arts, visual arts, and music such as reviews, program and exhibit notes, journal and magazine articles, grant proposals, and press releases. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 30. (General Education Code(s): W.) The Staff

106. Public Speaking. *

Students learn strategies to write, analyze, and deliver effective speeches of various kinds as well as professional presentations using PowerPoint and other visuals. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 25. The Staff

107. Technical and Business Writing: An Overview. *

An exploration of the conventions and formats of business and technical writing. Course work involves writing effective resumes, proposals, letters, end-user manuals, and the fundamentals of Web site design. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 30. The Staff

108. Electronic Communication. *

An introduction to the evolving conventions of effective Web site design as well as collaborative writing. Course work includes evaluation of Web site content and structure and creation of hypertext. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 24. The Staff

109. Argument and Practical Reasoning. *

An investigation of contemporary persuasive discourse with special attention to the elements and forms of argument, the nature of evidence, questions of validity and probability, and the workings of rhetorical reasoning. Emphasizes the analysis of arguments rather than their construction. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 40. The Staff

110A. Writing in the Professions. *

Study of writing required in the selected professions, including law, politics, and

government. Considers the rhetoric of each discipline and relevant texts. Includes lectures from visiting professionals and a series of writing assignments based on reading and research. Topic may vary from year to year, focusing on the rhetoric of other professional divisions: medicine, engineering, economics, and so forth. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 40. (General Education Code(s): W.) The Staff

120. Editing English Prose. *

This course offers extended, detailed instruction in editing one's own and other people's prose for accuracy, clarity, appropriateness, and effectiveness. It provides some history of theories of style and stylistic analysis, and instruction in prose variation according to social context. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 40. The Staff

159. Grammar for Tutors and Teachers (3 credits). W

English grammar from a pedagogical perspective, emphasizing structures, patterns, and conventions of written English that commonly challenge basic writers. Students learn strategies for helping multilingual and other writers improve their writing skills by increasing their awareness of grammar. Prerequisite(s): course 169, or by instructor permission. Enrollment limited to 45. The Staff

161. Academic Writing and Research Methods. *

Introduces library and field research methods and also provides instruction and practice in writing from research, addressing issues such as voice, argument, and documentation. Students write four lengthy essays and do considerable informal writing. Course 161 includes sections for re-entry women, transfer students, and students in the EOP Faculty Mentor Program. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements. Students should contact the instructor for enrollment information. Enrollment limited to 20. (General Education Code(s): W.) The Staff

163. Advanced Workshop in Expository Writing. *

A composition course for students who, having mastered basic writing skills, wish to concentrate on increasing their effectiveness as rhetoricians, prose stylists, and editors. Assignments include writing and revising essays, responding to other students' work, and reading published essays. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 22. May be repeated for credit. (General Education Code(s): W.) The Staff

165. Practicum in Reporting. *

In-depth, community-based reporting, with an emphasis on skills ranging from interviewing techniques to profiles, integrating research with writing. Students choose a specific area or "desk" of concentration, and all the stories reflect that beat. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; a writing sample, completed in class, is required at first class meeting. Enrollment restricted to journalism minors during priority enrollment. Enrollment limited to 22. (General Education Code(s): W.) The Staff

166. Topics in Journalism. *

Courses under this heading explore fields of newspaper and magazine journalism: feature writing, investigative reporting, reviewing, commentary, etc. Students study published writing and hone their own skills as writers under the supervision of a practicing journalist. See the Schedule of Classes for specific offerings. The Staff

166A. Magazine Writing. *

Introduces students to the various forms of magazine writing, as well as to pertinent reporting techniques. Students work intensively on process, style, and editing, producing numerous formal and informal pieces. Enrollment priority will be given to journalism minors. Students produce a writing sample on the first day of class. Prerequisite(s): satisfaction of Entry Level Writing and Composition requirements; course 64 or permission of instructor. Enrollment limited to 22. (General Education Code(s): W.) The Staff

166B. Investigative Reporting. *

Students acquire basic investigative and research skills, with particular emphasis on how to develop investigative subjects, obtain data, check accuracy, and convert information into well written, publishable articles. Priority given to students concentrating in journalism.

Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; interview with instructor to review journalism portfolio. Enrollment limited to 22. (General Education Code(s): W.) The Staff

166D. Minorities in Journalism. *

Focuses on the minority press and how it has shaped journalism in the U.S. as well as viewing how the media has dealt with this segment of our society. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements and consent of instructor. Enrollment limited to 22. (General Education Code(s): W.) The Staff

166J. Online Journalism. *

A course in using electronic sources to report articles for publication and in publishing journalistic pieces online. Prerequisite(s): course 64 or journalism experience; instructor determination at first class meeting. Enrollment limited to 25. The Staff

166N. The Rhetoric of Radio. *

Examines the theory and practice of radio. Students explore how the formats of radio create its meaning, and investigate radio's place in the landscape of the media, particularly in the U.S. and Mexico. Prerequisite(s): satisfaction of the Entry level Writing and Composition requirements and consent of instructor. Enrollment limited to 25. The Staff

167. Making the News. *

A writing course examining news and feature articles in popular print media. Students write their own articles and analyze how a particular content is mandated by conventional forms, by the structure of the industries, and by ideas of "newsworthiness." Designed for journalism minors and students for whom a course in media criticism is central to their program. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; qualifications determined by instructor at first class meeting. Enrollment limited to 43. (General Education Code(s): W.) The Staff

169. Theory and Practice of Tutoring Writing (3 credits). F

An introduction to theory and research on the composing process and practical strategies for teaching writing, especially in tutorial situations. Recommended for writing assistants. Prerequisite(s): instructor determination at first class meeting; course intended for writing tutors only. Enrollment limited to 30. (General Education Code(s): PR-S.) The Staff

180. Seminar in Editing and Publishing. *

Newswriting seminar for City on a Hill editors and writers. Weekly sessions evaluate newspaper in depth, including writing, reporting, and issues in journalism ranging from ethics to legal questions. Prerequisite(s): instructor determination at first class meeting; open only to editors, interns, and writers at City on a Hill Press. Enrollment limited to 40. May be repeated for credit. The Staff

189. Methods of Teaching Writing. *

Supervised by a writing instructor, each student attends a weekly seminar on teaching writing and either assists in a class or serves as a facilitator of a small writing group in a course at UCSC or a public school. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

191. Internships.

Individual work in journalism, publishing, or broadcasting. Internships require a contracted amount of writing or other work, and generally involve group tutorials with faculty in the Writing Program as well as individual conferences. The Staff

191A. Internship in Writing. F,W,S

Regular writing for newspaper or magazine. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

191B. Internship in Editing. F,W,S

Work in an editorial position involving critique and guidance of reporters. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

191C. Internship in Publishing. F,W,S

All phases of work for a publishing house, from manuscript reading to editorial. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

191D. Internship in Broadcasting. F,W,S

Writing, editing, scheduling, and/or broadcast work for television or radio. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

192. Directed Student Teaching. F,W,S

Teaching of a lower-division seminar under faculty supervision. (See course 42.) Students submit petition to sponsoring agency. May be repeated for credit. The Staff

193. Field Study. F,W,S

For upper-division students: supervised study within commuting distance of the campus. May include internships at magazines, newspapers, publishing houses, or newsletters of corporations, and civic or service organizations. Prerequisite(s): satisfaction of Entry Level Writing requirement; students submit petition to sponsoring agency. The Staff

193F. Field Study (2 credits). F,W,S

For upper-division students: supervised study within commuting distance of the campus. May include internships at magazines, newspapers, publishing houses, or newsletters of corporations, and civic or service organizations. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

194. Group Tutorial. F,W,S

A writing, editing, or publishing project undertaken by a small group of students under the direct supervision of a writing instructor. Students submit petition to sponsoring agency. Enrollment limited to 15. May be repeated for credit. The Staff

195. Senior Thesis. F,W,S

Individual work on a thesis for any campus major or individual major. Faculty in the Writing Program help students on all phases of work, from selection and focus to development of bibliographies, research techniques, revision, and editing. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

196. Developing and Editing Field Documentation (2 credits). *

Helps students transform field documentation into fully developed, professional projects. Employs a weekly production schedule and teaches principles of rhetoric as a means of effectively selecting and arranging documentary materials. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; interview with instructor to review documentary materials. Enrollment limited to 20. The Staff

198. Independent Field Study. F,W,S

Individual study for which faculty supervision is possible only by correspondence. May include internships at newspapers, magazines, publishing houses, or the newsletters of corporations, and civic or service organizations. Prerequisite(s): satisfaction of Entry Level Writing requirement; students submit petition to sponsoring agency. May be repeated for credit. The Staff

198F. Independent Field Study (2 credits). F,W,S

Individual study for which faculty supervision is possible only by correspondence. May include internships at newspapers, magazines, publishing houses, or the newsletters of corporations, and civic or service organizations. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual, directed study for upper-division students in expository writing, editing, or journalism. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual, directed study for upper-division students in expository writing, editing, or journalism. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

202. Writing and Learning Seminar (3 credits). *

Strategies for teaching assistants to help undergraduates become better learners and writers in disciplinary courses. Topics include using writing to improve reading and thinking, analysis of assignments, avoiding plagiarism, responding to and evaluating

papers, ESL writers, peer response, and technological aids. Enrollment restricted to graduate students. Enrollment limited to 30. The Staff

203. Teaching Writing. W,S

Prepares graduate students to teach first-year composition at UCSC and elsewhere. Development of a syllabus, teaching strategy, and class plans based on study of composition and rhetorical theories, research on students' writing development, and effective writing pedagogies. Enrollment restricted to graduate students. Enrollment limited to 18. T. Ritola, H. Shearer

* Not offered in 2014-15

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Theater Arts

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Lower-Division Courses

10. Introduction to Theater Design and Technology. F,S

Addresses imagination and creativity. Using the framework of theater production, students explore the process of translating a script into a performance. Topics include visual literacy, creative problem solving, establishing effective working teams, tear sheets, storyboarding, drawing, sound and color theory. This course is a prerequisite for all upper-division design courses. (General Education Code(s): IM, IH, A.) B. Baron, K. Edmunds

12. Stage Management. F

Designed to acquaint students with the complexities of staging productions from the audition process to final performance. Directing, lighting, scenic production, sound, cueing, and personnel management are aspects that will be touched upon in class. Students are billed a materials fee. (Formerly Production Management.) (General Education Code(s): A.) The Staff

14. Drawing. W

A fundamental course in drawing from still life, the figure, and in the landscape. The approach is from the tonal and volumetric aspects of the object. Color is introduced as the course progresses. Instruction fashioned to the individual needs of the student. The inexperienced are welcomed as well as the experienced. Students are billed a materials fee. (General Education Code(s): PR-C, A.) K. Edmunds

15. Special Topics in Textiles. *

Introduces varied techniques in textile manipulation to create scenic and costume-design properties including drapery, upholstery, masks, bags, and millinery. Students learn basic sewing and surface-design methods, such as knitting, screen-printing, painting/dyeing, and distressing. Enrollment limited to 20. (General Education Code(s): PR-C, A.) B. Baron, The Staff

17. Costume Construction. *

The process of interpreting a costume designer's sketch into a finished theatrical costume. Some techniques included are dyeing, fabric selection, draping, flat pattern drafting, pattern manipulation, adaptation, fitting, and alteration. Using various techniques, students make basic pattern pieces and learn to modify them to create costumes. Students are billed a materials fee. Enrollment limited to 20. (General Education Code(s): PR-C, A.) The Staff

18. Drafting for Theatrical Production. *

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■ Ecology and Evolutionary Biology
■ Economics
■ Education
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■ Environmental Studies
■ Feminist Studies
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■ Literature
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- An examination of the fundamentals of drafting scale drawings for production, including floor plans, elevations, sections, working drawings, dimensions, layout, and lettering. Students learn isometric drawing, perspective, and rendering techniques. Students are billed a materials fee. Enrollment limited to 20. (General Education Code(s): A.) K. Edmunds
- 18C. Drafting-Computer Aided. *
- In-depth exploration of computer-aided drafting, specifically the programs Vectorworks, Spotlight, and Renderworks. Topics include: the user interface, ground plan, section and detail views, paper space vs. working space, tool palettes, USITT drafting standards, layers, line weights, objects, classes, library annotations, importing rasters, and 3D modeling. Students required to do weekly projects such as ground plans, lighting plots, perspectives, and detail drawings, as well as turn in a major final project, and complete a mid-term, final, and quizzes. Students are billed for a materials fee. Enrollment restricted to theater arts majors. Enrollment limited to 10. (General Education Code(s): A.) D. Cuthbert, The Staff
19. Design Studio: Lighting Studio A. S
- An introduction to the theory and practice of lighting design with attention to the practical skills and creative approaches to lighting performance pieces; the technical side of lighting design via demonstrations, lectures, and labs. Students complete projects evolving and executing concepts for lighting chosen pieces. Students are billed a materials fee.
- Prerequisite(s): course 10. (General Education Code(s): PR-C, IH, A.) D. Cuthbert
20. Introductory Studies in Acting. F,S
- Introduction to basic acting skills and the problems of performance. Concentrates on expanding the students' range of expression and ability to respond to and analyze dramatic text. Students with little or no experience are encouraged to attend. (General Education Code(s): IM, IH, A.) P. Gallagher, The Staff
- 21A. Acting Studio 1A: Psychological Realism. W,S
- Explores the fundamentals of the work of Konstantin Stanislavski as developed at the Moscow Art Theater to the works of his and our contemporary playwrights. Specifically, students apply those techniques of action, physical score, given circumstances, subtext, interior monologue, goals, and objectives, throughline, superobjective, and emotional recall to works of Henrik Ibsen, Anton Chekov, and appropriate American realists, such as Sam Shepard, August Wilson, etc. Enrollment by interview only: audition at first class meeting. Enrollment limited to 31. (General Education Code(s): A.) D. Scheie
- 21B. Acting Studio 1B, Actors' Physicality. F
- Uses a rigorous physical approach to acting (rather than the text-based approach of course 21A). Provides an "outside-in" starting point for theatrical creation and study, balancing and countering the "inside-out" approach of Stanislavski-based actor training. Emphasis on physical characterization, ensemble theater, mask work, and object performance. May involve practices, theories, and readings of Jerzy Grotowski, Eugenio Barba, Jacques Lecoq, and/or Tadashi Suzuki. Enrollment by interview only. Enrollment limited to 30. (General Education Code(s): A.) P. Gallagher
22. Indonesian Dance and Drama. F
- Students learn the basic movement repertoire of the specific characters of the Indonesian dance-drama/puppetry tradition over the quarter with explication of how these types operate in their own cultural context. The course culminates in an open showing of scene work. May be repeated for credit. (General Education Code(s): CC, A, E.) P. Gallagher, M. Foley
23. Voice for the Actor. *
- Students work on developing resonance, range and expressivity for stage performance via physical exercises and text explorations undertaken in small groups. Prerequisite(s): course 20. Audition required for acceptance into class. Enrollment limited to 20. (General Education Code(s): A.) The Staff
30. Introduction to Dance Theory and Technique. W,S
- Intensive instruction in developing the dancer's mind/body, with introduction to movement theory and practice. Students are billed a materials fee. (Formerly Introduction to Modern Dance Theory and Technique.) May be repeated for credit. (General Education Code(s): PR-C, IH, A.) E. Warburton, The Staff

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Introduction to postmodern dance theory and technique. Focus on performance practices of historically significant postmodern dance choreographers in the U.S. and worldwide. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): IM, A.) E. Warburton

33C. Dance Studio I. F

Intensive instruction in developing the dancer's physical instrument. Intended for students who have a previous fundamental knowledge of the basics of classic dance, combined with movement theory. Students are billed a materials fee. Formerly Theater Arts 33, Advanced Introduction to Modern Dance. Prerequisite(s): course 30. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): IH, A.) G. Casel

36. Introduction to Dance Composition. W

Composing solo dances using a variety of approaches for developing movement combinations. Observation and recognition of personal movement patterns and discovering new sources for creative material. Students are billed a materials fee. May be repeated for credit. (General Education Code(s): PR-C, IH, A.) E. Warburton

37. African Dance. S

A griot (musician-entertainer from western Africa) from Burkina Faso teaches "The African Journey," which emphasizes dance as combined in Africa, including singing, history, oral tradition, and storytelling. Students are billed a materials fee. Enrollment limited to 30. (General Education Code(s): PR-C, A.) The Staff

40. Introduction to Directing. F

An overview of the analytical and creative processes that inform the director's work. Close examination of texts, concepts, and directorial choices in staged performances, opera, films, and video. (General Education Code(s): IM, IH, A.) The Staff

45. Student-Directed Production. F,W,S

Participation in a student-directed play or student-choreographed dance concert under faculty supervision. (See course 192). Rehearsals culminate in public performances. Prerequisite(s): admission by audition; see department office for more information. The Staff

50. Fundamentals of Theater Production (2 credits). F,W,S

Work is on various aspects of theatrical production, including scenery, lighting, costumes, sound, stage management, and video documentation. Satisfies the department's technical experience requirement. May be repeated for credit. D. Cuthbert

52. Basic Stagecraft. S

Provides introduction to technical theater and basic stagecraft. Course examines two-dimensional and three-dimensional scenery, scenic engineering, the physical theater, stage and scene shop equipment, project organization and process, technical theater graphics, materials, and theatrical construction techniques. Prerequisite(s): course 10. Enrollment limited to 30. (General Education Code(s): A.) The Staff

55A. Workshop in Performance: Barnstorm. F,W,S

Process-oriented investigation of practical theater production by working in and on productions in the Barnstorm season. Requires a total of 150 hours working backstage or onstage. Admission by audition at first class meeting; see department office for more information. May be repeated for credit. D. Cuthbert

55B. Workshop in Performance: Barnstorm Lab (2 credits). F,W,S

Process-oriented investigation of practical theater production by working in and on productions in the Barnstorm season. Requires a total of 50 hours working backstage or onstage. Admission by audition at first class meeting; see department office for more information. May be repeated for credit. K. Edmunds, D. Cuthbert

61A. Ancient and Medieval Drama. F

Ancient enmities; horrific acts of parricide; monumental errors; suffering and contrition. This course examines the enormous appeal of the ancient Greek tragic and comic visions from their inception through their enthusiastic adaptation by the Romans and on into the Middle Ages. For comparison purposes, Greek and Roman dramas are studied back-to-back with the contemporary non-Western dramatic forms of Noh and ancient Sanskrit

drama. (Formerly Issues and Methods in Theater Arts.) (General Education Code(s): TA, IH, A.) M. Chemers

61B. Drama from the Renaissance to the Modern Age. W

Examines major trends in European drama from the rediscovery of ancient Greek and Roman drama in the early 17th century to the late 19th century. Examines major trends in European drama from the discovery of ancient Greek and Roman drama in the early 17th century to the late 19th century. These trends include neo-classical drama, the rise of middle-class drama, social realism, romanticism, early naturalism, and the well-made play. These trends are compared with the parallel developments of the non-Western forms of Japanese Kabuki and Javanese Wayang. (Formerly Tragedy.) Enrollment limited to 40. (General Education Code(s): TA, IH, A.) K. Jannarone, The Staff

61C. The Birth of the Modern: Drama and Performance After the Renaissance. S

Examines dramatic and theatrical works that sprang into being in the wake of the European Renaissance. Follows the ways modern artists have dramatized their questions, struggles, beliefs, and despair in the face of world wars, cultural fragmentation, unprecedented prosperity, and new technologies that changed the concrete experience of life itself. Enrollment limited to 60. (General Education Code(s): TA, IH, A.) K. Jannarone

80A. Introduction to African American Theater. *

Surveys African American theater from late 19th century to contemporary 21st-century playwrights and examines dramatic narratives to trace creation, evolution, and development of African American cultural identity formation in American theater. Enrollment limited to 50. (General Education Code(s): ER, T4 (TH), A, E.) The Staff

80B. Rock 'n' Roll Design. *

Examination of the genesis, history, and development of technical theater practices used in large arena rock shows. Topics will include the development of rigging practices used in arenas, touring logistics, lighting instrumentation and aesthetics of rock shows, and the nature, practice, and approach of sound in these venues. (General Education Code(s): T4-Humanities and Arts, A.) The Staff

80C. Monsters. W

Examines the operation of monsters in plays from Ancient Greece to today, inquiring as to why these powerful cultural tools for the expression of social tension show no sign of diminishing despite our ostensible advance into scientific rationalism. (General Education Code(s): PE-H.) M. Chemers

80D. Commercial Design 1900 to Present. *

History of 20th-century commercial design for the theater through the eyes of the Western consumer. (Formerly course 161W, Critical Survey of Commercial Design, 1900 to Present.) (General Education Code(s): IM, T4-Humanities and Arts, A.) B. Baron

80H. Hamlet Conundrums. *

Offered online, the course explores major issues of interpretation of Shakespeare's classic play, which has occupied the minds of audiences, directors, designers, performers, and critics during its 400-year history. In doing this, it offers a sense of history of people's preoccupations with and thoughts about the play. Students taking this class are expected to complete the course during the quarter for which they are enrolled. All students enrolled in this course should visit elsinore.ucsc.edu and write to elsinore@ucsc.edu. (General Education Code(s): T4-Humanities and Arts, A.) J. Bierman

80K. Shakespeare 4every1. F

Introduces all students, regardless of experience, to the plays and theater of Shakespeare, and directly addresses linked relevance to contemporary 21st century American culture. (General Education Code(s): TA, T4-Humanities and Arts, A.) D. Scheie

80L. Muppet Magic: Jim Henson's Art. *

The artistic and social impact of the Muppets on American puppetry, children's television, and Hollywood film is explored through viewings, guest lectures, and analysis. Henson's legacy in artistic innovation, mainstreaming of puppet theater for adult audiences, and establishment of puppetry in media and marketing are also explored. (General Education Code(s): IM, T4-Humanities and Arts, A.) M. Foley

80M. Chicano/a Teatro. *

Introduction to Teatro Chicano/a with examination of how cultural diversity plays a role in theater. Through lectures, films, and workshop exercises, reflect upon the process of Teatro Chicano. Students write their own acts, improvise, and perform in class. (General Education Code(s): ER, T4 (TH), A, E.) The Staff

80N. Walt Disney. S

An examination of Walt Disney's creation of the American vision of "family entertainment." Particular attention will be paid to the classic animated feature films of Walt Disney and to the way this Disney invention has been preserved and developed since his death. We will also look at the live action films, theme parks, and other Disney creations. (General Education Code(s): IM, T4-Humanities and Arts, A.) The Staff

80P. The Pixar Feature. *

Combines examination of the canon of Western dramatic literature and theater history through viewings of Pixar Animation Studios' full-length animated features, representing the most popular form of digital art and new media in the world today, and lectures focusing on digital art and new media viewed through established rules and traditions of dramatic art in literature, plays, and the theater. (General Education Code(s): IM, T4-Humanities and Arts, A.) D. Scheie

80Q. Introduction to Queer Theater. *

Examines the history of the queer perspective in dramatic literature, from the Greeks to Marlowe and Shakespeare through the calcification of homosexuality in the era of Freud, then traces theater stewardship by gay and lesbian artists from within the closet and without. (General Education Code(s): IM, T4-Humanities and Arts, A.) The Staff

80S. Theater Arts Education and the Community. *

This course is designed to develop ways in which we can direct our interest in the arts into concrete and successful community projects. Although the emphasis will be on developing skills to work within K-12 classrooms, other community projects will be discussed and designed. (General Education Code(s): T4-Humanities and Arts, A.) The Staff

80T. Flashmob! Mass Performance in the Information Age. S

Flashmobs represent a new social configuration using information technology. Course covers the history of experiments in art and technology and the role of mass performance in society. Students consider the socio-cultural ramifications of flashmobs and participate in them. (General Education Code(s): PE-T.) E. Warburton

80V. The Circus in American Culture. *

Circus arts from their shamanic roots to contemporary practice will be analyzed in a historical, aesthetic, and creative dimension. Lecture, discussion, and demonstrations will explore the theory and practice of American circus arts. In section, students will explore basic circus skills from clowning to tumbling to exhibition of freaks. (General Education Code(s): T4-Humanities and Arts, A.) The Staff

80X. The Performance of Story in Theater and Film. *

An examination of the theory and practice of theater and film, comparing and contrasting works that have been adapted from one genre to another. Lecture, film and video viewing and discussion of materialist, psychoanalytic, and feminist approaches will be shared. (General Education Code(s): TA, T4-Humanities and Arts, A.) The Staff

80Y. American Musical Theater. *

The history of American musical theater, from its roots to today, is studied through scripts, scores, and film. Major composers and lyricists' work is shown, discussed, and analyzed. (General Education Code(s): T4-Humanities and Arts, A.) K. Edmunds

80Z. Indian Dance. F

Classical Indian dance will be studied as a performance practice. Understanding of drum syllables and associated steps, religious and sociological context, and mimesis (abinaya) as well as introduction to epic stories (Ramayana, Mahabharata, Bhagavata Purana) and classical song. (General Education Code(s): CC, T4-Humanities and Arts, A.) The Staff

99. Tutorial. F,W,S

Students must file their petitions for this course with the department office by the end of the fifth day of instruction in the quarter in which they would like to take the tutorial. Prerequisite(s): petition required, approved by instructor and department. May be

repeated for credit. The Staff

Upper-Division Courses

100A. Asian Theater/Dance and Global Impacts. *

Overview of selected theater/dance performance genres of India, Indonesia, China, Korea, and Japan with attention to how cultural, political, and social flows have impacted contemporary performance in Asia and beyond. Lectures supplemented by workshops. (General Education Code(s): A, E.) M. Foley

100B. Black Theater USA. *

Spanning slavery, emancipation, reconstruction, the great depression, civil rights, and the black power/black arts movements, course explores African American drama from literary, historical, and biographical perspectives in lecture/discussions, film excerpts, dramatizations, and visits from award-winning guests. (General Education Code(s): A, E.) The Staff

100C. Courts, Courtesans, Shamans, and Clowns: Asian Drama. *

Asian court and popular performance are traced. Sanskrit drama is contrasted with Indian epic recitation, medium, and courtesan dance. Gender specialization is noted in Indonesian courts using Indian and local legends in dance, mask/puppetry, and clowning. Buddhist and Confucian impulses in Chinese theater and early Korean and Japanese mask and puppetry are introduced. Students are evaluated on participation, tests, writing, and a performance project. (General Education Code(s): A.) P. Gallagher, M. Foley

100W. Black/African Diasporic World Theater. *

Examines major black African diasporic playwrights and theater. Focuses on the historical, cultural, and literary contexts that gave rise to the works of dramatists such as Ama Ata Aidoo, Derek Walcott, Wole Soyinka, Aime Cesaire, Debbie Green Tucker, and Paul Boakye. Prerequisite(s): course 61 or 60A or 60B or 60C. (General Education Code(s): A, E.) The Staff

104. Multimedia Authoring. *

Introduces students to basic tools for the creation of multimedia digital projects. Special attention is given to the integration of video, sound, graphics, text and virtual reality and to the creation and execution of strategies for interaction between users and the projects themselves. With this in mind, students design and create computer puzzles and games. Enrollment limited to 25. (General Education Code(s): A.) J. Bierman

106. Digital Illustration. W

Introduces digital rendering techniques using the Adobe Creative Suite. Using Photoshop, Illustrator, Acrobat Writer and InDesign, students solve design problems relevant to scenic, costume, and property design. Material is applicable to anyone with an interest in the Adobe platform. Enrollment by permission of instructor. Application form available at department office. Enrollment limited to 15. (General Education Code(s): A.) B. Baron

113. The History of Design for Theater. *

The development of scenic design from the Greek period to the present. Concentration is on the changing styles of set design in relation to the changing attitudes toward dramatic literature, art, and theater architecture. (General Education Code(s): IM, A.) B. Baron

114. Design Studio: Sound. *

The intangible and transitory nature of the acoustic reality. Electronically regenerated sounds for use in the performing arts. Broad scope of the course consideration begins with found sound and includes sound propagation. Emphasis on tape-recording, editing, sound control functions, and equipment utility. Students are billed a materials fee. Prerequisite(s): course 10. (General Education Code(s): PR-C, A.) The Staff

115A. Design Studio: Scenic Design. *

Advanced work in principles and theory of scenic design. Students are billed a materials fee. Prerequisite(s): course 10. (General Education Code(s): PR-C, A.) K. Edmunds

115B. Design Studio: Scenic Design B. *

Advanced theory and practice of theatrical set design. Prerequisite(s): course 115. (General Education Code(s): PR-C, A.) K. Edmunds

116A. History of Clothing and Costume. *

Survey of clothing and theatrical costumes; emphasis on dress of the audience and actor in historical periods of theatrical activity. Students are billed a materials fee. (General Education Code(s): IM, A.) B. Baron

117. Design Studio: Costume. S

Advanced principles and theory of costume design for theatrical productions. Students are billed for a materials fee. May be repeated for credit. (General Education Code(s): IM, A.) B. Baron

117A. Advanced Costume Construction. *

Advanced principles in costume construction, including tailoring, advanced pattern drafting, and draping techniques. Focuses on translating modern techniques into historical garment construction. Teaches how to study artifacts and do primary research to unlock the past. Prerequisite(s): course 17. Enrollment limited to 25. (General Education Code(s): A.) The Staff

118. Design Studio: Scene Painting. *

Emphasis on techniques used in painting scenery for the theater. Students are billed a materials fee. Prerequisite(s): course 10. (General Education Code(s): A.) The Staff

119. Design Studio: Lighting Studio B. *

The theory and practice of lighting design with emphasis on practical application. Light plots, electricity, optics, design, and manipulation of lighting for the theater and related performance events are investigated. The student explores mechanics and aesthetics with hands-on experience. Students are billed a materials fee. Prerequisite(s): course 19. (General Education Code(s): PR-C, A.) D. Cuthbert

121. Acting Studio II. F

Continuing concentrated work on basic acting skills and textual analysis through scene study. May be repeated for credit with consent of instructor. Prerequisite(s): admission by audition at first class meeting. See department office for more information. Course 21 recommended as preparation. May be repeated for credit. (General Education Code(s): A.) P. Gallagher

122. Indian Performance: Rama, Siva, Krishna. *

Study of the classical theater and dance of India, with attention to performance practice, aesthetic theory, relationship to religious practice devoted to Rama, Siva, and Krishna, political implications and intercultural experimentation. (General Education Code(s): CC, IH, A.) The Staff

126. Acting Studio III. W,S

Individual work on acting skills and problems, with emphasis on individual interpretation and scene work with other students. Prerequisite(s): course 121; permission of instructor; audition at first class meeting—contact department office for more information. Enrollment limited to 18. May be repeated for credit. (General Education Code(s): A.) P. Gallagher, The Staff

128. Choreographic Workshop (2 credits). W

Intensive upper-division choreographic workshop that begins from the key motifs of historical dance to develop original work. Dancers made available to the student choreographers. Concurrent enrollment in course 139 is required. Enrollment limited to 15. May be repeated for credit. (General Education Code(s): PR-C, A.) G. Casel, E. Warburton

130. Intermediate Dance Theory and Technique. W

A progression from the simple phrasing and articulation of beginning technique class to more complex material requiring more acute perceptive skills and richer dynamic range. Emphasis is on both alignment and maintaining the kinetic integrity of the body while moving through space. Students are billed a materials fee. (Formerly Intermediate Modern Dance Theory and Technique.) Prerequisite(s): course 30 or 31 or permission of instructor. May be repeated for credit. (General Education Code(s): IM, A.) G. Casel, The Staff

131. Advanced Dance Theory and Technique. *

Advanced instruction in developing the dancer's mind/body, combined with contemporary movement theory and practice. Students are billed a materials fee. (Formerly Advanced Modern Dance Theory and Technique.) Prerequisite(s): course 30 or 31 or permission of instructor. May be repeated for credit. (General Education Code(s): A.) E. Warburton

131C. Dance Studio II. *

Continued study of contemporary dance theory and practice. Focus on intermediate dance technique, individual and group movement invention, choreographic voice, and theatrical applications. Students are billed a materials fee. Enrollment limited to 30. (General Education Code(s): A.) The Staff

131P. Postmodern Dance II. *

Continued study of postmodern dance theory and technique. Focus on advanced compositional practice, theatrical applications, and critical analysis of contemporary postmodern dance choreographers in the U.S. and worldwide. Audition at first class meeting. Enrollment limited to 30. May be repeated for credit. (General Education Code(s): IM, A.) E. Warburton

135. Dance Improvisation and Theory. *

Exploring sources for movement; gaining facility in a wide range of movement elements; working in ensemble and solos. Students are billed a materials fee. (General Education Code(s): A.) E. Warburton

136. Choreography. *

Advanced study, exploration and analysis of choreographic form and content. Solo, duet, and group work are created with a focus on developing the creative process, interpreting styles and trends, and knowledge of compositional devices and generative movement practices. (Formerly course 136C, Dance Studio III.) Enrollment limited to 30. May be repeated for credit. (General Education Code(s): PR-C, A.) G. Casel

137. Studies in Performance (Dance). S

Studies in dance, taken in connection with performance in a major dance concert. Students are required to work on all aspects of the production. Students work with guest and faculty choreographers. May be repeated for credit with consent of instructor. Students are billed a materials fee. Admission by audition held late winter quarter; see department office for more information. May be repeated for credit. (General Education Code(s): A.) G. Casel

139. Random: With a Purpose. W

Participation in a student-choreographed and directed dance concert under faculty supervision. Rehearsals culminate in public performances. Students are billed a materials fee. Auditions to be held on the first day of class. May be repeated for credit. (General Education Code(s): PR-E, A.) E. Warburton

141. Play Direction Studio I. W

Basic studio exploration through scene problems and exercises of the development of directing principles. Intensive work on the director's pre-rehearsal work from text selection, analysis, and casting. Audition at first class. Enrollment limited to 20. K. Jannarone

142. Play Direction Studio II. *

Intensive studio exploration of the art and craft of directing. Primary focus on text analysis, collaboration with designers, developing a point of view and visual/auditory language for the play, staging techniques, and communication techniques with actors. Prerequisite(s): course 40, 141, or permission of instructor. Enrollment limited to 15. May be repeated for credit. (General Education Code(s): A.) The Staff

151. Studies in Performance (Drama). F,W

Studies in theater, taken in connection with participation in a Theater Arts Department sponsored production. Enrollment is limited to those persons chosen to take part in a particular production. Admission by audition; audition schedule to be announced at first class meeting. May be repeated for credit. (General Education Code(s): A.) The Staff, M. Foley, D. Scheie

151A. Studies in Performance: African American Theater Arts Troupe. W

Studies in drama; emphasis on African American theater taken in connection with participation in a theater arts sponsored production. Enrollment by audition only, and limited to those persons chosen to take part in a particular production. May be repeated for credit. (General Education Code(s): ER.) D. Williams

151I. Studies in Performance: Indonesian Dance and Drama. F

Studies in drama; emphasis on Indonesian theater taken in connection with participation in a theater arts sponsored production. Enrollment by audition only, and limited to those persons chosen to take part in a particular production. May be repeated for credit. (General Education Code(s): CC.) P. Gallagher, M. Foley

152. Advanced Stagecraft. *

Exploration of stage technology from the scene shop's perspective. Conversion of scenic designs to construction drawings. Pursuit of scenic-engineering and construction techniques using steel, wood, and other materials. Training on use of stage machinery: rigging, flying, wagons, tracking, and propulsion. Prerequisite(s): course 52. Enrollment limited to 25. (General Education Code(s): A.) The Staff

155. Workshop Experiments in Performance. W

A process-oriented investigation of specific playwrights or theatrical styles consisting of work which may culminate in a final production. Admission by audition at first class meeting; see department office for more information. May be repeated for credit. (General Education Code(s): A.) P. Gallagher

157. Playwriting. F

Students are given the opportunity to write their own scripts and refine them as the result of class discussion and scenework with actors. Work is on specific problems involving such elements as the structuring of a plot or the development of character. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. May be repeated for credit. (General Education Code(s): W,A.) J. Bierman

158. Chautauqua Workshop. *

Advanced course that provides directors, writers, and performers with an opportunity to develop new works in performance. Students enrolling in this course as playwrights are selected on basis of submissions turned in the previous quarter. Students are billed a materials fee. Students taking the course as directors are required to obtain consent of the instructor. Other students may enroll as usual. May be repeated for credit. The Staff

159. Advanced Playwriting. W

A study, through practice, of the constituent elements in the construction of a drama. Students concentrate, in particular, on the organization of complex plots, the expression of character through conflict, and maximizing the emotional impact of dramatic situations. Prerequisite(s): course 157 or equivalent, satisfaction of the Entry Level Writing and Composition requirements. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): W,A.) J. Bierman

160. Dramatic Theories. S

An examination of the theories of acting and directing from the 19th century to our own time, starting with the classic theater and concentrating on the 20th-century debate centered in Stanislavski and Brecht, Grotowski, and Robert Wilson. This course must be taken prior to student's senior year; required for course 185. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements. (General Education Code(s): A.) M. Chemers

161. Theater, Literature, and History. *

The Staff

161A. Irish Theater. F

Examines the idea of a "National Theater" in Ireland from its beginnings in the founding of the National Literary Society in 1892 to the current vitality of the contemporary Irish Theater. Enrollment limited to 45. (General Education Code(s): A.) P. Whitworth

161C. The Theater and Drama of Renaissance Europe. *

An examination of selected plays from Renaissance Europe (1580–1680, Italy, Spain, and France) from an explicitly theatrical viewpoint which will include practical scene study. Covers Renaissance theater buildings and some related critical materials. Offered in alternate academic years. (General Education Code(s): A.) P. Whitworth

161D. Asian Theater: An Anthropological Approach. F

Art serves simultaneously to educate its audience to the group's traditional values and to test new ideas. Indian, Indonesian, and Japanese forms are studied in relation to their cultural context. Through videotapes, lecture demonstrations, performances, and

scenework, students explore the forms. Offered in alternate academic years. (General Education Code(s): CC, A, E.) The Staff

161M. Sexuality, Gender, Drama, and Performance. *

Exploration and analysis of the interrelationships between gender, sexuality, and performance on stage and on the page. Topics include gender and homosexuality in the history of performance and dramatic literature, drag, queer Shakespeare, closet drama, same-sex performance conditions (e.g., Greece) vs. dual-gendered (e.g., Restoration England). Combines study of theoretical texts and script with analysis and practice. (Formerly Gender and Performance .) (General Education Code(s): A.) D. Scheie

161P. Theater in the "Chicano Power" Movement.

Covers the rise of Teatro Chicano as a cultural-political force within the 1960's "Chicano Power" Movement starting with founding playwright Luis Valdez and El Teatro Campesino and covering Chicana/o playwrights inspired by the movement, e.g. Cherrie Moraga, Luis Alfaro, and Josefina Lopez. (Also offered as Latin American&Latino Studies 161P. Students cannot receive credit for both courses.) (General Education Code(s): ER, A, E.) The Staff

161Q. Queer Theatricks: Representations and Sensibilities. *

An examination of the idea, form, and significance of queer/gay sensibility and representation in the English-speaking theater from the Renaissance to the present. (General Education Code(s): A.) The Staff

161R. Theater of American Cultures. *

Interrelationship of ethnicity and the rise of significant American theater groups including the black theater movement, Chicano Teatro, and Asian American theater will be shared via lecture, viewing, and discussion. (General Education Code(s): A, E.) The Staff

161S. American Drama: Politics and Theater. *

The dream of group theater, a long-term partnership of actors, directors, and playwrights, has fueled extraordinary and exciting change in the 20th-century American theater theory and practice. We examine ten exemplary manifestations of this dream. (General Education Code(s): A.) The Staff

161T. Women in Theater. *

Explores 20th-century American female playwrights from textual, historical, and multicultural perspectives. The course progresses from Trifles (1916) through the Harlem Renaissance, Broadway's Lillian Hellman, and today's post-Feminist theatrical explosion in lectures, films, dramatizations, and award-winning playwrights' visits. (General Education Code(s): A.) P. Gallagher

161U. Performance of Story in Theater and Film.

Examination of theory and practice of theater and film comparing and contrasting works having been adapted from one genre to another. Lecture, film, and video viewing. Discussions of materialist, psychoanalytic, and feminist approaches shared. Students cannot receive credit for this course and course 80X. (General Education Code(s): A.) The Staff

161Y. Modern Ancient Drama. *

Studies 20th- and 21st-century productions and adaptations of ancient Greek drama in theater, dance, music, and film, including Stravinsky, O'Neill, Graham, Pasolini, and Breuer, discussing artists' goals, the sociopolitical context, ideas of authenticity, and audience response. Enrollment limited to 30. (General Education Code(s): A.) The Staff

163. Special Studies in Individual Playwrights.

The Staff

163A. Shakespeare. *

Focuses on selected plays of Shakespeare. Explores the range and variety of interpretations of the plays, both in critical writings and in performance. Also studies other writings and graphic art created on the subjects and themes of the plays. Offered in alternate academic years. (General Education Code(s): A.) P. Whitworth

163E. Chekhov and His Impact. *

Delves into the work of Chekhov and the Moscow art theater. Through scene work Stanislavski's acting techniques are related to the scripts. The impact on later Russian

innovators, especially Meyerhold, and on the American theater is considered. (General Education Code(s): A.) The Staff

163G. Special Studies in Playwrights: Artaud. *

Antonin Artaud through three critical lenses: influence on modern and contemporary theater, subject and site of psychoanalytic and social criticism, and theater practitioner. Exercises cultural, historical, and analytic approaches to his work. Prerequisite: course 160 recommended. Enrollment limited to 40. (General Education Code(s): A.) K. Jannarone

163H. Henrik Ibsen and His Impact: Ghosts of the Future. W

Examines representative texts of Ibsen's work: early plays, realistic middle plays, and late plays. The cultural/historical context of Ibsen's oeuvre is considered as well as its impact, through contemporary translations and productions, on subsequent theater theory and practice. (General Education Code(s): TA.) P. Whitworth

163K. Special Studies in Playwrights: Euripides. S

Examines the works of the classical Athenian tragedian Euripides. The class undertakes a thorough consideration of the playwright's plays in cultural, historical, theatrical, and literary context. Prerequisite(s): course 61A or permission of the instructor. Enrollment limited to 40. (General Education Code(s): TA.) J. Bierman

164. Issues in Dance History and Theory. *

A research seminar. Topics range from problems in dance aesthetics, criticism, or theory to particular movements, periods, or the work of a choreographer. (Formerly course 133.) Enrollment limited to 20. May be repeated for credit. (General Education Code(s): A.) E. Warburton

165. Dance Modernism. F

Rare historical footage and the writings of famous choreographers provide an overview of 20th-century dance within the perspective of modernism. Topics include romanticism, "natural" dance, Orientalism, Ausdruckstanz, American modern dance and neo-classicism, chance procedure, postmodernism, and the avant-garde commodity marketplace.

(Formerly Introduction to Dance Modernism.) (General Education Code(s): IM, A.) E. Warburton

166. Ballet: A History. *

Chronological critical and historical overview of ballet as a form of ethnic dance from its European origins to the present. Focus is on development of form in Americas and Asia as it crossed with other socio-culturally constructed categories such as race, gender, class, sexual orientation. (General Education Code(s): ER, A.) M. Franko

185. Senior Seminar. F

A required seminar for majors involving readings and discussions of important texts in dance, design, and drama. Prerequisite(s): satisfaction of the Entry Level Writing and Composition requirements; course 160. D. Scheie

190. Group Projects. F,W,S

Prerequisite(s): petition required, approved by instructor and department. May be repeated for credit. The Staff

192. Directed Student Teaching. F,W,S

Teaching a lower-division seminar under faculty supervision. (See courses 42 and 45). Petition required, approved by instructor and department. The Staff

193. Proseminar. *

Exposees students to an aspect of the theory or practice of theater arts. Visiting scholars share their area of expertise in lectures to a small group of students. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) The Staff

193F. Proseminar (2 credits). *

Exposees students to an aspect of the theory or practice of theater arts. Visiting lecturers share their area of expertise in lectures to a small group of students. Enrollment limited to 25. May be repeated for credit. (General Education Code(s): A.) The Staff

198. Independent Field Study. F,W,S

Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Students engaging in

field study must complete application procedures for such study by the fifth week of the previous quarter. Petition required, approved by instructor and department. The Staff

198F. Independent Field Study (2 credits). F,W,S

Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person (e.g., supervision is by correspondence). Students engaging in field study must complete application procedures for such study by the fifth week of the previous quarter. Petition required, approved by instructor and department. May be repeated for credit. The Staff

199. Tutorial. F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

199F. Tutorial (2 credits). F,W,S

Individual study in areas approved by sponsoring instructors. Students submit petition to sponsoring agency. May be repeated for credit. The Staff

Graduate Courses

290A. Text Analysis. F

Presents a range of performance blueprints (texts, scores, libretti, etc.), and introduces key methodologies for translating text into performance. A final paper required. Enrollment restricted to graduate students in theater arts. May be repeated for credit. P. Whitworth

290B. Performance Histories. W

Contextualizes major movement in performance. Students are exposed to a wide range of historical and visual material pertinent to the creation of theater and dance. A final paper is required. Enrollment restricted to graduate students in theater arts. May be repeated for credit. J. Bierman

290C. Performance Analysis. S

Examines the production approaches of a range of performance practitioners, production companies, and performance traditions. Includes exercises in analysis and reconstruction of performance. A final reconstruction project is required. Enrollment restricted to graduate students in theater arts. May be repeated for credit. B. Baron, K. Jannarone

291. Field Study. F,W,S

Student-designed and conducted research carried out in field settings. A brief prospectus must be filed with the department office before undertaking the research, and a brief final report of activities must be filed upon return. Course intended for students with graduate standing in theater arts. Petition required, approved by instructor and department. The Staff

292. Teaching-Related Independent Study. F,W,S

Directed graduate research and writing coordinated with the teaching of undergraduates. Course intended for graduate students in theater arts. Petition required, approved by instructor and department. The Staff

293. Performance Research Project (10 credits). F,W,S

Internship with a professional theater company in the student's area of emphasis. This work will have a significant academic component supervised and assessed by a theater arts faculty member during the quarter it is taken. Enrollment restricted to graduate students. The Staff

295. Group Critique. W

Peer review and constructive assessment of works in progress. Students are required to give individual presentations to the group at least once a quarter. Educational objectives are to develop the ability to articulate themes and ideas in student's body of work; to strengthen critical skills in making, evaluating, and discussing theater art; to explore the role of the audience in context and criticism; and to investigate the ways artists construct, use, and maintain support communities. Enrollment restricted to graduate students. B. Baron

297. Independent Study. F,W,S

Independent study or research for graduate students in theater arts. Petition required,

approved by instructor and department. May be repeated for credit. The Staff

297F. Independent Study/Graduate (2 credits). F,W,S

Independent study or research for graduate students in theater arts. Petition required, approved by instructor and department. Enrollment restricted to graduate students in theater arts. May be repeated for credit. The Staff

299. Capstone Thesis. S

Involves participation in a major collaborative performance project (either faculty-directed or graduate student-directed with faculty supervision) or a research project group. Includes a written thesis, though the length will vary depending upon the student's particular emphasis. Enrollment restricted to graduate students. The Staff

* Not offered in 2014-15

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 218 Cowell College
 (831) 459-2054
<http://language.ucsc.edu>

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Lower-Division Courses

1. First-Year Yiddish.
 Introduces the Yiddish language. Students learn to speak and to ask others in Yiddish about themselves and about common situations (the classroom, work, family), and learn to read and write simple Yiddish texts. (Formerly Introduction to Yiddish.) The Staff

2. First-Year Yiddish. *
 Follows course 1 (formerly Hebrew 10), expanding vocabulary to include the weather, physical health and sickness, holidays, clothing, etc., and increasing student ability for self-expression using different tenses and grammatical cases. (Formerly Introduction to Yiddish.) Prerequisite(s): course 1 or Hebrew 10 or by consent of instructor. The Staff

99F. Tutorial (2 credits). F,W,S
 Students submit petition to sponsoring agency. May be repeated for credit. The Staff

* Not offered in 2014–15

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