

# SCHOOL OF HUMANITIES AND SCIENCES

*Dean:* Sharon R. Long

*Cognizant Deans:* Karen S. Cook, Judith L. Goldstein, Iain Johnstone, Arnold Rampersad

*Executive Dean:* Kären N. Nagy

*Associate Dean for External Relations:* Eugenie Van Wynen

*Assistant Deans:* Joseph Brown, Judith P. Cain, Roni Holeton

*Department Chairs:* Hans Andersen (Chemistry), Jonathan Berger (Music), Russell Berman (Comparative Literature), Tim Bresnahan (Economics), Gordon Brotherston (Spanish and Portuguese), Arnold Eisen (Religious Studies), Yakov Eliashberg (Mathematics), Amir Eshel (German Studies), Martin Fejer (Applied Physics), Ian Gotlib (Psychology; Autumn), Mark Granovetter (Sociology), Roland Greene (Division of Languages, Cultures and Literatures), Monika Greenleaf (Slavic Languages and Literatures), Robert Harrison (French and Italian), Shanto Iyengar (Communication), Joel Leivick (Art and Art History), Beth Levin (Linguistics), Carolyn Lougee Chappell (History), Yoshiko Matsumoto (Asian Languages), Terry Moe (Political Science), Robert M. Polhemus (English), Alice Rayner (Drama), John Rick (Anthropological Sciences), Debra Satz (Philosophy), David Siegmund (Statistics), Robert Simoni (Biological Sciences), George Somero (Hopkins Marine Station), Susan Stephens (Classics), Stanley Wojcicki (Physics) Sylvia Yanagisako (Cultural and Social Anthropology)

The School of Humanities and Sciences, with over 40 departments and interdepartmental degree programs, is the primary locus for the liberal arts education offered by Stanford University. Through exposure to the humanities, undergraduates study the ethical, aesthetic, and intellectual dimensions of the human experience, past and present, and so are prepared to make thoughtful and imaginative contributions to the culture of the future. Through the study of social, political, and economic events, they acquire theories and techniques for the analysis of specific societal issues, as well as general crosscultural perspectives on the human condition. And through exposure to the methods and discoveries of mathematics and the sciences, they become better-informed participants and leaders in today's increasingly technological societies.

Further, the exciting research environment within the school offers both undergraduates and graduate students the intellectual adventure of working on their own research projects side by side with the school's distinguished faculty. While a few of the school's graduate programs offer professional degrees such as the Master of Fine Arts, most are academic and research programs leading to the Ph.D. Doctoral programs empha-

size original scholarly work by the graduate students, often at the frontiers of knowledge, and normally require the students to participate in the supervised teaching of undergraduates. Indeed, in the school, as in the University more broadly, graduate students are of central importance in developing a community of scholars.

The fact that so many different disciplines lie within the same organization is one reason why the school has had great success in promoting interdisciplinary teaching and research programs. Whether engaged in studies as wide ranging as ethics, policy, and technological issues, or by applying contemporary social and philosophical theories to classical literature, our undergraduates, graduate students, and faculty are challenging the barriers among scholarly disciplines. The school continues to strive for a balance between teaching and research, the academy and society.

## ORGANIZATION

The School of Humanities and Sciences includes the departments of Anthropological Sciences, Applied Physics, Art and Art History, Asian Languages, Biological Sciences (and the Hopkins Marine Station), Chemistry, Classics, Communication, Comparative Literature, Cultural and Social Anthropology, Drama, Economics, English, French and Italian, German Studies, History, Linguistics, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Religious Studies, Slavic Languages and Literatures, Sociology, Spanish and Portuguese, and Statistics.

The school also includes 19 interdepartmental degree programs: African and African American Studies; American Studies; Archaeology; Biophysics; Comparative Studies in Race and Ethnicity; East Asian Studies; Human Biology; Feminist Studies; Financial Mathematics; Interdisciplinary Studies in Humanities; International Policy Studies; International Relations; Mathematical and Computational Science; Modern Thought and Literature; Public Policy; Russian, East European and Eurasian Studies; Science, Technology, and Society; Symbolic Systems; and Urban Studies.

In addition, the school sponsors programs that do not currently grant degrees: African Studies; Astronomy; Black Performing Arts; Center for the Interdisciplinary Study of Science and Technology; Ethics in Society; History and Philosophy of Science; the Institute for Research on Women and Gender; the Institute for Social Science Research; Islamic Studies; Jewish Studies; Latin American Studies; Medieval Studies; Overseas Studies; the Social Science History Institute; and Undergraduate Research Opportunities.

Faculty and academic staff of the School of Humanities and Sciences are listed under the respective departments or programs.

## DEGREES OFFERED

Candidates for the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Arts and Sciences, Master of Arts, Master of Fine Arts, Master of Science, Doctor of Musical Arts, or Doctor of Philosophy should consult appropriate sections of the announcements following. They should consult also the department or program in which they intend to specialize.



# PROGRAM IN AFRICAN AND AFRICAN AMERICAN STUDIES

*Director:* John R. Rickford

*Associate Director:* Vera I. Grant

*Advisory Committee:* Arnold Rampersad (Committee Chair; English); Claudine Gay (Political Science), Clay Carson (History), Sandra Drake (English), Joel Samoff (African Studies), Morris Graves (Associate Dean of Students), Elaine C. Ray (Director, Stanford University News Service)

*Affiliated Faculty:* David Abernethy (Political Science, emeritus), Armetha Ball (Education), Richard Banks (Law), Lucius Barker (Political Science, emeritus), John Baugh (Education), Michele Birnbaum-Elam (English), Albert Camarillo (History), Clayborne Carson (History), Susan Cashion (Drama), Wanda Corn (Art History), Linda Darling-Hammond (Education), Sally Dickson (Law), Sandra Drake (English), Jennifer Eberhardt (Psychology), Paulla Ebron (Cultural and Social Anthropology), Harry Elam (Drama), Shelley Fisher Fiskin (English), Louis Fraga (Political Science), George Fredrickson (History, emeritus), Claudine Gay (Political Science), James Gibbs Jr. (Political Science, emeritus), Sonya Grier (Business), Kennell Jackson Jr. (History), Anthony Kramer (Drama), Teresa LaFromboise (Education), Brian Lowery (Graduate School of Business), Hazel Markus (Psychology), Monica McDermott (Sociology), Robert Moses (Drama), Paula Moya (English), Angaluki Muaka (Stanford Language Center), Elisabeth Mudimbe-Boyi (French and Comparative Literature), Susan Olzak (Sociology), David Palumbo-Liu (Comparative Literature), Jack Rakove (History), Arnold Rampersad (English), Richard Roberts (History), Ramón Saldívar (English), Joel Samoff (African Studies), Claude Steele (Psychology), Ewart Thomas (Psychology), Joy Williamson (Education)

*Program Offices:* 450 Serra Mall, Building 240

*Mail Code:* 94305-2084

*Phone:* (650) 723-3782

*Email:* aaas@stanford.edu

*Web Site:* <http://www.stanford.edu/dept/AAAS/>

Courses given in the Program in African and African American Studies have the subject code AFRICAAM. For a complete list of subject codes, see Appendix.

## UNDERGRADUATE PROGRAMS BACHELOR OF ARTS

The African and African American Studies (AAAS) program covers a vast and varied field, including: (1) the history, literature, culture, and social science of African Americans as a central component of American culture; and (2) the history, literature, culture, and social science of the peoples of Africa and the African Diaspora. AAAS is an indispensable subject for those interested in the cultural, economic, historical, political, or social study of the United States.

To investigate the rich and varied human tapestry which AAAS spans, students are encouraged to use interdisciplinary methods drawn from various fields, including anthropology, art, art history, economics, education, languages, linguistics and literature, music, philosophy, political science, psychology, religion, and sociology, among others. A degree in AAAS prepares students for the many work positions requiring a broad liberal arts perspective, as well as those requiring the specialized knowledge that AAAS offers. Students in AAAS receive training that is especially valuable for graduate study and/or careers in such fields as business, comparative literature, creative writing, education, journalism, law, linguistics, medicine, performing arts, politics, social sciences, social work, teaching, and urban studies. The program emphasizes creative scholarship and research.

## MAJORS

All majors and double majors are expected to complete a total of 60 units, of which 25 units must be selected from the AAAS core courses, including AFRICAAM 105 and 152D, which are mandatory. Since AAAS is affiliated with the program in Comparative Studies in Race and Ethnicity (CSRE), AAAS students must also enroll in two CSRE core introductory courses and complete a CSRE senior seminar (CSRE 200X) before graduating.

Additionally, 20 units are to be selected from areas I (African American Studies) or II (Africa and the African Diaspora), or a special program, area III, devised by the student. All majors must include at least one course from area I and II. Each of these options consolidates and broadens the work of the core. Students who choose option III may devise a program with a special theme. This choice allows the student to use up to 20 units to explore issues encountered in other courses in greater depth or to strike out in new directions. Students who choose option III should work closely with an adviser and must have written approval from the director of the program. Regardless of whether students choose to focus on areas I, II, or III, no more than two courses of a general nature (for example, Sociology 145, which deals with race and ethnicity, but without a primary African or African American focus) may be counted towards the major.

All AAAS majors must take the CSRE Senior Seminar. The seminar is offered in Autumn Quarter. (For a complete description, see Comparative Studies in Race and Ethnicity.) This course satisfies the Writing in the Major requirement (WIM).

## MINORS

Students who minor in AAAS must complete either (1) a total of six courses of 3 or more letter-graded units, or (2) a minimum of 25 graded units from the list of AAAS courses listed below. The courses must include AFRICAAM 105 and at least one course from the social sciences and one from the humanities. Students should develop a coherent theme in their course selections, in consultation with the program director or associate director.

AAAS stresses academic advising. The director or associate director advises all AAAS students, including majors, minors, and double majors. Additionally, majors and double majors have the opportunity to participate in individual and group mentoring activities offered by CSRE. The program prides itself on its responsiveness to student concerns, and its advisory committee includes both faculty and student representation.

## HONORS

Majors who have maintained a grade point average (GPA) of at least 3.3 or higher in the major may apply for the honors program. Students should apply in the Spring Quarter of their junior year for the honors program. The honors thesis is intended to enable students to synthesize several of the skills they have acquired and to produce a document or project demonstrating some measure of competence in their specialty. The honors thesis must be discussed with and approved by the major adviser and the program director. A student may receive 5-15 units for the honors thesis. All students completing an honors thesis must participate in at least two quarters of the CSRE Senior Seminar; take CSRE 200X in the Autumn and AFRICAAM 199A,B,C.

## CORE COURSES

The core consists of 25 units, including the two marked, required courses, and 15 additional units selected from the following list:

<i>Subject Code and Catalog Number</i>	<i>Units</i>
AFRICAAM 105. Intro to African & African American Studies (required)	5
AFRICAAM 117A. African & African American Lecture Series (Aut)	1-3
AFRICAAM 117B. African & African American Lecture Series (Win)	1-3
AFRICAAM 117C. African & African American Lecture Series (Spr)	1-3
ENGLISH 143. Introduction to Afro-American Literature	5
ENGLISH 152D. W.E.B. Du Bois and American Culture (required; not given 2004-05)	5
FRENLIT 133. Literature and Society: Introduction to Francophone Literature from Africa and the Caribbean	4
HISTORY 148. Introduction to African History (not given 2004-05)	5
HISTORY 148C. Africa in the 20th Century	5

HISTORY 150B. Introduction to African American History: The Modern African American Freedom Struggle	4-5
LINGUIST 73. African American Vernacular English	3-5
PSYCH 174. African American Psychology (not given 2004-05)	3

### (AREA I) AFRICAN AMERICAN HISTORY, LITERATURE, CULTURE, AND SOCIETY

Area I majors choose at least 20 units in addition to the core, selected from the following list, plus at least one course from the Area II list (below):

#### AFRICAN AND AFRICAN AMERICAN STUDIES (AFRICAAM)

117A,B,C. African and African American Lecture Series

#### SOCIAL SCIENCES

Area I minors must choose at least one course below.

##### Economics (ECON):

116. American Economic History

##### Education (EDUC):

156A. Understanding Racial and Ethnic Identity  
175. African American English in Educational Context  
193C. Peer Counseling: The African American Community  
201A. History of African American Education  
201B. Education for Liberation

##### Cultural and Social Anthropology (CASA):

88. Theories in Race and Ethnicity: A Comparative Perspective

##### Political Science (POLISCI):

221T. Politics of Race and Ethnicity in the United States  
225R. Black Politics in the Post-Civil Rights Era

##### Psychology (PSYCH):

180. Social Psychological Perspectives on Stereotyping and Prejudice  
215. Mind, Culture, and Society

##### Sociology (SOC):

145. Race and Ethnic Relations  
149. The Urban Underclass

#### HUMANITIES

Area I minors must choose at least one course below.

##### Dance (DANCE):

44. Jazz Dance I  
144. Jazz Dance II  
145. Jazz Dance III

##### English (ENGLISH):

143. Introduction to Afro-American Literature

##### History (HISTORY):

61. The Constitution and Race  
150B. Introduction to African American History: The Modern African American Freedom Struggle  
200M. Martin Luther King, Jr., Papers Project

##### Linguistics (LINGUIST):

73. African American Vernacular English

##### Music (MUSIC):

18A. Jazz History: Ragtime to Bebop (1900-1940)  
18B. Jazz History: Bebop to Present (1940-Present)  
20A. Jazz Theory  
20B. Advanced Jazz Theory  
161B. Jazz Orchestra

##### Philosophy (PHIL):

177. Philosophical Issues Concerning Race and Racism

### (AREA II) AFRICAN HISTORY, CULTURE, AND SOCIETY: HISTORY, CULTURE, AND SOCIETY OF THE BLACK DIASPORA

Area II majors choose at least 20 units in addition to the cores selected from the following lists, plus at least one course from the Area I list:

#### AFRICAN AND AFRICAN AMERICAN STUDIES (AFRICAAM)

115A,B,C. African and African American Lecture Series

#### SOCIAL SCIENCES

Area II minors must choose at least one course below.

##### Cultural and Social Anthropology (CASA):

72. Dance and Culture in Latin America  
88. Theories of Race and Ethnicity

#### HUMANITIES

Area II minors must choose at least one course below.

##### Dance (DANCE):

43. Afro-Brazilian and Afro-Peruvian Dance

##### French and Italian (FRENLIT):

133. Literature and Society: Introduction to Francophone Literature from Africa and the Caribbean

##### History (HISTORY):

48Q. South Africa: Contested Transitions  
61. The Constitution and Race  
147A. African History in Novels and Film  
148C. Africa in the 20th Century  
246. Successful Futures for Africa: An Inventory of the 1970s-2000s  
246S. Popular Culture in Africa  
247. Greater East Africa and Its Historical Writing  
247B. Health and Society in Africa  
248D. Law and Colonialism in Africa  
248S. African Societies and Colonial States

##### Language Center (AMELANG):

100A,B,C. Beginning Amharic  
102A,B,C. Advanced Amharic  
106A,B,C. Beginning Swahili  
107A,B,C. Intermediate Swahili  
108A,B,C. Advanced Swahili  
133A,B,C. The African Forum

### COURSES

WIM indicates that the course satisfies the Writing in the Major requirements.

**AFRICAAM 105. Introduction to African and African American Studies**—Interdisciplinary. Central themes in African American culture and history related to race as a definitive American phenomenon. Possible topics: African survivals and interpretations of slavery in the New World, interpretations of the Black family, literature, and art. Possible readings: Frederick Douglass, Harriet Jacobs, Booker T. Washington, W.E.B. DuBois, Richard Wright, Maya Angelou, James Baldwin, Malcom X, Alice Walker, and Bell Hooks. Focus may vary each year. GER:3a,4b,WIM  
*5 units, Win (Carson)*

**AFRICAAM 117A,B,C. African American Lecture Series**—Weekly lectures on African or African American artistic expression, culture, history, language, literature, music, politics, religion, society, or sport. One unit for attendance at lectures and submission of brief reports. Additional units require participation in preparatory and discussion sections, readings, and the opportunity to conduct and record biographical interviews with speakers in the lecture series for the AAAS archives.  
*1-3 units, Aut, Win, Spr (Grant)*

**AFRICAAM 120. Global Perspectives on Human Language: The South African Context**—Seminar. Interdisciplinary language studies throughout the African diaspora. Theories of human language and anthropological evidence indicating that the origin of human language is located in southern Africa. The U.S. controversy over Ebonics in comparison to the linguistic origin of English among people of African descent.  
*2 units, Aut (Baugh)*

### INTERDEPARTMENTAL OFFERINGS

See the respective department listings for course descriptions and General Education Requirements (GER) information.

#### ANTHROPOLOGICAL SCIENCES

##### ANTHSCI 6. Human Origins

*5 units, Win (Klein)*

#### ART AND ART HISTORY

##### ARTHIST 178. Ethnicity and Dissent in United States Art and Literature

*4 units (Wolf) not given 2004-05*

#### COMPARATIVE LITERATURE

##### COMPLIT 24Q. Ethnicity and Literature

*5 units, Aut (Palumbo-Liu)*



**COMPLIT 133. Literature and Society: Introduction to Francophone Literature from Africa and the Caribbean**

4 units, Win (*Boyi*)

**COMPLIT 202. Comparative Fictions of Ethnicity**

5 units, Win (*Palumbo-Liu*)

## **COMPARATIVE STUDIES IN RACE AND ETHNICITY**

**CSRE 200X. CSRE Senior Seminar**

5 units, Aut (*Arellano, Moya*)

**CSRE 203A. The Changing Faces of America: Strategies for Change in the 21st Century**

5 units, Spr (*Montoya, Steyer*)

## **CULTURAL AND SOCIAL ANTHROPOLOGY**

**CASA 14. Anthropology and Art**

5 units, Aut (*Malkki*)

**CASA 88. Theories in Race and Ethnicity**

5 units, Win (*Yanagisako*)

**CASA 183D. Border Crossings and American Identities**

5 units, Aut (*Duffey*)

## **DANCE**

**DANCE 42. Dances of Latin America**

2 units, Win (*Cashion*)

**DANCE 43. Afro-Brazilian and Afro-Peruvian Dance**

2 units, Win (*Cashion*)

**DANCE 44. Jazz Dance I**

2 units, Aut, Win, Spr (*Kramer*)

**DANCE 51. West African Dance: Ghana**

1 unit, Aut (*Quarshie*)

**DANCE 144. Jazz Dance II**

2 units Aut, Spr (*Moses*)

**DANCE 145. Jazz Dance III**

2 units, Aut, Spr (*Moses*)

**DANCE 160. Dance, Gender, and History**

4 units, Win (*Ross*)

## **DRAMA**

**DRAMA 110. Cartographies of Race: The Institute for Diversity in the Arts at Stanford**

5 units, Win (*Elam*)

**DRAMA 157J/257J. Black Social Dance Performance Workshop**

4 units, Aut (*Hayes*)

**DRAMA 163/263. Performance and America**

5 units (*Elam*) not given 2004-05

## **ECONOMICS**

**ECON 116. American Economic History**

5 units, Spr (*Wright*)

## **EDUCATION**

**EDUC 135X/337X. Race, Ethnicity, and Linguistic Diversity in Teacher Preparation**

3-4 units, Spr (*Ball*)

**EDUC 156A. Understanding Racial and Ethnic Identity**

3-5 units (*LaFromboise*) alternate years, given 2005-06

**EDUC 175/275. African American English in Educational Context**

3 units (*Staff*) alternate years, given 2005-06

**EDUC 193C. Peer Counseling: The African American Community**

2 units, Aut (*Edwards*)

**EDUC 201. History of Education in the United States**

4 units, Win (*Labaree*)

**EDUC 201B. Education for Liberation**

3-4 units, Spr (*Williamson*)

**EDUC 201A. History of African American Education**

3-4 units, Win (*Williamson*)

## **ENGLISH**

**ENGLISH 43/143. Introduction to Afro-American Literature**

3-5 units, Spr (*Birnbaum*)

**ENGLISH 146C. Hemingway, Hurston, Faulkner, and Fitzgerald**

5 units, Aut (*G. Jones*)

**ENGLISH 152G. Harlem and Chicago Renaissances**

5 units, Spr (*Birnbaum*)

**ENGLISH 260G. Century's End: Race, Gender, and Ethnicity at the Turn of the Century**

5 units, Win (*Fishkin*)

**ENGLISH 362B. African American Literary Theory**

5 units, Win (*Birnbaum*)

## **FRENCH AND ITALIAN**

### **FRENCH LITERATURE**

**FRENLIT 186F. Contemporary African Literature in French**

4 units, Win (*Mangeon*)

### **HISTORY**

**HISTORY 40N. Recounting the Encounter: Histories of Colonial Contact in the Americas, the Pacific, and Africa**

5 units, Aut (*Daughton*)

**HISTORY 46S. Photography and African History**

5 units, Aut (*Jackson*)

**HISTORY 48Q. South Africa: Contested Transitions**

3 units, Win (*Samoff*)

**HISTORY 49N. The Slave Trade**

4-5 units, Win (*Roberts*)

**HISTORY 87. Empires and Cultures in the Modern World**

5 units, Win (*Lee*)

**HISTORY 146A. Religion and the State in Premodern Africa**

5 units, Win (*Hanretta*)

**HISTORY 148C. Africa in the 20th Century**

5 units, Aut (*Roberts*)

**HISTORY 149. African Intellectuals: 1940-2000**

5 units, Spr (*Jackson*)

**HISTORY 150B. Introduction to African American History: The Modern African American Freedom Struggle**

4-5 units, Spr (*Carson*)

**HISTORY 165A. Colonial and Revolutionary America**

5 units, Aut (*Rakove*)

**HISTORY 165B. 19th-Century America**

5 units, Win (*White*)

**HISTORY 165C. The United States in the Twentieth Century**

5 units, Spr (*Kennedy*)

**HISTORY 172A. The United States Since 1945**

4-5 units, Win (*Bernstein*)

**HISTORY 200M. Undergraduate Directed Research: Martin Luther King, Jr., Papers Project**

1-4 units (*Carson*) not given 2004-05

**HISTORY 246/346. Successful Futures for Africa: An Inventory of the 1970s-2000s**

5 units, Aut (Jackson)

**HISTORY 246S/446. Popular Culture in Africa**

5 units, Aut (Jackson)

**HISTORY 247/347. Greater East Africa and Its Historical Writing**

4-5 units (Jackson) not given 2004-05

**HISTORY 247B/347A. Health and Society in Africa**

5 units (Roberts) not given 2004-05

**HISTORY 248B. Islam in Africa**

5 units, Aut (Hanretta)

**HISTORY 248D/348D. Law and Colonialism in Africa**

4-5 units, Spr (R. Roberts)

**HISTORY 248S/448A. African Societies and Colonial States**

5 units (R. Roberts) not given 2004-05

**HISTORY 249B. North African State and Society to Independence**

5 units, Win (Gutelius)

**HISTORY 249S/449. African Cultural History in the 20th Century**

5 units (Jackson) not given 2004-05

**HISTORY 254A. The Civil War**

5 units, Spr (Hilde)

**HISTORY 254B. American Slavery from the British Colonies through Jim Crow**

5 units, Win (Hilde)

**HISTORY 450. Intellectual and Cultural History in Modern Africa**

5 units, Spr (Hanretta)

### **HISTORY AND PHILOSOPHY OF SCIENCE**

**HPS 158. Human Origins: History, Evidence, and Controversy—**  
(Same as HISTORY 466.)

5 units, Win (Proctor)

### **INTERNATIONAL RELATIONS**

**INTNLREL 111. Education for All? The Global and Local in Public Policy Making in Africa**

5 units, Spr (Samoff)

**INTNLREL 161A. Global Human Geography: Asia and Africa**

5 units, Aut (M.W. Lewis)

### **LINGUISTICS**

**LINGUIST 73. African American Vernacular English**

3-5 units (Rickford) not given 2004-05

**LINGUIST 151/251. Pidgin and Creole Sociolinguistics**

2-4 units, Spr (Rickford)

**LINGUIST 153. Ebonics and Other Vernaculars in Schools and Society**

4 units (Staff) not given 2004-05

**LINGUIST 159/259. Language in the U.S.**

3-5 units (Rickford) not given 2004-05

**LINGUIST 273. African American Vernacular English**

3-5 units (Rickford) not given 2004-05

### **MUSIC**

**MUSIC 18A. Jazz History: Ragtime to Bebop, 1900-1940**

3 units, Win (Berry)

**MUSIC 18B. Jazz History: Bebop to Present, 1940-Present**

3 units, Spr (Berry)

**MUSIC 20A. Jazz Theory**

3 units, Aut (Nadel)

**MUSIC 20B. Advanced Jazz Theory**

3 units, Win (Nadel)

**MUSIC 20C. Jazz Arranging and Composition**

3 units (Nadel) not given 2004-05

**MUSIC 161B. Jazz Orchestra**

1 unit, Aut, Win, Spr (Berry)

### **PHILOSOPHY**

**PHIL 177. Philosophical Issues Concerning Race and Racism**

4 units (Satz) not given 2004-05

### **POLITICAL SCIENCE**

**POLISCI 21N. The Evolution of Voting Rights in the U.S.**

5 units, Spr (Fraga)

**POLISCI 46N. Contemporary African Politics**

5 units, Aut (Weinstein)

**POLISCI 126. Issues of Race and Minority Representation in American Politics**

5 units, Win (Wong)

**POLISCI 128. Colonial and Revolutionary America**

5 units, Aut (Rakove)

**POLISCI 141. The Global Politics of Human Rights**

5 units, Win (Karl)

**POLISCI 225R. Black Politics in the Post-Civil Rights Era**

5 units, Win (Gay)

**POLISCI 325S. Race and Place in American Politics**

5 units, Spr (Gay)

**POLISCI 327R. American Politics of Race and Ethnicity: Comparative Perspectives**

5 units, Aut (Wong)

### **PSYCHOLOGY**

**PSYCH 9N. The Social Psychology of Race, Gender, and Culture**

3 units, Spr (Steele)

**PSYCH 75. Introduction to Cultural Psychology**

5 units, Spr (Markus) alternate years, not given 2005-06

**PSYCH 155. Introduction to Comparative Studies in Race and Ethnicity**

5 units (Markus, Moya) alternate years, given 2005-06

**PSYCH 178/263. Stigma and Marginality**

3 units (Eberhardt) not given 2004-05

**PSYCH 180/245. Social Psychological Perspectives on Stereotyping and Prejudice**

3 units (Eberhardt) not given 2004-05

**PSYCH 215. Mind, Culture, and Society**

3 units, Win (Markus, Steele)

### **SOCIOLOGY**

**SOC 44N. Race, Class, and Culture in Urban America**

3 units, Spr (McDermott)

**SOC 141A. Social Class, Race/Ethnicity, Health**

4 units, Win (Barr)

**SOC 145/245. Race and Ethnic Relations**

5 units (Olzak) not given 2004-05

**SOC 148. Racial Identity**

5 units (McDermott) not given 2004-05

**SOC 149/249. The Urban Underclass**

5 units (Rosenfeld) not given 2004-05

# AFRICAN STUDIES

*Emeriti:* David B. Abernethy, James L. Gibbs, Jr., Raymond D. Giraud, Bruce F. Johnston, William R. Leben, Hans N. Weiler, Sylvia Wynter  
*Chair:* Richard Roberts

*Professors:* John Baugh (Education), Russell Berman (Comparative Literature, German Studies), Martin Carnoy (Education), James Ferguson (Cultural and Social Anthropology), George M. Fredrickson (History), William B. Gould (Law), Liisa Malkki, (Cultural and Social Anthropology), Richard Randell (Art and Art History), John Rickford (Linguistics, African and African American Studies), Richard Roberts (History)

*Associate Professors:* Elisabeth Boyi (French and Italian, Comparative Literature), Sandra E. Drake (English), Akhil Gupta (Cultural and Social Anthropology), Kennell A. Jackson, Jr. (History), Bruce Lusignan (Electrical Engineering)

*Associate Professor (Research):* David Katzenstein (School of Medicine)

*Assistant Professors:* David DeGusta (Anthropological Sciences), Paulla A. Ebron (Cultural and Social Anthropology), Sonia Grier (Business), Sean Hanretta (History), Barbaro Martinez-Ruiz (Art History), Joanna Mountain (Anthropological Sciences), Jeremy Weinstein (Political Science)

*Senior Lecturer:* Khalil Barhoum (Linguistics, African and Middle Eastern Languages)

*Lecturer:* Angaluki Muaka (African and Middle Eastern Languages)

*Consulting Professor:* Joel Samoff (Center for African Studies)

*Curators:* Peter Duignan (Senior Fellow, emeritus, Hoover Institution), Karen Fung (African Collection Curator, Green Library), Thomas Seligman (Director, Cantor Arts Center, and Lecturer, Art and Art History), Manuel Jordan (Curator, Oceania and Africana Collection, Cantor Arts Center)

*Senior Research Fellows:* Larry Diamond (Hoover Institution), Stephen Stedman (CISAC)

*Center Offices:* Building 240, Room 104

*Mail Code:* 94305-2152

*Phone:* (650) 723-0295

*Email:* ccapper@stanford.edu

*Web Site:* <http://www.stanford.edu/dept/AFR/>

Courses given in African Studies have the subject code AFRICAST. For a complete list of subject codes, see Appendix.

The Committee on African Studies coordinates an interdisciplinary program in African Studies for undergraduate and graduate students. Under special arrangement with the Stanford/Berkeley Joint Center for African Studies, it is possible to incorporate courses from both institutions into one's program. Contact the center for information regarding courses offered at the University of California at Berkeley.

Courses in African Studies are offered by departments and programs throughout the University. Each year the committee sponsors a seminar to demonstrate to advanced undergraduate and graduate students how topics of current interest in African Studies are approached from different disciplinary perspectives. Each week's presentation is conducted by a different professor; the first hour is a lecture, followed by a one-hour seminar discussion.

Course offerings in African languages are also coordinated by the Committee on African Studies. Along with regular courses in several levels of Swahili and Arabic, the committee arranges with the African and Middle Eastern Languages and Literatures Program in the Stanford Language Center to offer instruction in other African languages; in recent years, it has offered courses in Amharic, Bambara, Chichewa, Ewe, Fulani, Hausa, Maninka, Northern Sotho, Shona, Twi, Yoruba, and Wolof.

The Committee on African Studies does not sponsor degree programs, but undergraduates and graduate students can specialize in African Studies under a number of arrangements listed below.

## UNDERGRADUATE PROGRAMS

Undergraduates may choose an African Studies focus from:

1. A major in a traditionally defined academic department (for example, Anthropological Sciences, Cultural and Social Anthropology, History, Political Science). These departments afford ample opportunity to enroll in courses outside the major, leaving the student free to pursue the interdisciplinary study of Africa.
2. Interdepartmental majors, such as African and African American Studies or International Relations, which offer coordinated and comprehensive interdisciplinary course sequences, permitting a concentration in African Studies.
3. An individually designed major. Under the supervision of a faculty adviser and two other faculty members, the student can plan a program of study focused on Africa that draws courses from any department or school in the University. If approved by the Dean's Advisory Committee on Individually Designed Majors, the program becomes the curriculum for the B.A. degree.

## MINORS

The Committee on African Studies awards a minor in African Studies. Students majoring in any field qualify for this minor by meeting the following requirements:

1. Taking a minimum of 25 units of African-related courses. Students may not overlap (double-count) courses for completing major and minor requirements.
2. Having at least one quarter's exposure to a sub-Saharan African language. Africa is a linguistically heterogeneous region, and most Africans are multilingual. Learning an African language is an excellent way to learn about African cultures. The Center for African Studies and the Special Languages Program may arrange instruction in any of several languages spoken in West, East, Central, and Southern Africa.
3. Completing one introductory course that deals with more than one region of Africa.
4. Writing a minimum 25-page research paper, with a clear focus on Africa. This paper may be an extension of a previous paper written for an African Studies course.
5. Designate a focus of study (either disciplinary or regional) through a three-course concentration.

Upon satisfactory completion of all requirements, final certification of the minor is made by the Center for African Studies and appears on the student's transcript.

## CERTIFICATE

Students may apply for a certificate in African Studies. Requirements for the certificate are the same as for the minor; however students may double count courses applied toward their major or graduate studies. The principal difference between the minor and the certificate, however, is that the certificate does not appear on the transcript. For more information and an application, contact the center.

## GRADUATE STUDY

For those who wish to specialize in Africa at the graduate level, African Studies can be designated a field of concentration within the master's and doctoral programs of some academic departments. Students in such departments as Anthropological Sciences, Cultural and Social Anthropology, History, Political Science, and Sociology, and in the School of Education, may declare African Studies as the area of specialization for their master's and Ph.D. thesis work. Some other departments, programs, and institutes such as International Policy Studies, International Relations, and the International Comparative Education Program also permit students to specialize in African Studies. Stanford graduate students who are U.S. citizens or permanent residents may request an academic year application for a Foreign Language and Area Studies (FLAS) Fellowship. The academic year FLAS application deadline is mid-January. For summer FLAS applications, the deadline is mid-April. Students need not be enrolled at Stanford to apply for the summer fellowship. For more information or an application, contact the center.

**COURSES****INTERDEPARTMENTAL OFFERINGS**

See respective department listings for course descriptions and General Education Requirements (GER) information.

**AFRICAN AND AFRICAN AMERICAN STUDIES**

**AFRICAAM 105. Introduction to African and African American Studies**

5 units, Win (Carson)

**AFRICAAM 117A,B,C. African American Lecture Series**

1-3 units, Aut, Win, Spr (Grant)

**AFRICAN AND MIDDLE EASTERN LANGUAGES**

For courses in African and Middle Eastern language instruction with the subject code AMELANG, see the "Language Center" section of this bulletin.

**ANTHROPOLOGICAL SCIENCES**

**ANTHSCI 6/206. Human Origins**

5 units, Win (Klein)

**ANTHSCI 111/211. Language and Prehistory**

5 units, Spr (Fox)

**ART AND ART HISTORY**

**ARTHIST 190/390. African Art and Writing Traditions**

4 units, Aut (Martinez-Ruiz)

**ARTHIST 191/391. Afro-Atlantic Religion, Art, and Philosophy**

4 units, Win (Martinez-Ruiz)

**ARTHIST 290. Mapping Africa: Cartography and Architecture**

5 units, Aut (Martinez-Ruiz)

**ARTHIST 291. African and Afro-Atlantic Graphic Writing Systems**

5 units, Spr (Martinez-Ruiz)

**CLASSICS**

**CLASSHIS 105. History and Culture of Ancient Egypt**

3-5 units, Spr (Manning)

**COMPARATIVE LITERATURE**

**COMPLIT 133. Literature and Society: Introduction to Francophone Literature from Africa and the Caribbean**

4 units, Win (Boyi)

**CULTURAL AND SOCIAL ANTHROPOLOGY**

**CASA 1/201. Introduction to Cultural and Social Anthropology**

5 units, Win (Costanzo-Kapur)

**CASA 14. Anthropology and Art**

5 units, Aut (Malkki)

**CASA 118/218. Literature, Politics, and Gender in Africa**

5 units (Malkki) not given 2004-05

**CASA 119/219. The State in Africa**

5 units (Ferguson) not given 2004-05

**CASA 190/290. History and Theory in Cultural and Social Anthropology**

5 units, Win (Baviskar)

**CASA 313. Anthropology of Neoliberalism**

5 units (Ferguson) not given 2004-05

**DANCE**

**DANCE 43. Afro-Brazilian and Afro-Peruvian Dance**

2 units, Win (Cashion)

**ECONOMICS**

**ECON 106. World Food Economy**

5 units, Win (Falcon, Naylor)

**ECON 118. Development Economics**

5 units, Spr (Johnson)

**EDUCATION**

**EDUC 107. The Politics of International Cooperation in Education**

4 units, Win (Inoue)

**EDUC 202. Introduction to Comparative and International Education**

4-5 units, Aut (Inoue)

**EDUC 202I. Education Policy Workshop in International and Comparative Education**

3-4 units, Spr (Staff)

**EDUC 306A. Education and Economic Development**

5 units, Aut (Carnoy)

**EDUC 306B. The Politics of International Cooperation in Education**

4 units, Win (Inoue)

**EDUC 314. Workshop in Economics of Education**

1-2 units, Aut, Win, Spr (Carnoy)

**ENGINEERING**

**ENGR 297A,B,C. Ethics of Development in a Global Environment**

1-4 units, Aut, Win, Spr (Lusignan)

**ENGLISH**

**ENGLISH 43/143. Introduction to Afro-American Literature**

3-5 units, Spr (Birnbaum)

**FRENCH GENERAL**

**FRENGEN 187. Bledi, Bledi: North African Youth and Contested Identities in Urban France, 1970-2005**

1-3 units, Aut (Le Breton)

**FRENCH LITERATURE**

**FRENLIT 133. Literature and Society: Introduction to Francophone Literature from Africa and the Caribbean**

4 units, Win (Boyi)

**FRENLIT 278. Special Topics: Discourse of Self Representation**

3-5 units (Boyi) not given 2004-05

**HISTORY**

**HISTORY 40N. Recounting the Encounter: Histories of Colonial Contact in the Americas, the Pacific, and Africa**

5 units, Aut (Daughton)

**HISTORY 46S. Photography and African History**

5 units, Aut (Jackson)

**HISTORY 48Q. South Africa: Contested Transitions**

3 units, Win (Samoff)

**HISTORY 49. Twentieth-Century South Africa**

5 units (R. Roberts) not given 2004-05

**HISTORY 49N. The Slave Trade**

4-5 units, Win (Roberts)

**HISTORY 87. Empires and Cultures in the Modern World**

5 units, Win (Lee)

**HISTORY 101A. Global Human Geography: Asia and Africa**

5 units, Aut (M.W. Lewis)

**HISTORY 146A. Religion and the State in Premodern Africa**

5 units, Win (Hanretta)

**HISTORY 147A. African History in Novels and Film**

5 units (Jackson) not given 2004-05

**HISTORY 149. African Intellectuals: 1940-2000**

5 units, Spr (Jackson)



**HISTORY 140V. Franco-Arab Encounters**

5 units, Spr (Beinin)

**HISTORY 148C. Africa in the 20th Century**

5 units, Aut (R. Roberts)

**HISTORY 206B/306B. Design and Methodology for International Field Research**

1 unit, Win (N. Kollmann, Roberts)

**HISTORY 246/346. Successful Futures for Africa: An Inventory of the 1970s-2000s**

5 units, Aut (Jackson)

**HISTORY 246S/446. Popular Culture in Africa**

5 units, Aut (Jackson)

**HISTORY 247/347. Greater East Africa and Its Historical Writing**

4-5 units (Jackson) not given 2004-05

**HISTORY 247B/347A. Health and Society in Africa**

5 units (Roberts) not given 2004-05

**HISTORY 248B/348B. Islam in Africa**

5 units, Aut (Hanretta)

**HISTORY 248D/348D. Law and Colonialism in Africa**

4-5 units, Spr (R. Roberts)

**HISTORY 248S/448A. African Societies and Colonial States**

5 units (R. Roberts) not given 2004-05

**HISTORY 249S/449. African Cultural History in the 20th Century**

5 units (Jackson) not given 2004-05

**HISTORY 287S/487. Research Seminar on the Modern Middle East**

3-5 units (Beinin) not given 2004-05

**HISTORY 347B. Core Colloquium African History: The Colonial Period**

4-5 units (R. Roberts) not given 2004-05

**HISTORY 349. Core Colloquium: Precolonial Africa**

4-5 units, Aut (R. Roberts)

**HISTORY 450. Intellectual and Cultural History in Modern Africa**

5 units, Spr (Hanretta)

**HUMAN BIOLOGY****HUMBIO 2A. Genetics, Evolution, and Ecology**

5 units, Aut (Durham, Mountain)

**INTERNATIONAL RELATIONS****INTNLREL 111. Education for All? The Global and Local in Public Policy Making in Africa**

5 units, Spr (Samoff)

**MEDICINE****MED 93Q. The AIDS Epidemic: Biology, Behavior, and Global Responses**

3 units, Aut (Katzenstein)

**POLITICAL SCIENCE****POLISCI 46N. Contemporary Africa**

5 units, Aut (Weinstein)

**POLISCI 111. Peace Studies**

5 units, Spr (Bland, Ross, Holloway)

**POLISCI 114T. Major Issues in International Conflict Management**

5 units (Stedman) not given 2004-05

**POLISCI 147. Comparative Democratic Development**

5 units, Spr (Diamond)

**POLISCI 244R. Political Economy of Disease: AIDS in Historical Perspective**

5 units, Win (Weinstein)

# AMERICAN STUDIES

*Director:* Shelley Fisher Fishkin

*Program Coordinators:* Joseph Corn, Richard Gillam

*Administrative Committee:* Barton J. Bernstein (History), Michele B. Elam (English), David Brady (Political Science), Henry Breitrose (Communication), Scott Bukatman (Art and Art History), Gordon H. Chang (History), Wanda Corn (Art and Art History), Arnold Eisen (Religious Studies), Jay Fliegelman (English), Estelle Freedman (History), Nicholas Jenkins (English), Gavin Jones (English), Paula Moya (English), Hilton Obenzinger (English), David Palumbo-Liu (Comparative Literature), Jack Rakove (History), Rob Reich (Political Science, on leave), Ramón Saldivar (English, Comparative Literature), Fred Turner (Communication), Barry Weingast (Political Science), Richard White (History), Bryan Wolf (Art and Art History), Gavin Wright (Economics)

*Program Offices:* Building 250, Room 251F

*Mail Code:* 94305-2020

*Phone:* (650) 723-3413

*Email:* idstudies.moore@stanford.edu

*Web Site:* <http://www.stanford.edu/group/HSP/AmStud/>

Courses given in American Studies have the subject code AMSTUD. For a complete list of subject codes, see Appendix.

The American Studies program is administered through the office of Interdisciplinary Studies in Humanities.

## UNDERGRADUATE PROGRAMS

### BACHELOR OF ARTS

American Studies is an interdisciplinary undergraduate major that seeks to convey a broad understanding of American culture and society in all their complexity. Building on a foundation of courses in history and institutions, literature and the arts, and race and ethnicity, students bring a range of disciplines to bear on their efforts to analyze and interpret America's past and present, forging fresh and creative syntheses along the way.

The core requirements illustrate how different disciplines approach the study and interpretation of American life and include three courses in each of two main areas: History and Institutions; and Literature, Art, and Culture. The required gateway seminar, AMSTUD 160, Perspectives on American Identity, explores the tensions between commonality and difference from a variety of disciplinary perspectives.

Beyond the core requirements of the major, American Studies expects students to define and pursue their own interests in interpreting important dimensions of American life. Accordingly, each student designs a thematic concentration of at least five courses drawn from fields such as history, literature, art, communication, theater, political science, African American studies, feminist studies, economics, cultural and social anthropology, religious studies, Chicana/o studies, law, sociology, education, Native American studies, music, and film. At least one of the five courses in a student's thematic concentration should be a small group seminar or a colloquium. With program approval, students may conclude the major with a capstone honors research project during their senior year.

Whether defined broadly or narrowly, the thematic focus or concentration should examine its subject from the vantage of multiple disciplines. Examples of concentrations include: Race and the Law in America, Gender in American Culture and Society, Technology in American Life and Thought, Health Policy in America, Art and Culture in 19th-Century America, Education in America, Nature and the Environment in American Culture, Politics and the Media, Religion in American Life, Borders and Boundaries in American Culture, The Artist in American Society, and Civil Rights in America.

To illustrate how different disciplines approach the study of American life, the major requires undergraduates to take three courses in each of two main areas (History and Institutions, and Literature, Art, and Culture), at least one additional course in Comparative Race and Ethnic-



ity, and AMSTUD 160, Perspectives on American Identity. Completion of the major thus normally requires 13 courses (totaling at least 60 units), all of which must be taken for a letter grade.

The specific course requirements for the American Studies major are as follows:

1. *History and Institutions*—All American Studies majors are required to complete three foundation courses in American History and Institutions. Specific requirements are: HISTORY 165A, Colonial and Revolutionary America, and HISTORY 165B, 19th-Century America. The third course may be chosen from one of the following: AMSTUD 179, Introduction to American Law; AMSTUD 151, The Transformation of American Thought and Culture, 1865 to the Present; ECON 116, American Economic History; HISTORY 165C, The United States in the 20th Century; HISTORY 172A, The United States since 1945; POLISCI 2, American National Government and Politics.
2. *Literature, Art, and Culture*—Majors must take three gateway courses that, together, cover the broad range of the American experience. Specific requirements are:
  - a. at least one course focusing on the period before the Civil War, normally AMSTUD 150, American Literature and Culture to 1855.
  - b. two additional courses, including at least one from Art or Drama. Choices include but are not limited to: AMSTUD 138C, *Huckleberry Finn* and American Culture; AMSTUD 152, American Spaces: An Introduction to Material Culture and the Built Environment; ARTHIST 132, American Art and Culture, 1528-1860; ARTHIST 133, American Art and Culture in the Gilded Age; ARTHIST 151, Transatlantic Modernism: Paris and New York in the Early 20th Century; ARTHIST 178, Ethnicity and Dissent in United States Art and Literature (not given 2004-05); COMPLIT 105, Literature and the Americas (not given 2004-05); DRAMA 163, Performance and America (not given 2004-05); ENGLISH 143, Introduction to Afro-American Literature; ENGLISH 146C, Hemingway, Hurston, Faulkner, and Fitzgerald; ENGLISH 152D, W.E.B. Du Bois and American Culture (not given 2004-05).
3. *Comparative Race and Ethnicity*—All majors are required to take one course in the Program in Comparative Studies of Race and Ethnicity (CSRE) that focuses on comparative studies rather than a single racial or ethnic group (5 units). Courses that satisfy this requirement include: HISTORY 64, Introduction to Race and Ethnicity in the American Experience (not given 2004-05); CASA 88, Theories of Race and Ethnicity; SOC 145, Race and Ethnic Relations; SOC 148, Racial Identity (not given 2004-05); PHIL 177, Philosophical Issues Concerning Race and Racism (not given 2004-05); and COMPLIT 202, Comparative Fictions of Ethnicity. If a CSRE course is appropriate for a student's thematic focus, the course may be used to satisfy both this requirement and, in part, the unit requirement for the focus.
4. *Gateway Seminar*—All majors are required to take AMSTUD 160, Perspectives on American Identity (5 units), which is the Writing in the Major (WIM) course for American Studies. (For majors declaring prior to 2004-05, this course counts as AMSTUD 200.)
5. *Thematic Concentration and Capstone Seminar*—All students must design a thematic concentration of at least 5 courses. The courses, taken together, must give the student in-depth knowledge and understanding of a coherent topic in American cultures, history, and institutions. With the help of faculty advisers, students are required to design their own thematic concentrations, preferably by the end of registration period, Autumn quarter of the junior year. A list of sample thematic concentrations and of courses that allow a student to explore them are available in the American Studies Office in Building 250.

At least one of these courses must be a capstone seminar or other group discussion course in the thematic concentration that requires a research paper. The American Studies Program office has a list of courses that satisfy the seminar requirement, but students are encouraged to propose others that fit better with their concentration area. An independent study course with a faculty member culminating in a research paper or an honors project may also fulfill this requirement, with the Director's approval

## MINORS

To earn a minor in American Studies, students must complete at least 33 units of course work in the program. Because students may not count courses for both a major and a minor, the specific courses that are used for an American Studies minor depend on the courses that are used to satisfy the major requirement.

A student must take the following:

1. at least 2 courses from category 1 (History and Institutions)
2. at least 2 courses from category 2 (Literature, Art, and Culture)
3. at least 1 course from category 3 (CSRE)
4. AMSTUD 160

All courses that are used to satisfy these requirements must be taken for a letter grade.

## HONORS PROGRAM

To graduate with honors, American Studies majors must complete a senior thesis and have an overall grade point average of 3.5 in the major, or demonstrated academic competence. Students must apply to enter the honors program no later than the end of registration period in the Autumn Quarter of their senior year, and must enroll in 10-15 units of AMSTUD 250, Senior Research, during the senior year. These units are in addition to the units required for the major. The application to enter the program must contain a one-page statement of the topic of the senior thesis, and must be signed by at least one faculty member who agrees to be the student's honors adviser. (Students may have two honors advisers.) The thesis must be submitted for evaluation and possible revision to the adviser no later than four weeks before graduation.

Students are encouraged to choose an honors topic and adviser during the junior year. To assist students in this task, American Studies offers a pre-honors seminar in which students learn research skills, develop honors topics, and complete honors proposals. Students also may enroll in the American Studies Honors College during September before the senior year. American Studies also provides students the opportunity to work as paid research assistants for faculty members during the summer between their junior and senior year, which includes participation in a research seminar. More information about American Studies honors is available from the program office.

## COURSES

See departmental listings for complete descriptions and University General Education Requirements (GER) notations. Some courses may require prerequisites that do not apply toward the major. See the *Time Schedule* and Axxess each quarter for changes in listings. An up-to-date list is also available in the program office.

### AMERICAN STUDIES

**AMSTUD 68N. Mark Twain and American Culture**—(Same as ENGLISH 68N.) Stanford Introductory Seminar. Preference to freshmen. Mark Twain defined the rhythms of American prose, the contours of its moral map, and its promise, failures, foibles, and flaws. Focus is on how his work provides a window on his time and speaks to the present. Sources include his travel books, journalism, short stories, and novels. GER:3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,3aa,3ab,3ac,3ad,3ae,3af,3ag,3ah,3ai,3aj,3ak,3al,3am,3an,3ao,3ap,3aq,3ar,3as,3at,3au,3av,3aw,3ax,3ay,3az,3ba,3bb,3bc,3bd,3be,3bf,3bg,3bh,3bi,3bj,3bk,3bl,3bm,3bn,3bo,3bp,3bq,3br,3bs,3bt,3bu,3bv,3bw,3bx,3by,3bz,3ca,3cb,3cc,3cd,3ce,3cf,3cg,3ch,3ci,3cj,3ck,3cl,3cm,3cn,3co,3cp,3cq,3cr,3cs,3ct,3cu,3cv,3cw,3cx,3cy,3cz,3da,3db,3dc,3dd,3de,3df,3dg,3dh,3di,3dj,3dk,3dl,3dm,3dn,3do,3dp,3dq,3dr,3ds,3dt,3du,3dv,3dw,3dx,3dy,3dz,3ea,3eb,3ec,3ed,3ee,3ef,3eg,3eh,3ei,3ej,3ek,3el,3em,3en,3eo,3ep,3eq,3er,3es,3et,3eu,3ev,3ew,3ex,3ey,3ez,3fa,3fb,3fc,3fd,3fe,3ff,3fg,3fh,3fi,3fj,3fk,3fl,3fm,3fn,3fo,3fp,3fq,3fr,3fs,3ft,3fu,3fv,3fw,3fx,3fy,3fz,3ga,3gb,3gc,3gd,3ge,3gf,3gg,3gh,3gi,3gj,3gk,3gl,3gm,3gn,3go,3gp,3gq,3gr,3gs,3gt,3gu,3gv,3gw,3gx,3gy,3gz,3ha,3hb,3hc,3hd,3he,3hf,3hg,3hi,3hj,3hk,3hl,3hm,3hn,3ho,3hp,3hq,3hr,3hs,3ht,3hu,3hv,3hw,3hx,3hy,3hz,3ia,3ib,3ic,3id,3ie,3if,3ig,3ih,3ii,3ij,3ik,3il,3im,3in,3io,3ip,3iq,3ir,3is,3it,3iu,3iv,3iw,3ix,3iy,3iz,3ja,3jb,3jc,3jd,3je,3jf,3jg,3jh,3ji,3jj,3jk,3jl,3jm,3jn,3jo,3jp,3jq,3jr,3js,3jt,3ju,3jv,3jw,3jx,3jy,3jz,3ka,3kb,3kc,3kd,3ke,3kf,3kg,3kh,3ki,3kj,3kk,3kl,3km,3kn,3ko,3kp,3kq,3kr,3ks,3kt,3ku,3kv,3kw,3kx,3ky,3kz,3la,3lb,3lc,3ld,3le,3lf,3lg,3lh,3li,3lj,3lk,3ll,3lm,3ln,3lo,3lp,3lq,3lr,3ls,3lt,3lu,3lv,3lw,3lx,3ly,3lz,3ma,3mb,3mc,3md,3me,3mf,3mg,3mh,3mi,3mj,3mk,3ml,3mm,3mn,3mo,3mp,3mq,3mr,3ms,3mt,3mu,3mv,3mw,3mx,3my,3mz,3na,3nb,3nc,3nd,3ne,3nf,3ng,3nh,3ni,3nj,3nk,3nl,3nm,3nn,3no,3np,3nq,3nr,3ns,3nt,3nu,3nv,3nw,3nx,3ny,3nz,3oa,3ob,3oc,3od,3oe,3of,3og,3oh,3oi,3oj,3ok,3ol,3om,3on,3oo,3op,3oq,3or,3os,3ot,3ou,3ov,3ow,3ox,3oy,3oz,3pa,3pb,3pc,3pd,3pe,3pf,3pg,3ph,3pi,3pj,3pk,3pl,3pm,3pn,3po,3pp,3pq,3pr,3ps,3pt,3pu,3pv,3pw,3px,3py,3pz,3qa,3qb,3qc,3qd,3qe,3qf,3qg,3qh,3qi,3qj,3qk,3ql,3qm,3qn,3qo,3qp,3qq,3qr,3qs,3qt,3qu,3qv,3qw,3qx,3qy,3qz,3ra,3rb,3rc,3rd,3re,3rf,3rg,3rh,3ri,3rj,3rk,3rl,3rm,3rn,3ro,3rp,3rq,3rr,3rs,3rt,3ru,3rv,3rw,3rx,3ry,3rz,3sa,3sb,3sc,3sd,3se,3sf,3sg,3sh,3si,3sj,3sk,3sl,3sm,3sn,3so,3sp,3sq,3sr,3ss,3st,3su,3sv,3sw,3sx,3sy,3sz,3ta,3tb,3tc,3td,3te,3tf,3tg,3th,3ti,3tj,3tk,3tl,3tm,3tn,3to,3tp,3tq,3tr,3ts,3tt,3tu,3tv,3tw,3tx,3ty,3tz,3ua,3ub,3uc,3ud,3ue,3uf,3ug,3uh,3ui,3uj,3uk,3ul,3um,3un,3uo,3up,3uq,3ur,3us,3ut,3uu,3uv,3uw,3ux,3uy,3uz,3va,3vb,3vc,3vd,3ve,3vf,3vg,3vh,3vi,3vj,3vk,3vl,3vm,3vn,3vo,3vp,3vq,3vr,3vs,3vt,3vu,3vv,3vw,3vx,3vy,3vz,3wa,3wb,3wc,3wd,3we,3wf,3wg,3wh,3wi,3wj,3wk,3wl,3wm,3wn,3wo,3wp,3wq,3wr,3ws,3wt,3wu,3wv,3ww,3wx,3wy,3wz,3xa,3xb,3xc,3xd,3xe,3xf,3xg,3xh,3xi,3xj,3xk,3xl,3xm,3xn,3xo,3xp,3xq,3xr,3xs,3xt,3xu,3xv,3xw,3xx,3xy,3xz,3ya,3yb,3yc,3yd,3ye,3yf,3yg,3yh,3yi,3yj,3yk,3yl,3ym,3yn,3yo,3yp,3yq,3yr,3ys,3yt,3yu,3yv,3yw,3yx,3yy,3yz,3za,3zb,3zc,3zd,3ze,3zf,3zg,3zh,3zi,3zj,3zk,3zl,3zm,3zn,3zo,3zp,3zq,3zr,3zs,3zt,3zu,3zv,3zw,3zx,3zy,3zz,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4m,4n,4o,4p,4q,4r,4s,4t,4u,4v,4w,4x,4y,4z,5a,5b,5c,5d,5e,5f,5g,5h,5i,5j,5k,5l,5m,5n,5o,5p,5q,5r,5s,5t,5u,5v,5w,5x,5y,5z,6a,6b,6c,6d,6e,6f,6g,6h,6i,6j,6k,6l,6m,6n,6o,6p,6q,6r,6s,6t,6u,6v,6w,6x,6y,6z,7a,7b,7c,7d,7e,7f,7g,7h,7i,7j,7k,7l,7m,7n,7o,7p,7q,7r,7s,7t,7u,7v,7w,7x,7y,7z,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z,9a,9b,9c,9d,9e,9f,9g,9h,9i,9j,9k,9l,9m,9n,9o,9p,9q,9r,9s,9t,9u,9v,9w,9x,9y,9z,0a,0b,0c,0d,0e,0f,0g,0h,0i,0j,0k,0l,0m,0n,0o,0p,0q,0r,0s,0t,0u,0v,0w,0x,0y,0z,1a,1b,1c,1d,1e,1f,1g,1h,1i,1j,1k,1l,1m,1n,1o,1p,1q,1r,1s,1t,1u,1v,1w,1x,1y,1z,2a,2b,2c,2d,2e,2f,2g,2h,2i,2j,2k,2l,2m,2n,2o,2p,2q,2r,2s,2t,2u,2v,2w,2x,2y,2z,3a,3b,3c,3d,3e,3f,3g,3h,3i,3j,3k,3l,3m,3n,3o,3p,3q,3r,3s,3t,3u,3v,3w,3x,3y,3z,4a,4b,4c,4d,4e,4f,4g,4h,4i,4j,4k,4l,4

traditions in American literature, the history of racism in American society, and the role of African American voices in shaping the text. GER:3a

5 units, Win (*Fishkin*)

**AMSTUD 150. American Literature and Culture to 1855**—(Same as ENGLISH 123.) Major issues in early American cultural and literary history; developments in the fine and domestic arts; and methodological issues central to American Studies. Texts include Cotton Mather and Melville. GER:3a

5 units, Win (*Fliegelman*)

**AMSTUD 151. The Transformation of American Thought and Culture, 1865 to the Present**—Persistent strains and tensions in American intellectual life and culture over the past 125 years. Readings include autobiographies, novels, documentary works, and historical and theoretical analyses that bear on issues of technology and culture, consumerism, mass society, gender, sexuality, violence, political extremism, and power. GER:3a,4b

5 units, Win (*Gillam*)

**AMSTUD 152. American Spaces: An Introduction to Material Culture and the Built Environment**—(Same as HISTORY 152.) American history through the evidence of things, including spaces, buildings, and landscapes of the built environment. How to read such artifacts using methods and theories from anthropology, cultural geography, history, and other disciplines. GER:3a

5 units, Spr (*Corn*)

**AMSTUD 160. Perspectives on American Identity**—(Same as HISTORY 260A; formerly 200.) Required for American Studies major. Changing interpretations of American identity and Americanness. GER:3a,4b, WIM

5 units, Spr (*Corn*)

**AMSTUD 179. Introduction to American Law**—(Same as POLISCI 122, LAW 106.) For undergraduates. The structure of the American legal system including the courts; American legal culture; the legal profession and its social role; the scope and reach of the legal system; the background and impact of legal regulation; criminal justice, civil rights and civil liberties; and the relationship between the American legal system and American society in general. GER:3b

3-5 units, Aut (*Friedman*)

**AMSTUD 185. American Studies Internship**—Restricted to declared majors. Practical experience working in a field related to American Studies for six to ten weeks. Students make internship arrangements with a company or agency and receive the consent of the director or a program coordinator of American Studies. Credit is awarded for submitting a paper after completing the internship focused on a topic related to the internship and the student's studies.

1-3 units, Aut, Win, Spr, Sum (*Staff*)

**AMSTUD 195. Directed Research**

1-5 units, Aut, Win, Spr (*Staff*)

**AMSTUD 199. Directed Reading**

2-5 units, Aut, Win, Spr (*Staff*)

**AMSTUD 210. Research Seminar in American Studies**—(Same as ENGLISH 195A.) For juniors and seniors who wish to pursue a specific paper topic or research question. Year-long sequence. Students attend the American Cultures Graduate Research Workshop at the Stanford Humanities Center, meet individually with the professor in a tutorial setting to discuss the workshop and their own projects, and present a chapter of a senior thesis, a thesis prospectus, or a research paper. Limited enrollment.

2 units, Aut, Win, Spr (*G. Jones*)

**AMSTUD 221. Public and Professional Service: Theories and Ethical Practice of Public and Community Service**—Values, traditions, policies, and politics of community service as practiced by professionals. Through weekly seminars integrated with concurrent community service

work, students consider perspectives on topics including social responsibility, versus obligation, charity, and justice, public leadership, and organization of communities and their development.

3 units, Win (*Stanton*)

**AMSTUD 240. Pre-Honors Seminar**—Methods, interpretations, and issues pertinent to honors work in American Studies. Open to juniors interested in honors.

2-5 units, Spr (*Gillam*)

**AMSTUD 250. Senior Research**—Research and writing of senior honors thesis under the supervision of a faculty member. The final grade for the thesis is assigned by the chair based on the evaluations of the primary thesis adviser and a second reader appointed by the program. Prerequisite: consent of chair.

1-15 units, Aut, Win, Spr, Sum (*S. Fishkin*)

## INTERDEPARTMENTAL OFFERINGS

### AFRICAN AND AFRICAN AMERICAN STUDIES

**AFRICAAM 105. Introduction to African and African American Studies**

5 units, Win (*Carson*)

### ART HISTORY

**ARTHIST 132/332. American Art and Culture, 1528-1860**

4 units, Spr (*Wolf*)

**ARTHIST 133/333. American Art and Culture in the Gilded Age**

4 units, Aut (*Corn*)

**ARTHIST 151/351. Transatlantic Modernism: Paris and New York in the Early 20th Century**

4 units, Win (*Corn*)

**ARTHIST 161/361. Cinematic Spectacle**

4 units, Win (*Bukatman*)

**ARTHIST 167/367. Hollywood Musicals, 1927-1944**

4 units, Spr (*Bukatman*)

**ARTHIST 178/378. Ethnicity and Dissent in United States Art and Literature**

4 units (*Wolf*) not given 2004-05

**ARTHIST 251. Frank Lloyd Wright**

5 units, Spr (*Turner*)

### COMMUNICATION

**COMM 1/211. Media Technologies, People, and Society**

4-5 units, Aut (*Nass*)

**COMM 120. Digital Media in Society**

4-5 units, Spr (*Turner*)

**COMM 125/225. Perspectives on American Journalism**

4-5 units, Aut (*Glasser*)

**COMM 131/231. Media Ethics and Responsibilities**

4-5 units, Spr (*Glasser*)

**COMM 136/236. Democracy and the Communication of Consent**

4-5 units, Aut (*J. Fishkin*)

**COMM 160/260. The Press and the Political Process**

4-5 units, Aut (*Iyengar*)

**COMM 244. Democracy, the Press, and Public Opinion**

1-4 units, Spr (*J. Fishkin*)

### COMPARATIVE LITERATURE

**COMPLIT 168. Introduction to Asian American Culture**

3-5 units, Win (*Palumbo-Liu*)

**COMPLIT 202. Comparative Fictions of Ethnicity**

5 units, Win (*Palumbo-Liu*)

**CULTURAL AND SOCIAL ANTHROPOLOGY**

**CASA 16. Native Americans in the 21st Century: Encounters, Identity, and Sovereignty in Contemporary America**

5 units (*Wilcox*) not given 2004-05

**CASA 88. Theories in Race and Ethnicity**

5 units, *Win* (*Yanagisako*)

**CASA 132. Science, Technology, and Gender**

3-5 units (*Jain*) not given 2004-05

**CASA 144/244. Sex, Blood, Kinship, and Nation**

5 units (*Delaney*) not given 2004-05

**CASA 183D. Border Crossings and American Identities**

5 units, *Aut* (*Duffey*)

**DRAMA**

**DRAMA 110. Cartographies of Race: The Institute for Diversity in the Arts at Stanford**

5 units, *Win* (*Elam*)

**DRAMA 163/263. Performance and America**

5 units (*Elam*) not given 2004-05

**DRAMA 180Q. Noam Chomsky: The Drama of Resistance**

3 units, *Aut* (*Rehm*)

**EARTH SYSTEMS**

**EARTHSYS 112. Environmental Economics and Policy**

5 units, *Spr* (*Goulder*)

**ECONOMICS**

**ECON 116. American Economic History**

5 units, *Spr* (*Wright*)

**EDUCATION**

**EDUC 102. Culture, Class and Educational Opportunity**

4 units, *Spr* (*Staff*)

**ENGLISH**

**ENGLISH 21/121. Masterpieces of American Literature**

3-5 units, *Spr* (*Jones*)

**ENGLISH 43/143. Introduction to Afro-American Literature**

3-5 units, *Spr* (*Birnbaum*)

**ENGLISH 138. Melville**

5 units, *Win* (*Fliegelman*)

**ENGLISH 139A. Henry James and Edith Wharton**

5 units, *Spr* (*Ngai*)

**ENGLISH 139B. American Women Writers, 1850-1915**

5 units, *Spr* (*Richardson*)

**ENGLISH 139E. Irish American Literature**

5 units, *Aut* (*Jockers*)

**ENGLISH 142F. Film Noir with Literary and Cultural Backgrounds**

5 units, *Win* (*Fields*)

**ENGLISH 142G. Contemporary American Fiction**

5 units, *Aut* (*Heise*)

**ENGLISH 146C. Hemingway, Hurston, Faulkner, and Fitzgerald**

5 units, *Aut* (*G. Jones*)

**ENGLISH 152G. Harlem and Chicago Renaissances**

5 units, *Spr* (*Birnbaum*)

**ENGLISH 172A. Introduction to Chicana/o Literature and Culture—**  
(Same as HISTORY 162.)

5 units, *Aut* (*Camarillo, Moya*)

**ENGLISH 173. American Comedy and Satire: Topics in Laughter and Ethics**

5 units, *Win* (*Obenzinger*)

**ENGLISH 260G. Century's End: Race, Gender and Ethnicity at the Turn of the Century**

5 units, *Win* (*Fishkin*)

**HISTORY**

**HISTORY 33A/333A. The Rise of Scientific Medicine**

4-5 units, *Spr* (*Lenoir*)

**HISTORY 53N. Reflections on the American Condition: American History through Literature**

4 units, *Aut* (*Kennedy*)

**HISTORY 28S. The End of the American Frontier**

5 units, *Spr* (*Venit*)

**HISTORY 56S. Advertising and Consumer Culture in the United States**

5 units, *Aut* (*Corn*)

**HISTORY 59. Introduction to Asian American History**

5 units, *Aut* (*Chang*)

**HISTORY 165A. Colonial and Revolutionary America**

5 units, *Aut* (*Rakove*)

**HISTORY 165B. 19th-Century America**

5 units, *Win* (*White*)

**HISTORY 165C. The United States in the Twentieth Century**

5 units, *Spr* (*Kennedy*)

**HISTORY 172A. The United States Since 1945**

4-5 units, *Win* (*Bernstein*)

**HISTORY 250X. Introduction to African American History**

5 units, *Win* (*Carson*)

**HISTORY 251A,B. Poverty and Homelessness in America**

5 units, *A:Win, B:Spr* (*Camarillo*)

**HISTORY 252/352. Decision Making in International Crises: The A-Bomb, the Korean War, and the Cuban Missile Crisis**

5 units, *Aut* (*Bernstein*)

**HISTORY 253. California Dreaming**

5 units, *Spr* (*Farmer*)

**HISTORY 254A. The Civil War**

5 units, *Spr* (*Hilde*)

**HISTORY 256A. California History**

5 units, *Win* (*Camarillo*)

**HISTORY 262S/462. Science and High Technology in the Silicon Valley, 1930-1980**

4-5 units, *Win* (*Lenoir*)

**HISTORY 265/365. New Research in Asian American History**

5 units, *Spr* (*Chang*)

**HISTORY 267A/367A. The Politics and Ethics of Modern Science and Technology**

5 units, *Spr* (*Bernstein*)

**HISTORY 268A. Popular Culture and American Nature**

5 units, *Spr* (*White*)

**HISTORY 270A. Cities in the North American West, 1840-1940**

4-5 units (*O'Mara*) not given 2004-05

**HISTORY 271A/371A. The Suburban West**

5 units (*O'Mara*) not given 2004-05



**HISTORY 272/372. Creating the American Republic**—(Same as POLISCI 321.)

5 units (*Rakove*) not given 2004-05

**HISTORY 274D/375D. An American Place: The Lower Mississippi Valley since 1500**

5 units, *Win (C. Morris)*

## **HUMAN BIOLOGY**

**HUMBIO 102B. Children, Youth, and the Law**

5 units (*Abrams*) not given 2004-05

**HUMBIO 166. Special Projects: The Death Penalty: Human Biology, Law, and Policy**

3 units, *Aut, Win, Spr (Abrams)*

## **LINGUISTICS**

**LINGUIST 146. Language and Gender**

4 units (*Eckert*) not given 2004-05

**LINGUIST 153. Ebonics and Other Vernaculars in Schools and Society**

4 units (*Staff*) not given 2004-05

## **MEDICINE INTERDISCIPLINARY**

**INDE 272. Policy Making and Problem Solving at Local and Regional Level: Community and Economic Development**

5 units, *Spr (Stanton)*

## **MUSIC**

**MUSIC 8A. Rock, Sex, and Rebellion**

3 units, *Spr (Applebaum)*

**MUSIC 18A. Jazz History: Ragtime to Bebop, 1900-1940**

3 units, *Win (Berry)*

**MUSIC 18B. Jazz History: Bebop to Present, 1940-Present**

3 units, *Spr (Berry)*

**MUSIC 33N. Silence! The Music of John Cage**

4 units, *Win (Applebaum)*

**MUSIC 35N. A Good Dissonance Like a Man: The Music and Ideas of Charles Ives**

4 units, *Spr (Barth)*

## **PHILOSOPHY**

**PHIL 177. Philosophical Issues Concerning Race and Racism**—(Same as POLISCI 136.)

4 units (*Satz*) not given 2004-05

## **POLITICAL SCIENCE**

**POLISCI 2. Introduction to American National Government and Politics**

5 units, *Win (Ferejohn, Fiorina)*

**POLISCI 120A. American Political Sociology and Public Opinion: Who We Are and What We Believe**

5 units (*Fiorina, Sniderman*) not given 2004-05

**POLISCI 120B. Parties, Interest Groups, the Media, and Elections**

5 units, *Aut (Sprague)*

**POLISCI 120C. American Political Institutions: Congress, the Executive Branch, and the Courts**

5 units, *Win (Rutten)*

**POLISCI 121. Urban Politics**

5 units, *Win (Fraga)*

**POLISCI 123. Politics and Public Policy**—(Same as PUBLPOL 101.)

5 units, *Spr (Brady)*

**POLISCI 124R. Judicial Politics and Constitutional Law: The Federal System**

5 units, *Aut (Rutten)*

**POLISCI 124S. Judicial Politics and Constitutional Law: Civil Liberties**

5 units, *Win (Rutten)*

**POLISCI 124T. Legislatures, Courts, and Public Policy**

5 units, *Spr (Rutten)*

**POLISCI 126. Issues of Race and Minority Representation in American Politics**

5 units, *Win (Wong)*

**POLISCI 133. Ethics and Politics in Public Service**

5 units (*Reich*) not given 2004-05

**POLISCI 151A. Doing Political Science**

5 units (*Fiorina, Jackman*) not given 2004-05

## **PUBLIC POLICY**

**PUBLPOL 182A. Policy Making and Problem Solving at Local and Regional Level: Contested Issues in Silicon Valley**

3 units, *Win (Stanton)*

**PUBLPOL 182B. Policy Making and Problem Solving at Local and Regional Level: Community and Economic Development**

5 units, *Spr (Stanton)*

**PUBLPOL 190. Social Innovation and the Social Entrepreneur**

1 unit, *Aut (Staff)*

**PUBLPOL 191. Business Concepts and Skills for the Social Sector**

3 units, *Win (Staff)*

**PUBLPOL 192. Social Innovation and the Social Entrepreneur**

4 units, *Aut (Edwards)*

**PUBLPOL 194. Technology Policy**

5 units, *Win (Windham)*

**PUBLPOL 195. Business and Public Policy**

5 units, *Win (Hauk)*

## **RELIGIOUS STUDIES**

**RELIGST 53. Jews and Judaism in America**

4 units (*Eisen*) not given 2004-05

## **SCIENCE, TECHNOLOGY, AND SOCIETY**

**STS 101/201. Science, Technology, and Contemporary Society**

4-5 units, *Aut (McGinn)*

## **SOCIOLOGY**

**SOC 145/245. Race and Ethnic Relations**

5 units (*Olzak*) not given 2004-05

**SOC 148/248. Racial Identity**

5 units (*McDermott*) not given 2004-05

**SOC 141A/241A. Social Class, Race/Ethnicity, Health**

4 units, *Win (Barr)*

**SOC 149/249. The Urban Underclass**

5 units (*Rosenfeld*) not given 2004-05

# ANTHROPOLOGICAL SCIENCES

*Emeriti: (Professors)* Clifford R. Barnett, Harumi Befu, Charles O. Frake, James L. Gibbs, Jr., Benjamin D. Paul, George D. Spindler, Robert B. Textor

*Chair:* William H. Durham

*Professors:* William H. Durham, Richard G. Klein, Arthur P. Wolf

*Associate Professors:* James A. Fox, John W. Rick

*Assistant Professors:* Ronald L. Barrett, Rebecca Bliege Bird, Melissa J. Brown, David DeGusta, James H. Jones, Joanna L. Mountain, Ian G. Robertson

*Lecturers:* Katharine S. Barrett, Libra R. Hilde, Merritt Ruhlen, James Truncer

*Consulting Professors:* Nina G. Jablonski, William L. Rathje, Armin Rosencranz

*Consulting Associate Professor:* Dominique Irvine

*Affiliated Faculty:* William Barnett, Carol Boggs, L. Luca Cavalli-Sforza, John Dolph, Marcus W. Feldman, John A. Gosling, Barbara Koenig, Ellen Porzig, Robert Sapolsky

*Mail Code:* 94305-2117

*Phone:* (650) 736-2674

*Web Site:* <http://www.stanford.edu/dept/anthsci>

Courses given in Anthropological Sciences have the subject code ANTHSCI. For a complete list of subject codes, see Appendix.

The Department of Anthropological Sciences (ANSI) takes as its subject matter the nature and evolution of our species. The department offers students training in archaeology, cultural anthropology, demography, ecology, environmental anthropology, evolutionary theory, genetics, linguistic anthropology, medical anthropology, paleoanthropology, and primatology. Specialties and interests of individual faculty members include ethnomedicine, infectious diseases, human mortality, demography, ethics, ethnic identity, gender, genetic and cultural evolution, historical linguistics and linguistic anthropology, human environments and adaptations, human origins, hunters and gatherers, resource management, community-based conservation, materialism, molecular anthropology, social and psychological anthropology, and tools and technology. The department is united by a common interest in the interrelations of biology, culture, and environment, and by a commitment to a scientific approach to anthropology.

The departmental curriculum includes courses at three levels. These courses are designed to: (1) expose undergraduates to the theories, methods, and substance of the anthropological sciences; (2) provide undergraduate majors and minors with a program of work leading to the bachelor's degree; and (3) prepare candidates for advanced degrees in the discipline. Students are also encouraged to pursue ethnographic area studies building on existing faculty research in Asia, Latin America, and North America.

The department offers an undergraduate Bachelor of Arts degree. Undergraduates may elect to specialize in any one of four concentration tracks: (1) Culture, Social Relations, and Language; (2) Archaeology and Evolutionary Studies; (3) Population and Environment; and (4) Medical Anthropology and Genetics. Within each of these concentration tracks, students work with their faculty adviser to design a course of study that includes at least one course from each of five areas of a "Human Evolution Framework" (described in detail below): human nature and variation; human history and prehistory; human evolutionary processes and their interactions; cultural systems and cultural transmission; and laboratory and field methods. The framework is designed to ensure that students of all specializations receive a solid grounding in evolutionary thinking and analysis.

The department offers three graduate degrees: Master of Science, Master of Arts, and the Doctor of Philosophy. The graduate curriculum encourages students to pursue both breadth across the anthropological sciences and individual interests and projects under the supervision of a faculty committee. The backbone of the graduate program is a department-wide Core Seminar devoted to ongoing discussion of issues and approaches in the anthropological sciences. An active Teaching Assis-

tant Training Program, focused on students in the second year of the Ph.D. program, is an integral part of graduate training. The graduate program offers students a wide range of opportunities for training in theoretical and practical skills including model building, ethnographic methods, archaeological and osteological techniques, data analysis, computer imaging, laboratory methods in genetics, and a variety of field training options. At both the undergraduate and graduate levels, the curriculum emphasizes the use of scientific methodology.

The department also offers a variety of hands-on research and training opportunities, including research assistantships, internships on- and off-campus, an active undergraduate honors program, and a series of field seminars with scholarships in the Amazon, the Andes, the American Southwest, Middle America, and the Galapagos. Undergraduate and graduate students are encouraged to work with various members of the faculty at their field sites each summer. The department maintains teaching and research collections in the Iris and B. Gerald Cantor Center for Visual Arts at Stanford University, featuring materials from the Americas, the Pacific Rim, and Africa. Under the Pritzker Summer Scholars Program and the Franz Boas Summer Scholar Program, the department also awards a number of summer grants each year to undergraduates who are planning specialized study in Anthropological Sciences. The grants are of three kinds: (1) independent research grants, to facilitate summer research projects leading to honors in Anthropological Sciences (application in Winter Quarter); (2) mentored research grants, to enable students to gain research experience by working on faculty research projects (application in Spring Quarter); and (3) training grants, to help with costs of summer field schools and training programs (application in Spring Quarter). The department also selects undergraduate recipients for Stanford's annual "Beagle II Awards," which provide generous funds for a summer expedition of scientific discovery anywhere in the world (application in Winter Quarter). In addition, students have the opportunity to participate in ongoing historical archaeology conducted on campus.

## UNDERGRADUATE PROGRAMS

The Department of Anthropological Sciences offers a Bachelor of Arts degree together with an honors program and a minor. These programs include active undergraduate advising (described below).

### BACHELOR OF ARTS

The B.A. degree program in Anthropological Sciences gives students an understanding of the breadth and depth of anthropological knowledge, as well as a series of intellectual and practical tools. Majors choose from one of four concentration tracks: Culture, Social Relations, and Language; Archaeology and Evolutionary Studies; Population and Environment; and Medical Anthropology and Genetics. The B.A. in Anthropological Sciences provides solid preparation for careers in anthropology, business, economic development, education, environmental conservation, foreign service, health professions, international relations, law, or public policy.

With the addition of courses from the natural, physical, and mathematical sciences, the B.A. degree also provides preparation for further study in a broad variety of scientific areas, including earth sciences, ecology and evolutionary biology, environmental sciences, human genetics, medicine, and psychology.

### REQUIREMENTS

The department offers considerable flexibility in structuring an Anthropological Sciences major. In consultation with a faculty adviser, students develop a program that reflects their individual interests and needs. Majors in anthropological sciences meet with their advisers at least once every quarter. Each student's progress toward fulfilling the major requirements is recorded in a departmental file. It is the student's responsibility to see that this file is kept up to date.

All B.A. majors in the Department of Anthropological Sciences (ANSI) must fulfill the following requirements:

1. Complete course work equivalent to 65 units, with at least 45 units in Anthropological Sciences. The remaining 20 units may be taken in any of the related humanities, social science, and science departments and programs. Outside courses must form a coherent program of study

- and must be approved by the student's adviser. Up to 10 of the 65 units may be in Directed Individual Study.
2. Complete ANTHSCI 2A and 2B (HUMBIO 2A and 2B), or three other introductory courses, numbered 3-19, listed below, each in a different Concentration Track. Students may substitute one introductory area course, numbered 20-39, for one of these three.
  3. Complete the theory course ANTHSCI 190, Social Theory in the Anthropological Sciences, with a letter grade of 'B' or better. This course fulfills the University's Writing in the Major Requirement (WIM) and should be taken no later than the junior year.
  4. Declare a concentration track and complete at least 25 units in that track. One introductory area course, numbered 20-39, may be included in the concentration track, as long as it is not used as an introductory course (see 2).
  5. Complete at least one course from each of the five Human Evolution Framework (HEF) areas below. Note that some courses satisfy multiple areas of the HEF.
  6. Complete at least one foreign language course at the second-year level with a letter grade of 'B' or better. This requirement may also be met by special examination, presentation of superior foreign language placement scores, or certification in writing from an appropriate department.
  7. Complete at least one course in statistics (ANTHSCI 192, BIOSCI 141, STATS 60, PSYCH 60, or equivalent).

### CONCENTRATION TRACKS

Concentration tracks are designed to encourage students to acquire in-depth knowledge and training. Undergraduates in the major program may elect to specialize in one of the four tracks described below. Alternatively, students may design their own specialization(s) with the guidance of a faculty adviser. Each student is required to complete 25 units within the chosen track. With consent of their faculty adviser, students may replace one course with a relevant course offered by another department. The 25 units count towards the total of 65 units required for the major.

*Culture, Social Relations, and Language* (Track 1)—Emphasizes the unity and diversity of contemporary social, cultural, and linguistic systems. Course offerings include culture and social theory, family, gender, kinship, linguistic anthropology, and political economy. Ethnographic or linguistic area studies are strongly encouraged for students who choose this track.

*Archaeology and Evolutionary Studies* (Track 2)—Features primate evolution, human origins and prehistory, and the development of human societies from early hunter-gatherers through complex civilizations. Students choose from courses in anthropological genetics, archaeology, evolutionary theory, historical linguistics, paleoanthropology, and primatology.

*Population and Environment* (Track 3)—Explores mutual relationships between human populations and their environments. Biocultural adaptations of human societies to diverse environments are examined, as are the causes and consequences of human impact upon local and global environments. Students choose from courses in behavioral ecology, demography, ecological and environmental anthropology, and selected area studies.

*Medical Anthropology and Genetics* (Track 4)—Examines human biological and cultural variation from a variety of perspectives. Within medical anthropology, the focus is on the social, cultural, and genetic correlates of physical and mental health, as well as disease. In anthropological genetics, students explore the extent, origins, and impact of variation among human genomes. Students choose from courses in epidemiology, genetics, and medical anthropology.

### HUMAN EVOLUTION FRAMEWORK (HEF)

Crossing-cutting these concentration tracks is an evolutionary framework designed to familiarize students with the tools of analysis in anthropological sciences. The department divides this framework into five essential components (HEF I-V) as outlined below. Regardless of the concentration track, students are required to take at least one course in

each of these component areas. Many courses offered by the department satisfy one or more of these requirements as shown by the HEF designations under "Courses" below.

#### *Human Nature and Variation: Past and Present* (HEF I):

- Biological nature and variation
- Cultural nature and variation
- Language capability and linguistic variation
- Human universals, human differences

#### *Human History and Prehistory: Inferring Events of the Past* (HEF II):

- Population events: movements, splits, admixture, extinctions
- Environmental events: changes in climate, resources, disease
- Species events: adaptation, speciation, species extinction
- Social and cultural events: changes in technology, settlement, language, and social organization

#### *Evolutionary Processes and their Interactions* (HEF III):

- Molecular evolution, population genetics, and speciation
- Cultural and linguistic evolution, ethnogenesis, social evolution
- Causes and consequences of environmental change
- Interactions of genetic, cultural, and social evolution

#### *Cultural Systems and Cultural Transmission* (HEF IV):

- Systemic properties of culture and language
- Transmission of culture in space and time
- Cultural ontogeny and socialization
- Relationship between individual, society, and culture

#### *Lab and Field Methods: Tools for the Anthropological Sciences* (HEF V):

- Laboratory and field methods
- Ethnographic methods
- Data analysis
- Computational models and methods

### MAJORS

*Declaring a Major*—To declare an Anthropological Sciences major, students should first discuss their ideas and plans with one or more department faculty, and with the peer adviser. When they have a good working plan on paper (forms are available from the student services coordinator) for their course of study, they must then fill out the Declaration of Major form in the Registrar's Office, obtain the signature of their student and faculty advisers, and contact the department's student services coordinator who reviews the degree requirements and give general guidance. It may be helpful for students to meet with the chair of the department's Student Affairs Committee for initial academic advising and assistance in choosing an appropriate adviser in the department. Students must complete the declaration process (including the signature of their Anthropological Sciences adviser) no later than the last day of the quarter, two quarters prior to degree conferral (Autumn Quarter if Spring graduation is planned).

Undergraduates are actively encouraged to take advantage of funding opportunities to carry out independent research. Funding for undergraduate research is available from Undergraduate Research Programs (URP) grants, affiliated area studies programs (for example, Latin American Studies), the Beagle II Awards, and the department's own Pritzker Summer Scholars Program and Franz Boas Summer Scholars Program described above. Information and applications for the latter are available from the student services coordinator in the department office.

*Advising Program*—The department puts high priority on undergraduate advising. Each student works with a peer adviser, as well as a faculty adviser, to design and carry out an Anthropological Sciences major or minor. The advising program is built on a faculty mentoring approach, in order to help students develop a good working relationship with at least one faculty member. Students are expected to meet regularly, and for at least two hours per quarter, with their faculty adviser to discuss their progress and to review course selection, research opportunities, graduate or professional schools, and career planning. The peer adviser is often the first step in seeking advice; the peer adviser keeps regular hours in the peer advising office in the department.



## MINORS

*Declaring a Minor*—The department offers flexibility in structuring an Anthropological Sciences minor. In consultation with both peer and faculty advisers, students develop a minor that reflects their individual interests and needs. Prospective Anthropological Sciences minors should request an Anthropological Sciences Minor Planning Form and Checklist from the department's student services coordinator. All minors in the Department of Anthropological Sciences must fulfill the following four requirements:

1. Selection of an Anthropological Sciences faculty adviser and approval of the minor courses by both peer and faculty advisers.
2. Completion of 30 units of course work in Anthropological Sciences with an average letter grade of 'B-' or better. With the adviser's approval, up to 10 of the required 30 units may be taken in other social science departments at Stanford. No more than 10 of the 30 units may be taken for an instructor-elected satisfactory/no credit grade. Student-elected satisfactory/no credit units are not allowed.
3. Completion of ANTHSCI 2A and 2B (HUMBIO 2A and 2B) or three introductory courses, numbered 3-19, listed below, each in a different Concentration Track. Students may substitute one introductory area course, numbered 20-39, for one of these three.
4. Completion of at least one course at the 100 level or higher. Please note: Human Biology majors who minor in ANTHSCI may use HUMBIO 2A and 2B to fulfill requirement 3, but may not use it towards requirement 2. That is, students are not required to take an additional 3 introductory courses, but they must take 30 units of ANTHSCI coursework other than 2A and 2B.

## HONORS

The honors program in Anthropological Sciences provides students with an opportunity to conduct original research under the guidance of a faculty adviser. Declared Anthropological Sciences majors of sophomore or junior standing may apply for admission to the honors program by submitting an application form (available from the student services coordinator), a transcript, a copy of their planned course of study in the major, a proposal of their honors research project and paper, and a formal letter of recommendation from the professor who will supervise the student's honors project. A minimum average letter grade of 'B+' in Anthropological Sciences course work is required for students to enroll in the honors program. For students planning fieldwork as part of their thesis project, all application materials must be completed and turned in no later than March 1 of the candidate's junior year so that they can take ANTHSCI 193 in Spring Quarter. For students planning lab- or library-based research projects, applications must be submitted by the third week of Spring Quarter in the candidate's junior year. Applications are reviewed by the department's Student Affairs Committee which selects the students who become candidates for honors. Honors projects typically involve field research, but applications for lab or library-based research will be considered.

Throughout honors work, students work closely with their advisers to plan the honors proposal, conduct the research, and write the honors paper. Honors students are strongly encouraged to take ANTHSCI 190 and 192 no later than their junior year and are typically required to take ANTHSCI 193, Prefield Research Seminar, ANTHSCI 194, Post Field Seminar, and ANTHSCI 196, Honors and Master's Writing Workshop, to prepare and write up their research projects. Additionally, an honors candidate may enroll in ANTHSCI 199, Directed Individual Study, for as many as 15 units but may not count more than five of these units toward fulfilling the 65-unit requirement for the major. In Winter Quarter, students present oral reports on the progress of their research to the Honors Workshop (ANTHSCI 196) and receive constructive feedback. The honors paper is to be completed and two copies are to be handed in to the student services coordinator no later than May 1 of the student's senior year. The paper is read and evaluated by the adviser and by one other faculty member. Candidates submitting a paper that is judged to be of honors quality (letter grade of 'A-' or better, from both readers) are awarded honors.

Students interested in the honors program are especially encouraged to apply for summer research funding through the department, through Undergraduate Research Programs (URP), and through various of the area studies centers on campus (e.g., Latin American Studies or African and African American Studies). In most cases, honors students apply for such funding in the Winter and Spring quarters of their junior year.

## COTERMINAL BACHELOR'S AND MASTER'S DEGREES

The Department of Anthropological Sciences accepts applications from Stanford undergraduates to work toward coterminal M.A. or M.S. degrees. Undergraduates may apply during any quarter prior to the one in which they expect to graduate and after completing 120 units. All application materials are due by the third Friday of the quarter. Students planning field work are encouraged to apply by Winter Quarter so that they may take ANTHSCI 193 in Spring Quarter. Students apply by submitting application forms (available from the student services coordinator), a proposal of their master's research project and paper, a plan for their master's course of study, at least one writing sample (preferably a research paper), a University transcript, and a letter of recommendation from the faculty member who will supervise their master's work in the department. The GRE is not required. Requirements for coterminal degrees are described under "Graduate Programs" below.

For University coterminal degree program rules and University application forms, see <http://registrar.stanford.edu/publications/#Coterm>.

## GRADUATE PROGRAMS

University requirements for the degrees of Master of Arts, Master of Science, and Doctor of Philosophy are described in the "Graduate Degrees" section of this bulletin.

The department offers three graduate degrees: Master of Arts, Master of Science, and Doctor of Philosophy. The graduate curriculum encourages students to pursue individual interests and projects under the supervision of a faculty committee. Specific details of the graduate programs in Anthropological Sciences are outlined in the departmental *Graduate Handbooks* (available in the department office).

## MASTER OF ARTS

The Department of Anthropological Sciences offers the M.A. degree to four groups of students: Stanford undergraduates who enroll in the coterminal program; Stanford graduate students taking advanced degrees in other departments or schools at Stanford; Ph.D. students in Anthropological Sciences who fulfill the M.A. requirements in the course of their work toward the Ph.D. degree; and students who apply from outside of Stanford for entry into the terminal M.A. program.

## REQUIREMENTS

1. Graduate enrollment at Stanford for at least three quarters of full tuition.
2. At least 45 units of course work for a letter grade (in addition to any pertinent undergraduate courses), with at least 30 units in Anthropological Sciences. The remaining 15 units may be taken from related humanities, social science, and science departments and programs. Outside courses must be approved by the student's adviser and must form a coherent program of study. No more than 10 of the 45 units may be in Directed Individual Study. Students must maintain an average letter grade of 'B' or better.
3. The three graduate fundamentals courses (ANTHSCI 290A, 290B, and 292), each for a letter grade, plus any two 200-level courses other than special courses. Units earned in these courses count toward the 45-unit M.A. requirement.
4. Enroll in the departmental Core Seminar (ANTHSCI 291) while in residence, for at least 1 unit each quarter.
5. Submit a master's-level field- or library-research paper to be read and approved by at least two department faculty members. For students in the Ph.D. program, the required first-year paper meets this requirement.

## MASTER OF SCIENCE

The Department of Anthropological Sciences offers the M.S. degree to four groups of students: Stanford undergraduate science majors who enroll in the coterminal program; Stanford graduate students taking advanced degrees in other departments or schools at Stanford; Ph.D. students in Anthropological Sciences who fulfill the M.S. requirements in the course of their work toward the Ph.D. degree; and students who apply from outside Stanford for entry into the terminal M.S. program.

### REQUIREMENTS

1. Graduate enrollment at Stanford for at least three quarters of full tuition.
2. At least 45 units of course work for a letter grade (in addition to any pertinent undergraduate courses), with at least 30 units in Anthropological Sciences. The remaining 15 units must be taken from earth or natural science, statistics, computer science, chemistry, engineering, math, or physics. Outside courses must be approved by the student's adviser and must form a coherent program of study. No more than 10 of the 45 units may be in Directed Individual Study. Students must maintain an average letter grade in master's work of 'B' or better.
3. The three graduate fundamentals courses (ANTHSCI 290A, 290B, and 292), each for a letter grade, plus any two 200-level courses other than special courses. Units earned in these courses count toward the 45-unit M.S. requirement.
4. Enroll in the departmental Core Seminar (ANTHSCI 291) while in residence, for at least 1 unit each quarter.
5. Submit a master's-level field- or library-research paper to be read and approved by at least two department faculty members. For students in the Ph.D. program, the required first-year paper meets this requirement.

## DOCTOR OF PHILOSOPHY

Prospective graduate students should request application materials from Graduate Admissions in the Registrar's Office. The deadline for applications is January 5. The Graduate Record Exam (GRE) is required. Successful applicants for the Ph.D. program may enter only in Autumn Quarter.

### REQUIREMENTS

Requirements 1-9 must be completed within the first two years:

1. Within the first two years, complete 67 units of course work for a letter grade of 'B+' or better. Of these 67 units, at least 40 units must come from graduate-level courses within the department. The remaining 27 units may include advanced undergraduate courses as well as courses from related humanities, social science, and science departments and programs. Outside courses must form a coherent program of study and be approved by the student's adviser.
2. Enroll in ANTHSCI 200 during Autumn Quarter of the first year. This course must be taken for a letter grade.
3. Enroll in the departmental Core Seminar (ANTHSCI 291) each quarter while in residence (except for students in the second year of the program who are working as TAs or RAs and thus have a 9-10 unit course limit). Units for ANTHSCI 291 count toward the unit requirements for the Ph.D.
4. Complete 3 fundamentals courses, each for a letter grade: ANTHSCI 290A, Advanced Social Theory in Anthropological Sciences; ANTHSCI 290B, Evolutionary Theory in Anthropological Sciences; and ANTHSCI 292, Data Analysis in the Anthropological Sciences.
5. Complete, for a letter grade, one designated 200-level course from each of the following three distribution areas of anthropological sciences:
  - a. Ethnography/Ecological Anthropology/Linguistics (DA-A)
  - b. Archaeology/Paleoanthropology/Primatology (DA-B)
  - c. Medical Anthropology/Anthropological Genetics/Demography (DA-C)

Courses that fulfill this requirement are shown by the distribution areas (DA) designation in the course listings that follow. Courses that fulfill DA-A must have significant ethnographic content.
6. Submit a substantial research paper of acceptable quality for the Master's degree in the Spring Quarter of the first year. To be consid-

ered acceptable, the paper must receive a grade of 'B+' or better from all three readers designated by the instructor of the spring paper course.

7. Enroll in a methods course in the chosen area of specialization. This course must contain an ethics component and must be taken for a letter grade.
8. Serve as a teaching assistant for the department. In preparation for this responsibility, students are expected to take part in the departmental Teaching Assistant Training Program organized each year. (Students can petition to substitute an internship or research assistantship for one quarter as a TA.)
9. For those whose native language is English, pass an examination in a language other than English that can serve as a field or research language. The language exam is normally given in the third quarter of the second year. For those whose native language is not English, satisfactory command of English must be demonstrated by successful completion of the courses and other requirements of the first two years of graduate study.

After successful completion of the first two years of the program, and after an accepted petition for doctoral candidacy, advanced graduate students are required to complete the following:

1. Take at least one quarter of Proposal Writing (ANTHSCI 294) and prepare a dissertation proposal. If necessary, obtain Human Subjects clearance.
2. Pass a Prospectus Examination by the end of Winter Quarter of the third year, and petition for candidacy. To pass the examination, a student is required to complete the following within a 6-week period: (a) submit a thesis proposal and obtain committee consent to proceed; (b) present the thesis proposal publicly; and (c) pass the University Orals exam consisting of both a review of the proposal and a test of knowledge in a chosen subfield (e.g., archaeology, medical anthropology, anthropological genetics) and/or geographic area as appropriate.
3. Submit the Doctoral Dissertation Reading Committee form no later than the end of the third year and before approval of TGR.
4. Take at least one quarter of Dissertation Writing (ANTHSCI 298) and complete an approved dissertation based on independent research.
5. Give a public presentation of the dissertation in the department.

*Financial Support*—The department endeavors to provide needed financial support (through fellowships, teaching and research assistantships, and tuition grants) to all students admitted to the Ph.D. program who maintain satisfactory progress. First-year students in the Ph.D. program who have not entered with outside funding are required to apply for such funding during their first quarter. See *Guide to the Ph.D. Program in Anthropological Sciences* and the department web site <http://www.stanford.edu/dept/anthsci> for details.

### PH.D. MINOR

The requirements for a Ph.D. minor in Anthropological Sciences are the following:

1. Enlist a faculty member of Department of Anthropological Sciences who consents to serve as the adviser for the minor.
2. Submit an application for admission to the Ph.D. minor to the Department of Anthropological Sciences. The completed application must include the written consent of the adviser. The application and any associated instructions should be obtained from the student services coordinator of the Department of Anthropological Sciences.
3. Complete 27 units of courses in the Department of Anthropological Sciences at Stanford for letter grades (in courses for which letter grades are offered), each with a grade of 'B' or better. The University Ph.D. minor requirements state that 20 of these units must be in courses numbered 200 or above, and that course work for the minor cannot also be used to meet the requirements for a master's degree. Of the additional 7 units, 2 must come from the Department's Core Seminar (ANTHSCI 291, see below); the additional 5 units are not restricted as to course number.
4. In conjunction with the adviser, determine a coherent course of study related to the student's interests. Among the 27 units of required Anthropological Science courses, the student must take ANTHSCI

290A, Advanced Social Theory in Anthropological Sciences, or ANTHSCI290B, Evolutionary Theory in Anthropological Sciences, and must enroll in the department's Core Seminar (ANTHSCI 291) for at least two quarters at a minimum of 1 unit per quarter. No more than 10 of the 27 units can be individual study or independent research. No more than 15 of the 27 units can be counted from courses taken before submission of the application for admission to the Ph.D. minor, but only with the approval of the adviser.

5. It is expected that the student's adviser participate as a representative of the Department at the student's University Ph.D. oral examination. The student is responsible for this arrangement with the major department.
6. For graduation, complete all necessary paperwork with the student services coordinator of the department.

## COURSES

WIM indicates that the course satisfies the Writing in the Major requirements.

Undergraduate Anthropological Sciences courses numbered 100 and above are organized by concentration tracks, 1 to 4 (see above). HEF designations indicate that the course satisfies requirement I, II, III, IV, or V of the Human Evolution Framework, also described above. A course may satisfy more than one HEF requirement.

## NUMBERING SYSTEM

Anthropological Sciences courses are numbered according to the following scheme:

- 001-099 Introductory Courses
  - 0001-19 General Introductory Courses
  - 0020-39 Introductory Area Courses
  - 0040-49 SIS Courses (freshmen)
  - 0050-59 SIS Seminars and Dialogues (sophomores)
- 100-129 Culture, Social Relations, and Language
  - 100-109 Culture and Social Relations
  - 110-119 Language
  - 120-124 Area Studies: The Americas
  - 125-129 Area Studies: Asia
- 130-149 Archaeology and Evolutionary Studies
  - 130-139 Evolutionary Studies
  - 140-149 Archaeology
- 150-169 Population and Environment
  - 150-159 Population/Demography
  - 160-169 Environment/Ecology
- 170-189 Medical Anthropology and Genetics
  - 170-179 Medical Anthropology
  - 180-189 Anthropological Genetics
- 190-199 Special Courses
- 200-299 Graduate-level Courses

## INTRODUCTORY

Intended to serve as an introduction to the methods, theories, and substance of Anthropological Sciences, introductory courses are for both majors and non-majors. ANTHSCI 2A and 2B (HUMBIO 2A and 2B) provide a good introduction to the major; alternatively, a student may take three other introductory courses numbered from 3 to 39.

**ANTHSCI 2A. Genetics, Evolution, and Ecology**—(Enroll in HUMBIO 2A.)

*5 units, Aut (Durham, Mountain)*

**ANTHSCI 2B. Culture, Evolution, and Society**—(Enroll in HUMBIO 2B.)

*5 units, Aut (Klein, Brown)*

**ANTHSCI 3. Introduction to Prehistoric Archaeology**—(Same as ARCHLGY 1.) Aims, methods, and data in the study of human society's development from early hunters through late prehistoric civilizations. Archaeological sites and remains characteristic of the stages of cultural development are examined for selected geographic areas, emphasizing methods of data collection and analysis appropriate to each. (HEF I, II) GER:3b,4a

*3-5 units, Aut (Rick)*

**ANTHSCI 4. Language and Culture**—(Enroll in CASA 4.)

*5 units (Inoue) not given 2004-05*

**ANTHSCI 5. The Biology and Evolution of Language**—(Graduate students register for 214.) Language as an evolutionary adaptation of humans. Comparison of communicative behavior in humans and animals, and the inference of evolutionary stages. Structure, linguistic functions, and the evolution of the vocal tract, ear, and brain, with associated disorders (stuttering, dyslexia, autism, schizophrenia) and therapies. Controversies over language centers in the brain and the innateness of language acquisition. Vision, color terminology, and biological explanation in linguistic theory. (HEF III; DA-A) GER:2a

*4-5 units (Fox) alternate years, given 2005-06*

**ANTHSCI 6. Human Origins**—(Graduate students register for 206.) The human fossil record from the first non-human primates in the late Cretaceous or early Paleocene, 80-65 million years ago, to the anatomically modern people in the late Pleistocene, between 100,000 to 50,000 B.C. Emphasis is on broad evolutionary trends and on the natural selective forces behind them. (HEF I, III; DA-B) GER:2a

*5 units, Win (Klein)*

**ANTHSCI 7. Marriage and Kinship**—Variation in human kinship systems; whether or not they can be understood as evolutionary products and the contribution to be made by a Marxist perspective. Eurasia and Africa are contrasted with Europe and E. Asia. (HEF I) GER:3b,4c

*4-5 units, Win (J. Wolf)*

**ANTHSCI 10. Medical Anthropology**—Introduction to the cross-cultural study of health beliefs and healing systems around the world. How social processes shape human health. (HEF I, IV; DA-C) GER:3b,4a

*3-5 units, Spr (R. Barrett)*

**ANTHSCI 12. Querying Human Nature**—Historical and contemporary anthropological perspectives on human nature. Topics include human behaviors such as aggression, incest avoidance, sexual jealousy, childhood attachments, maternal care, color symbolism, facial expression, and language. GER:3b

*5 units (Wolf) not given 2004-05*

**ANTHSCI 13. Bioarchaeology**—The study of skeletal remains from archaeological contexts. Methods of bioarchaeology including taphonomy, paleodemographics, paleopathology, and molecular approaches. Case studies illustrate issues such as health consequences of the adoption of agriculture, cannibalism, and relationships among health, violence, class, and sex in historic and prehistoric cultures. (HEF I, IV) GER:2a

*3-5 units, Spr (DeGusta)*

**ANTHSCI 14. Introduction to Anthropological Genetics**—The extent and pattern of variation among human genomes, the origin of these patterns in human evolution, and the social and medical impact of recent discoveries. Topics include: the Human Genome Project; human origins; ancient DNA; genetic, behavioral, linguistic, cultural, and racial diversity; the role of disease in shaping genetic diversity; DNA forensics; genes and reproductive technology. (HEF I, II; DA-C) GER:2a

*5 units, Spr (Mountain)*

**ANTHSCI 17. Archaeoastronomy and Ethnoastronomy**—Cross-cultural and historical examination of major world astronomies, focusing on the relations among conceptual systems, social practices, and empirical realities. Calendrical astronomy of ancient Babylonia, Egypt, China, and Maya, and modern Andean peoples. Navigational astronomy of medieval Europe and Oceania. The Western distinction between astronomy and astrology. Archaeoastronomy and ethnoastronomy in anthropological thought. Readings and nighttime observation. GER:3b

*4-5 units (Fox, King) not given 2004-05*



## INTRODUCTORY AREA COURSES

Intended to serve as introductions to particular areas of the world as known through ethnography, archaeology, and history. Prior courses in anthropology recommended but not required.

**ANTHSCI 22. Archaeology of North America**—Why and how people of N. America developed. Issues and processes that dominate or shape developments during particular periods considering the effects of history and interactions with physical and social environment. Topics include the peopling of the New World, explaining subsequent diversity in substance and settlement adaptations, the development of social complexity, and the impact of European contact. (HEF II, III; DA-B) GER:3b,4b

*3-5 units, Spr (Truncer)*

**ANTHSCI 23. Identity and Peoples of China**—Who is Chinese? Perspectives on being Chinese from Han and ethnic minorities in China, in Taiwan, and among overseas Chinese. Emphasis is on distinguishing forces contributing to identity formation from ideological rhetoric about identity. (HEF I, IV) GER:3b,4a

*3-5 units (Brown) not given 2004-05*

**ANTHSCI 24. The Anthropology of Japan**—(Same as CASA 128.) Cultural history of Japan since WWII. Transformation of religion, kinship, gender, education, work, leisure, ideology, and national identity as interconnected institutions. The legacy of Tokugawa and prewar Japan as antecedents to postwar developments. (HEF I, II) GER:3b,4a

*3-5 units, Win (Befu)*

**ANTHSCI 25. Human Ecology of the Amazon**—The diversity of peoples and cultures in the Amazon Basin and the ecosystems in which they live. Themes in ecological anthropology of Amazonia including limiting factors, the protein debate, indigenous knowledge and resource management, and anthropogenic modification. Ethnographic, historical, and archeological evidence. (HEF I, IV) GER:3b,4a

*5 units, Spr (Ocampo-Raeder)*

**ANTHSCI 27. Introduction to Mesoamerican Archaeology**—The prehispanic cultures of Mesoamerica through archaeology and ethnohistory; from the archaic period to the Spanish conquest in the 16th century. (HEF II; DA-B) GER:3b,4a

*5 units, Win (Robertson)*

## CULTURE, SOCIAL RELATIONS, AND LANGUAGE

In addition to the courses listed directly below, ANTHSCI 23, 24, 25, and 121, listed elsewhere, also count towards the Track 1 concentration.

### CULTURE AND SOCIAL RELATIONS

**ANTHSCI 101. The Human Hand: Evolution, Ontogeny and Influence**—(Enroll in HUMBIO 101.)

*3 units (Porzig) alternate years, not given 2005-06*

**ANTHSCI 102. Women, Fertility, and Work**—Is gender culturally or biologically determined or both? The arguments for sociobiological and cultural determinist explanations of the differences between women and men are compared, emphasizing their intersection in work. Case studies: hunter/gatherer, horticultural (Melanesian), southern Chinese, and Anglo American societies. (HEF I, IV) GER:3b,4c

*5 units (K. Barrett) not given 2004-05*

### LANGUAGE

**ANTHSCI 110. Introduction to Language Change**—Variation and change as the natural state of language. Differentiation of dialects and languages over time. Determination and classification of historical relationships among languages, and reconstruction of ancestral stages. Types, rates, and explanations of change. Parallels with cultural and genetic evolutionary theory. Implications for the description and explanation of language in general. (DA-A) GER:3b

*4-5 units, Win (Fox)*

**ANTHSCI 111. Language and Prehistory**—(Graduate students register for 211.) Language classification and its implications for human prehistory. The role of linguistic data in analyzing prehistoric populations, cultures, contact, and migrations. Comparison of linguistic and biological classifications. Semantic reconstruction, proto-vocabularies, and culture. Archaeological decipherment, the origins and evolution of writing, and the relationships between writing, culture, and civilization. (HEF II, III; DA-A) GER:3b,4a

*5 units, Spr (Fox)*

**ANTHSCI 112. Human Diversity: A Linguistic Perspective**—(Same as HUMBIO 118.) Theories and practices around building speech recognition-based dialogue systems. Differences between speech and graphical interfaces. Skills in application design and implementation; design of usability experiments to gauge the effectiveness of application design principles. Recommended: some programming background.

*3 units, Spr (Ruhlen)*

**ANTHSCI 115. Maya Hieroglyphic Writing**—(Graduate students register for 215.) Deciphering the hieroglyphic writing of the classic Maya. Principles of archaeological decipherment. Analysis of Maya calendrical, astronomical, political, and religious/mythological texts on stone, wood, bone, shell, ceramic vessels, and screenfold books. Ancient Maya scribal practice and literacy. The origins of Maya writing and related Mesoamerican writing systems. The impact of epigraphy on the archaeology and linguistics of the Maya. (HEF II, IV; DA-B) GER:3b,4a

*5 units, Spr (Fox)*

**ANTHSCI 116. Research in Maya Hieroglyphic Writing**—(Graduate students register for 216.) Workshop. Current issues in the decipherment and analysis of Maya hieroglyphic writing and literacy. Prerequisite: 115 or consent of instructor. (HEF II, IV)

*1-2 units (Fox) not given 2004-05*

**ANTHSCI 121. Indigenous Languages of the Americas**—The classification, history, structural variation, and sociocultural aspects of the indigenous languages of N. and S. America, with attention to linguistic evidence for the settlement of the Americas, the effects of European contact, indigenous writing systems and literacy, and the relationship between these languages and the development of anthropological and linguistic theory. (HEF I, IV) GER:3b

*5 units (Fox) not given 2004-05*

### AREA STUDIES: THE AMERICAS

**ANTHSCI 122. The Ancient Maya**—(Graduate students register for 222.) Archaeology and culture of the ancient Maya of Mesoamerica. The natural world of the Maya, languages and writing, and origins of Maya culture. Archaeological and historical dating and classification of periods. Life cycle, daily life, food, agriculture, technology, and medicine. Power, social structure, gender, and the origins of the state. Mythology, time, astronomy, art, and religion. Maya sites, their relations with each other and other Mesoamerican states and peoples. The classic Maya collapse, the Spanish conquest, and today's Maya. Changes of archaeological focus and issues as exemplified in the study of the Maya. Optional Spring Break field trip to Maya country (at extra expense, limited capacity). (HEF II, IV; DA-A)

*2-5 units (Fox) not given 2004-05*

**ANTHSCI 124. Perspectives on Sustainable Development in Latin America**—(Graduate students register for 224A.) Crossdisciplinary. Interactions among poverty, development, environmental degradation, and approaches to growth and stability in agroecology, agroforestry, small farm development, and conservation biology. Limited enrollment.

*5 units (Staff) not given 2004-05*

### AREA STUDIES: ASIA

**ANTHSCI 125A. 20th-Century Chinese Societies**—(Graduate students register for 225A.) Nationalist China, the People's Republic of China, Taiwan, and the loosely knit networks of the overseas Chinese are examined through the anthropological methods used in exploring com-

plex societies. Emphasis is on political-economic, demographic, social organizational, gender/kinship, ideological, and transformative aspects of Chinese populations after the 1949 revolution. (HEF IV; DA-A) GER:3b,4a

3-5 units (*Brown*) not given 2004-05

**ANTHSCI 125B. Late Imperial China**—(Graduate students register for 225B.) Chinese civilization in the late imperial era (960-1911) in its spatial, temporal, structural, institutional, and ideational complexity. Frontiers and empire building, the making of Han Chinese and barbarians, migrations, colonization, urban and rural living, imperial state and local government, commerce and petty capitalism, kinship and family, gender and marriage, food, money, population and religion. (HEF IV; DA-A) GER:3b,4a

5 units (*Wolf*) not given 2004-05

**ANTHSCI 128B. Globalization and Japan**—(Graduate students register for 228B; same as CASA 128B.) Globalization theories in anthropology and sociology, and Japan in the context of these theories. Ethnographic cases of Japan's global presence from the 15th century to the present. Processes of globalization in business management, popular culture, and expatriate communities. Japan's multiculturalization through its domestic globalization. (HEF IV) GER:3b,4a

3-5 units (*Befu*) not given 2004-05

## ARCHAEOLOGY AND EVOLUTIONARY STUDIES

In addition to the courses listed directly below, 22, 27, 110, 111, 112, 115, 116, and 122, listed elsewhere, count towards the Track 2 concentration.

### EVOLUTIONARY STUDIES

**ANTHSCI 130. Paleoanthropology Seminar**—(Graduate students register for 230B.) Aspects of human evolution through primary literature and fossils. Topics vary to fit the interests of participants. (HEF II) GER:2a

3-4 units (*DeGusta*) not given 2004-05

**ANTHSCI 131A. Primate Evolution**—The fossil, molecular, and anatomical data on primate origins, from their mammalian ancestors to the origin of the hominids. The adaptive radiations of lemurs, lorises, tarsiers, new world monkeys, old world monkeys, lesser apes, and great apes. The functional anatomy of primates in relation to habitat and social ecology. (HEF I, II; DA-B) GER:2a

5 units (*Jablonski*) not given 2004-05

**ANTHSCI 131B. Primate Societies**—(Graduate students register for 231B.) Introduction to primatology. Survey of the living primates, primate evolution, distribution, and taxonomy. Life history patterns, dominance hierarchies, reproductive strategies, and social structures. Focus is on cultural behaviors, including tool manufacture and use, language and communication, hunting and warfare, and political behavior. Analysis of current conservation issues. (HEF II, III; DA-B) GER:2a

5 units, *Spr* (*Jablonski*)

**ANTHSCI 131C. Current Issues in Primatology**—(Graduate students register for 231C.) Seminar. Evolution of cognitive abilities in primates. Selective forces increasing intelligence from ecological factors impacting early prosimian primates to social and cultural factors affecting hominid evolution. Hypotheses about relationships between brain morphology and intelligence in humans, nonhuman primates, and hominid ancestors. Prerequisite: ANTHSCI 131B or consent of instructor. (HEF II, III) GER:2a

5 units (*Staff*) not given 2004-05

**ANTHSCI 133A. Human Osteology**—(Graduate students register for 233A; same as HUMBIO 180.) The human skeleton. Focus is on identification of fragmentary skeletal remains. Analytical methods such as paleopathology, taphonomy, and forensic techniques. Students work independently in laboratory with the collection. (HEF I,V; DA-B) GER:2a

5 units, *Win* (*DeGusta*)

**ANTHSCI 133B. Advanced Osteology**—(Graduate students register for 233B.) Skeletal analytical methods such as paleopathology, osteometry, taphonomy, and functional morphology. Strategies for osteological curation and research. Students conduct independent projects in their area of interest. (HEF II,V; DA-B) GER:2a

5 units, *Spr* (*DeGusta*)

**ANTHSCI 134. Human Behavioral Biology**—(Enroll in BIOSCI 150/250.)

3-6 units (*Sapolsky*) alternate years, given 2005-06

**ANTHSCI 139A. Regional Study of Human Structure**—(Enroll in SURG 101.)

5 units, *Win* (*Dolph, Gosling*)

### ARCHAEOLOGY

**ANTHSCI 141. Hunter-Gatherers in Archaeological Perspective**—(Graduate students register for 241.) Methods and data used to reconstruct the organization and subsistence of band-level hunter-gatherers. Studies of modern hunter-gatherers provide background for interpreting prehistoric groups, and the archaeological record of Africa, Europe, and the New World contribute examples of how archaeological data are used to reconstruct the life ways of extinct hunter-gatherers. (HEF I, II; DA-B) GER:3b,4a

4-5 units, *Aut* (*Truncer*)

**ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeology**—The development of high civilizations in Andean S. America from hunter-gatherer origins to the powerful, expansive Inca empire. The contrasting ecologies of coast, sierra, and jungle areas of early Peruvian societies from 12,000 to 2,000 B.C. The domestication of indigenous plants which provided the economic foundation for monumental cities, ceramics, and textiles. Cultural evolution, and why and how major transformations occurred. (HEF II, III) GER:3b,4a

3-5 units (*Rick*) not given 2004-05

**ANTHSCI 143. Ethnoarchaeology**—The study of relationships between observable human behavior and material consequences. How ethnographic observation serves the primary goal of archaeology: to describe variability in past human behavior. The role of ethnoarchaeology in the history of anthropological inquiry, ethnoarchaeological studies of the use of space and subsistence, and future directions. (HEF II, IV; DA-B) GER:3b

3-5 units, *Win* (*D. Bird*)

**ANTHSCI 145A. Evolutionary Theory in Archaeology**—(Graduate students register for 245.) The ability of scientific evolutionary theory to explain human behavior as represented in the archaeological record. Past attempts to apply evolutionary theory in archaeology are compared to more recent Darwinian efforts, as are current evolutionary approaches to human behavior in related fields. The ontological underpinnings and methodological requirements of a Darwinian archaeology and its potential contribution to archaeology as an explanatory system. (HEF I) GER:3b

3-5 units (*Staff*) not given 2004-05

**ANTHSCI 145B. Evolution of Civilizations**—(Graduate students register for 245B.) How archaeology contributes to understanding prehistoric civilizations. How and why complex social institutions arose, and the conditions and processes behind their collapse. The development of monumental architecture, craft specialization, trade and exchange, and social stratification using examples from the archaeological record. (HEF II, III) GER:3b

3-5 units (*Staff*) not given 2004-05

**ANTHSCI 146. Archaeological Ceramics**—(Graduate students register for 246.) Treatment of archaeological ceramics with emphasis on practical applications. What these objects can tell us about the lives of ancient peoples and the larger scale systems in which they lived. Ceramic technology. Methodological (chronology, seriation), economic (production, exchange, consumption), and social (style, signaling) aspects of ceramic analysis. (HEF V) GER:3b

4 units (*Staff*) not given 2004-05

**ANTHSCI 147. Archaeology of Modern Times**—(Same as ARCHLGY 104.) Archaeological theory, method, and data are used to arrive at a better understanding of an issue of contemporary public concern. Issues include resource and energy management strategies such as the electricity situation in California, biodegradation and solid waste management, the relationship between human beings and dogs, ethnic wars in the Balkans and elsewhere, and Bill Gates' strategies in the rise of Microsoft. (HEF IV) GER:3b

*5 units, Win (Rathje)*

**ANTHSCI 148. Archaeological Methods**—(Graduate students register for 248; same as ARCHLGY 102.) Methods and methodological issues related to the archaeological investigation of ancient sites, materials, and contexts. Topics include research design for survey and excavation, artifact analysis, and dating methods. (HEF V; DA-B) GER:3b

*5 units Spr (Robertson)*

**ANTHSCI 149. Archaeological Field Methods**—Archaeological field research in the local area. The practical working methodology of the archaeologist through excavation and site survey, with training in registration, preservation, and analysis of archaeological data. (HEF V) GER:3b

*5 units (Rick) not given 2004-05*

**ANTHSCI 149B. Models and Imaging in Archaeological Computing**—(Graduate students register for 208.) Hands-on seminar. Digital photography, mapping, and modeling methodology. Emphasis is on sharing skills between participants and instructor. Working with digital data and imagery relevant to archaeology. (DA-B) GER:2b

*3-5 units (Rick) not given 2004-05*

## POPULATION AND ENVIRONMENT

In addition to the courses listed directly below, 25, 124, and 179, listed elsewhere, count towards the Track 3 concentration.

### POPULATION/DEMOGRAPHY

**ANTHSCI 152. Environment and Growth in Developing Countries**—(Enroll in INTNLREL 135.)

*5 units, Aut (Rosencranz)*

**ANTHSCI 155. Human Population Biology**—(Graduate students register for 255.) Problems in demography and theoretical population biology applied to human systems. Emphasis is on establishing relationships between models in theoretical population biology and empirical demographic methodology. Topics include philosophy of models and model building, population dynamics, stable population theory, species interactions in human ecology, models of infectious diseases and their control, cultural evolution. Prerequisites: HUMBIO 137 or consent of instructor. (HEF I, III, V; DA-C) GER:3b

*5 units, Aut (Jones)*

**ANTHSCI 156. Population Studies**—(Enroll in BIOSCI 146.)

*1 unit, Win (Feldman)*

**ANTHSCI 159. Migration in a Biosocial Context**—Social, cultural, economic, and biological consequences of human migration. Evolutionary, social, and theoretical approaches.

*5 units, Spr (Roseman)*

### ENVIRONMENT/ECOLOGY

**ANTHSCI 160B. Conservation Anthropology**—Environmental conservation as a social and cultural process including strategies used around the world to achieve conservation goals such as market-based conservation, protected areas, and single-species conservation. Emphasis is on social and cultural issues and theory. (HEF III, IV; DA-A) GER:3a

*3-5 units, Aut (Ocampo-Raeder)*

**ANTHSCI 161. Conservation Challenges in the North American West**—Conservation issues and related social controversies in recent decades in the N. American West including the subdivision of rangelands, distribution of scarce water resources, private uses of public lands, and conflicts between environmentalists and proponents of the wise-use movement. How to assess the efficacy of conservation tools such as

conservation easements, community conservation cooperatives, and working landscapes within protected areas through case studies including subdivision Madison Valley, Montana, water distribution in the Klamath and Russian rivers, logging in the Santa Cruz Mountains, and grazing in the Point Reyes National Seashore.

*5 units, Spr (Ediger)*

**ANTHSCI 162. Indigenous Peoples and Environmental Problems**—(Graduate students register for 262; same as HUMBIO 171.) The social and cultural consequences of contemporary environmental problems. The impact of market economies, development efforts, and conservation projects on indigenous peoples, emphasizing the Amazon, E. Africa, Alaska, and Central America. The role of indigenous grass roots organizations in combating environmental destruction and degradation of homeland areas. (HEF II, IV; DA-A) GER:3a,4a

*3-5 units (Durham, Irvine) not given 2004-05*

**ANTHSCI 163. Human Behavioral Ecology**—(Graduate students register for 263.) Theory, method, and application in anthropology. How theory in behavioral ecology developed to understand animal behavior is applied to questions about human economic decision making in ecological and evolutionary contexts. Topics include decisions about foraging and subsistence, competition and cooperation, mating, and reproduction and parenting. (HEF I, III) GER:3b

*3-5 units, Spr (R. Bird)*

**ANTHSCI 163B. Parks and Peoples: The Impact of Protected Area Conservation on Local Populations**—(Same as EARTHSYS 163B/263B.) The value of parks as a conservation tool affecting biological and cultural systems. The success of parks in protecting biodiversity, cultural diversity, and social justice. The Western park model, its modifications, and solutions to dilemmas about integrating people within parks. (HEF II)

*3-5 units, Win (Ediger)*

**ANTHSCI 164. Ecological Anthropology**—(Graduate students register for 264.) Dynamics of culturally inherited human behavior and its relationship to social and physical environments. Topics include a history of ecological approaches in anthropology, subsistence ecology, sharing, risk management, territoriality, warfare, and resource conservation and management. Case studies from Australia, Melanesia, Africa, and S. America. (HEF I, III; DA-A) GER:3b

*3-5 units, Win (R. Bird)*

**ANTHSCI 164A. Ethnoecology**—(Graduate students register for 264A.) Role of human beings in ecosystems as mediated by culture, markets, and environment. Theory and methods for investigating human-nature relationships at the local and global level. How people of different cultures and languages conceptualize and categorize plants, animals, landscapes, ecological relationships, and ecosystem processes. Relationship of traditional ecological knowledge to Western ecological science and its importance to policy and development. Field methods include ethno-taxonomy and ethnomapping. (HEF I, III) GER:3b

*5 units (Irvine) not given 2004-05*

**ANTHSCI 165B. Central America: Environment, Sustainable Development, and Security**—(Graduate students register for 265B; same as IPER 265.) Interrelationships among environmental stress, poverty, and security in Central America, with focus on Costa Rica. The legacy of the Cold War in Central America as manifested in the Contra War and U.S. policy. Current development schemes and their impact on environment and security in the region. Dilemmas between population growth in the developing world and consumption patterns in the industrial world. Some years, the course includes an optional field trip to Costa Rica over Spring Break at extra expense; limited capacity. (HEF III) GER:3b

*3-5 units (Hoagland) not given 2004-05*

**ANTHSCI 166C. Ocean Policy**—(Graduate students register for 266C.) Introduction to the formulation and implementation of ocean policy with regard to a variety of issues across a range of spatial scales: U.S. and international efforts to regulate ocean uses such as fishing, mineral extraction, and pollution. Emphasis is on problem solving, using case studies to encourage creative thinking about new tools to improve ocean



use management, including economic and regulatory options. A multi-disciplinary approach to thinking about ocean policy, with readings in science, economics, anthropology, and law. (HEF II) GER:3b

4 units (Staff) not given 2004-05

**ANTHSCI 167. Social Policy for Sustainable Resource Use**—(Graduate students register for 267.) The development of social policies that foster a positive human role in the ecosystem. Goal is to develop group skills in a team setting while researching case studies of forest peoples impacted by integration into the global economy. The case of voluntary forest product certification under the Forest Stewardship Council system. Local participation in policy development, the effectiveness of certification, tenure and institutional aspects of sustainability, indigenous rights and forest conservation, and the role of local communities and workers in sustaining forests over the long term. Prerequisite: consent of instructor. (HEF II, IV; DA-A) GER:3b

5 units, Win (Irvine)

**ANTHSCI 167C. Managing the Commons: Evolving Theories for Sustainable Resource Use**—(Graduate students register for 267C.) Development of common property theory since Hardin's article on the tragedy of the commons. Interdisciplinary theorizing about sustainable management of common-pool resources such as grazing, forest, or marine resources; debates about sustainability of commons management within heterogeneous state and global systems; and new common such as atmosphere or the information commons. Links among theory, methods, and policy. Prerequisite: 190 or consent of instructor. (HEF II, III, IV)

5 units, Aut (Irvine)

**ANTHSCI 168C. Environmental Politics in Latin America**—(Graduate students register for 268C.) (HEF II, IV) GER:3b,4a

5 units (Staff) not given 2004-05

**ANTHSCI 169. Environmental Dynamics**—(Graduate students register for 269.) Environmental degradation resulting from human behavior, and what can be done about it. Patterns of interaction between people and environments, and why they vary over time and space. Topics include adaptation and behavior, resource acquisition and utilization, conflicts of interest, collective action problems, conspicuous consumption, waste, land management, and public policy. (HEF I, III; DA-A) GER:3b

3-5 units, Spr (D. Bird)

## MEDICAL ANTHROPOLOGY AND GENETICS

In addition to the courses listed directly below, ANTHSCI 133B and 151, listed elsewhere, also count towards the Track 4 concentration.

### MEDICAL ANTHROPOLOGY

**ANTHSCI 171. Aging: From Biology to Social Policy**—The biological processes that contribute to aging; differences across populations and cultures. Cultural, social, and economic consequences of a large elderly population, and implications for social policy? Students are assisted in research and working with the elderly. Films. (HEF I) GER:3b

5 units, Spr (Barnett)

**ANTHSCI 172. Evolution of Human Disease**—(Graduate students register for 272.) Seminar. Understanding human health and disease from an evolutionary perspective. Topics: Darwinian medicine, genes and disease, aging, infectious diseases, mental illness, and cancer. Prerequisites: 2A, 2B, upper division standing; or consent of the instructor. (HEF III) GER:3b

5 units (R. Barrett) not given 2004-05

**ANTHSCI 173A. The Evolution of Human Diet**—(Graduate students register for 273A.) Human dietary choices and their consequences from ecological, epidemiological, and evolutionary perspectives. Topics include foraging theory, human community ecology, evidence for evolutionary design in physiological and motivational systems relating to feeding and nutrition, epidemiology of nutritional disorders, subsistence economies and modes of production, reduction diets, and health diets. (HEF I, II, IV; DA-C) GER:3b

5 units, Spr (Jones)

**ANTHSCI 174. Bioethics and Anthropology**—(Graduate students register for 274; same as CASA 130A/230A.) The relevance of moral and ethical issues in health and illness, the development of scientific knowledge, and applications of biomedical technology from an anthropological perspective. The ways moral problems in science and technology are culturally situated, defined, and resolved in specific historical, political, social, and economic contexts. Research ethics for anthropologists studying health and illness. Focus is on cultural production of moral dilemmas in biomedicine and healing practices in diverse cultures. (HEF IV) GER:3b

5 units, Spr (Koenig)

**ANTHSCI 175. The Anthropology of Death and Dying**—(Graduate students register for 275.) Death as a biocultural process. Funerary practices and attitudes toward dying in different societies. Issues include hospice care, palliative care, and euthanasia. Instructor is an anthropologist and registered nurse with hospice experience. (HEF I, IV, V; DA-C) GER:3b

5 units, Aut (R. Barrett)

**ANTHSCI 176A. Anthropological Perspective on Child Welfare**—(Graduate students register for 276A.) Practices at the core of child welfare debates, including corporal punishment, neglect, male and female circumcision, gender discrimination, emotional abuse, child labor, and sexual abuse. Legal and ethical issues surrounding global definitions of maltreatment. Literature on child growth and development. (HEF I) GER:3b,4c

5 units (K. Barrett) not given 2004-05

**ANTHSCI 178. Contagion and Conflict**—Historical and anthropological relationships between human disease and human conflict. Major disease epidemics from Paleolithic conflicts and medieval crusades to the world wars and genocides of the last century. The uneasy alliances between military institutions, sanitary reform movements, and public and international health agencies. The history of biowarfare from smallpox blankets to cold war weaponry and bioterrorism. Application to current events and future policy implications. (HEF IV) GER:3b

3-5 units (R. Barrett) not given 2004-05

**ANTHSCI 179. Environmental Change and Emerging Infectious Diseases**—The changing epidemiological environment. Focus is on how human-induced environmental changes, such as global warming, deforestation and land-use conversion, urbanization, international commerce, and human migration, are altering the ecology of infectious disease transmission, and promoting their re-emergence as a global public health threat. Case studies of malaria, cholera, hantavirus, plague, and HIV. (HEF III; DA-C) GER:3b

3-5 units, Win (Durham, Jones)

### ANTHROPOLOGICAL GENETICS

**ANTHSCI 187. The Genetic Structure of Populations**—(Graduate students register for 287.) Inference of evolutionary history from the current structure of genetic variation within a population genetic and phylogenetic framework. Methods include tree inference, analysis of molecular variance, gene genealogies and the coalescent, phylogeography, clustering algorithms, and Bayesian and frequentist approaches. Applications in evolutionary studies, medicine, conservation, and forensics. Principles and methods illustrated primarily with human and other primate examples; students investigate species of own choice. Prerequisites: 2A or Biology Core. (HEF II, III, V; DA-C)

5 units (Mountain) not given 2004-05

**ANTHSCI 188. Research in Anthropological Genetics**—(Graduate students register for 288.) Seminar. Current research at Stanford and beyond. Presentations by instructor, guests, and class participants. May be repeated for credit. (HEF V; DA-C)

1-5 units, Aut, Win (Mountain)

**SPECIAL COURSES**

**ANTHSCI 190. Social Theory in the Anthropological Sciences**—Required of all majors. Foundational course in the history of social theory in anthropology from the late 19th century to the present. Major approaches to human culture and society: symbolic, social, material, and psychological. Fundamental questions about the role of theory in anthropology and how it can be applied to human issues. (HEF I, IV) GER:3b WIM

5 units, Spr (Brown)

**ANTHSCI 191A. Communicating Science: Proposals, Talks, Articles**—(Graduate students register for 291A.) The presentation of research ideas and results is an integral part of the scientific process; good science poorly communicated is effectively bad science. The principles and practice of effective scientific communication, written and oral. Grant applications and research proposals, professional talks, and scientific journal papers. (HEF V) GER:3b

4-5 units, Spr (DeGusta)

**ANTHSCI 192. Data Analysis in the Anthropological Sciences**—(Graduate students register for 292.) The univariate, multivariate, and graphical methods used for analyzing quantitative data in anthropological research. Archaeological and paleobiological examples illustrate various methods. Recommended: knowledge of algebra. (HEF V) GER:2c

5 units, Spr (Klein)

**ANTHSCI 193. Prefield Research Seminar**—Preparation for field or laboratory research. Students develop testable hypotheses and realistic data collection procedures, reviewing common data collection techniques including participant observation, interviewing, surveys, and sampling procedures as appropriate. Emphasizes theory guided empirical work. Prerequisites: 2A, 2B, or equivalents; and declared concentration track. (HEF V) GER:3b

5 units, Spr (K. Barrett)

**ANTHSCI 194. Post Field Seminar**—Undergraduates analyze and write about material gathered during summer fieldwork. Emphasizes writing and revising as key steps in analysis and composition. Students critique classmates' work and revise their own writing in light of others' comments. Limited enrollment. (HEF V) GER:3b

5 units, Aut (K. Barrett)

**ANTHSCI 195. Research Project**—Independent research conducted under faculty supervision, normally taken junior or senior year in pursuit of an honors project. May be taken for more than one quarter for credit. Prerequisite: completed application to the honors program.

1-10 units, Aut, Win, Spr, Sum (Staff)

**ANTHSCI 196. Honors and Master's Writing Workshop**—For students writing honors or master's papers. Techniques for interpreting data, organizing bibliographic material, writing, editing, and revising. Preparation of papers for conferences and publications in anthropology.

2-6 units, Aut, Win, Spr, Sum (Staff)

**ANTHSCI 197. Internship in Anthropological Sciences**—Undergraduate opportunity to their area of specialization in an institutional setting such as a laboratory, a clinic, a research institute, or a government agency.

4-5 units, Aut, Win, Spr, Sum (Staff)

**ANTHSCI 199. Directed Individual Study**—(Graduate students register for 299.) Advanced students to explore special areas of interest.

1-10 units, Aut, Win, Spr, Sum (Staff)

**GRADUATE**

These courses are intended for graduate students. However, advanced undergraduates may be admitted with consent of instructor.

**ANTHSCI 200. Introduction to the Anthropological Sciences**—Themes and topics of lasting heuristic value in the anthropological sciences. Combines the lecture content of 2A and 2B with a discussion section for graduate students. Must be taken in the Autumn Quarter of a student's first year in the graduate program.

5 units, Aut (Durham)

**ANTHSCI 201B. Social Theory in the 20th Century**—Continuation of 201A. Comparative analysis of major 20th-century social theories as they relate to anthropology. (HEF IV)

5 units (Brown) not given 2004-05

**ANTHSCI 206. Human Origins**—(Graduate section; see 6.)

5 units, Win (Klein)

**ANTHSCI 208. Models and Imaging in Archaeological Computing**—(Graduate section; see 149B.)

3-5 units (Rick) not given 2004-05

**ANTHSCI 210. Examining Ethnographies**—Eight or nine important ethnographies, including their construction, their impact, and their faults and virtues. (HEF IV; DA-A)

5 units, Win (K. Barrett)

**ANTHSCI 211. Language and Prehistory**—(Graduate section; see 111.)

5 units, Spr (Fox)

**ANTHSCI 213. Topics in Linguistic Anthropology**—Seminar. Culture, society, and cognition as reflected in vocabulary. Semantic analysis and universals of terminological systems; vocabulary size, abstraction, and the issue of primitiveness; variation, strategy, and figures of speech in vocabulary use. Emphasis is on vocabularies of identity (kinship, personal names, and the body) and environment (plants, animals, and place).

5 units (Fox) not given 2004-05

**ANTHSCI 214. The Biology and Evolution of Language**—(Graduate section; see 5.)

4-5 units (Fox) alternate years, given 2005-06

**ANTHSCI 215. Maya Hieroglyphic Writing**—(Graduate section; see 115.)

5 units, Spr (Fox)

**ANTHSCI 216. Research in Maya Hieroglyphic Writing**—(Graduate section; see 116.)

1-2 units (Fox) not given 2004-05

**ANTHSCI 222. The Ancient Maya**—(Graduate section; see 122.)

2-5 units (Fox) not given 2004-05

**ANTHSCI 224A. Perspectives on Sustainable Development in Latin America**—(Graduate section; see 124.)

5 units (Staff) not given 2004-05

**ANTHSCI 225A. 20th-Century Chinese Societies**—(Graduate section; see 125A.)

3-5 units (Brown) not given 2004-05

**ANTHSCI 225B. Late Imperial China**—(Graduate section; see 125B.)

5 units (Wolf) not given 2004-05

**ANTHSCI 228B. Globalization and Japan**—(Graduate section; see 128B; same as CASA 128B.)

3-5 units (Befu) not given 2004-05

**ANTHSCI 230B. Paleoanthropology Seminar**—(Graduate section; see 130.)

3-4 units (DeGusta) not given 2004-05

**ANTHSCI 231A. Primate Evolution**—(DA-B)

5 units (Jablonski) not given 2004-05

**ANTHSCI 231B. Primate Societies**—(Graduate section; see 131B.)

5 units, Spr (Jablonski)

**ANTHSCI 231C. Current Issues in Primatology**—(Graduate section; see 131C.)

5 units (Staff) not given 2004-05

**ANTHSCI 233A. Human Osteology**—(Graduate section; see 133A; same as HUMBIO 180.)

5 units, Win (DeGusta)

- ANTHSCI 233B. Advanced Osteology**—(Graduate section; see 133B.)  
5 units, Spr (*DeGusta*)
- ANTHSCI 241. Hunter-Gatherers in Archaeological Perspective**—(Graduate section; see 141.)  
4-5 units, Aut (*Truncer*)
- ANTHSCI 242. Beginnings of Social Complexity**—Models and examples of the social evolution of stratification and political centralization in prehistoric human societies. Inferences from the archeological record concerning the forces and mechanisms behind the rise and fall of complex societies, particularly in S. America. (DA-B)  
5 units (*Rick*) not given 2004-05
- ANTHSCI 244. Prehispanic New World Urbanism**—Preindustrial urbanism as exemplified by prehispanic New World societies. Case studies: central and southern highlands of Mesoamerica, and the Maya region. Comparative material from highland S. America. (DA-B)  
5 units, Win (*Robertson*)
- ANTHSCI 245. Evolutionary Theory in Archaeology**—(Graduate section; see 145A.)  
3-5 units (*Staff*) not given 2004-05
- ANTHSCI 245B. Evolution of Civilizations**—(Graduate section; see 145B.)  
3-5 units (*Staff*) not given 2004-05
- ANTHSCI 246. Archaeological Ceramics**—(Graduate section; see 146.)  
4 units (*Staff*) not given 2004-05
- ANTHSCI 250A. Advanced Ecological Anthropology**—Seminar. The role of ecological models in the analysis of culture and social systems. Early efforts linking environments and social systems, such as cultural ecology, neofunctionalism, systems ecology. Current research trends including evolutionary ecology, indigenous resource management, and historical ecology. Case studies: agricultural involution in Java, ritual regulation in New Guinea, demographic change in the Swiss Alps, peasant ecology in Central America, and indigenous resource management in Amazonia. (DA-A)  
5 units (*Staff*) not given 2004-05
- ANTHSCI 255. Human Population Biology**—(Graduate section; see 155.)  
5 units, Aut (*Jones*)
- ANTHSCI 262. Indigenous Peoples and Environmental Problems**—(Graduate section; see 162; same as HUMBIO 171.)  
3-5 units (*Durham, Irvine*) not given 2004-05
- ANTHSCI 263. Human Behavioral Ecology**—(Graduate section; see 163.)  
3-5 units, Spr (*R. Bird*)
- ANTHSCI 264. Ecological Anthropology**—(Graduate section; see 164.)  
3-5 units, Win (*R. Bird*)
- ANTHSCI 264A. Ethnoecology**—(Graduate section; see 164A.)  
5 units (*Irvine*) not given 2004-05
- ANTHSCI 265B. Central America: Environment, Sustainable Development, and Security**—(Graduate section; see 165B; same as IPER 265.)  
3-5 units (*Hoagland*) not given 2004-05
- ANTHSCI 266C. Ocean Policy**—(Graduate section; see 166C; same as EARTHSYS 167/267.)  
4 units (*Staff*) not given 2004-05
- ANTHSCI 267. Social Policy for Sustainable Resource Use**—(Graduate section; see 167.)  
5 units, Win (*Irvine*)
- ANTHSCI 267A. Ecotourism and Social Entrepreneurship**—(Same as STRAMGT 384.) Prospects for a transition in the tourism industry toward environmental and social objectives. Case study approach to investigate nature-based destinations around the world tourism companies and business partnerships with local communities. Competitive implications of certification and labeling.  
4 units (*W. Barnett, Durham*) not given 2004-05
- ANTHSCI 267C. Managing the Commons: Evolving Theories for Sustainable Resource Use**—(Graduate section; see 167C.)  
5 units, Aut (*Irvine*)
- ANTHSCI 268C. Environmental Politics in Latin America**—(Graduate section; see 168C.) (HEF II, IV)  
5 units (*Staff*) not given 2004-05
- ANTHSCI 269. Environmental Dynamics**—(Graduate section; see 169.)  
3-5 units, Spr (*D. Bird*)
- ANTHSCI 270. Advanced Topics in Medical Anthropology**—Prerequisite: 140 and consent of instructor.  
5 units, Spr (*R. Barrett*)
- ANTHSCI 272. Evolution of Human Disease**—(Graduate section; see 172.)  
5 units (*R. Barrett*) not given 2004-05
- ANTHSCI 273A. The Evolution of Human Diet**—(Graduate section; see 173A.)  
5 units, Spr (*Jones*)
- ANTHSCI 274. Bioethics and Anthropology**—(Graduate section; see 174; same as CASA 130A/230A.)  
5 units, Spr (*Koenig*)
- ANTHSCI 275. The Anthropology of Death and Dying**—(Graduate section; see 175.)  
5 units, Aut (*R. Barrett*)
- ANTHSCI 276A. Anthropological Perspective on Child Welfare**—(Graduate section; see 176A.)  
5 units (*K. Barrett*) not given 2004-05
- ANTHSCI 286. Advanced Andean Archaeology**  
3-5 units (*Staff*) not given 2004-05
- ANTHSCI 287. The Genetic Structure of Populations**—(Graduate section; see 187.)  
5 units (*Mountain*) not given 2004-05
- ANTHSCI 288. Research in Anthropological Genetics**—(Graduate section; see 188.)  
1-5 units, Aut, Win (*Mountain*)
- SPECIAL COURSES**
- ANTHSCI 290A. Advanced Social Theory in the Anthropological Sciences**—Social theories that have influenced anthropology including evolutionism, Marxism, interpretivism, and postmodernism. Implications of debates among theorists for conducting anthropological research. Prerequisite: graduate standing or consent of instructor. With consent of instructors of 190 and 290A, undergraduate majors may substitute 290A for 190. (HEF IV) WIM  
5 units, Aut (*Brown*)
- ANTHSCI 290B. Evolutionary Theory in Anthropological Sciences**—History of evolutionary theory from the 19th century to present, emphasizing anthropological applications. Theory and concept in evolutionary biology; evolutionary theories of culture; and interactions of genetic, social, and cultural evolution and their implications. Emphasis is on tools of analysis and the value of evolutionary thinking for formulating research questions in anthropology today. Prerequisite: graduate standing or consent of instructor. (HEF II, III)  
5 units, Aut (*Durham*)



**ANTHSCI 291. Graduate Core Seminar**—Graduate seminar. The use of the scientific method in anthropological research. Published papers from subfields illustrate effective research design, the formulation and testing of hypotheses, and comparative methods. Field exercises in interviewing, observation, and taking and using field notes. The ethics of field research and procedures for maintaining physical and mental health in the field.

*1-5 units, Aut, Win, Spr (Staff)*

**ANTHSCI 291A. Communicating Science: Proposals, Talks, Articles**—(Graduate section; see 191A.)

*4-5 units, Spr (DeGusta)*

**ANTHSCI 292. Data Analysis in the Anthropological Sciences**—(Graduate section; see 192.)

*5 units, Spr (Klein)*

**ANTHSCI 293. First Year Paper/M.A. Writing Seminar**—Assistance and guidance with first-year paper and master's thesis.

*2-4 units, Win, Spr (Mountain)*

**ANTHSCI 294. Proposal Writing Seminar**—Required of all ANSI Ph.D. students. Hands-on practical training in grant writing methods. Students draft a research prospectus based on their own interests and proposed projects, and work closely with their advisers and other faculty.

*5 units, Aut, Win, Spr, Sum (Staff)*

**ANTHSCI 295. Research in Anthropological Sciences**—Supervised work with an individual faculty member on the student research project. May be taken for more than one quarter.

*3-5 units, Aut, Win, Spr, Sum (Staff)*

**ANTHSCI 296. Graduate Internship**—Provides graduate students with the opportunity to pursue their area of specialization in an institutional setting such as a laboratory, clinic, research institute, or government agency.

*4-5 units, Aut, Win, Spr, Sum (Staff)*

**ANTHSCI 297. Teaching Assistantship**—Supervised experience as assistant in one undergraduate course.

*3-5 units, Aut, Win, Spr, Sum (Staff)*

**ANTHSCI 298. Dissertation Writing Seminar**—Required of all ANSI Ph.D. students. Students work closely with their advisers and committee members to write a draft of their dissertation.

*5 units, Aut, Win, Spr, Sum (Staff)*

**ANTHSCI 299. Directed Individual Study**—(Graduate section; see 199.)

*1-10 units, Aut, Win, Spr, Sum (Staff)*

## OVERSEAS STUDIES

Courses approved for the Anthropological Sciences major and taught overseas can be found in the "Overseas Studies" section of this bulletin, or in the Overseas Studies office, 126 Sweet Hall.

## SANTIAGO

**ANTHSCI 104X. Modernization and Culture in Latin America**—(Same as SPANLIT 290Z.)

*5 units, Aut (Subercaseaux)*

# APPLIED PHYSICS

*Emeriti: (Professors)* Marvin Chodorow, Theodore H. Geballe, Walter A. Harrison, W. Conyers Herring, Peter A. Sturrock; *(Professors, Research)* Bertram A. Auld, H. John Shaw, Helmut Wiedemann, Herman Winick; *(Courtesy)* Gordon S. Kino

*Chair:* Martin M. Fejer

*Professors:* Malcolm R. Beasley, Arthur Bienenstock, Steven M. Block, Robert L. Byer, Steven Chu, Sebastian Doniach, Martin M. Fejer, Alexander L. Fetter, Stephen E. Harris, Aharon Kapitulnik, Mark A. Kasevich, Robert B. Laughlin, Vahé Petrosian, Zhi-Xun Shen, Yoshihisa Yamamoto

*Associate Professor:* Kathryn A. Moler

*Assistant Professors:* Ian R. Fisher, Martin Greven, Mark J. Schnitzer

*Professor (Research):* Calvin F. Quate

*Courtesy Professors:* Bruce M. Clemens, James S. Harris, Lambertus Hesselink, David A. B. Miller, Douglas D. Osheroff, Robert H. Siemann, Shoucheng Zhang

*Consulting Professors:* Thomas M. Baer, Richard G. Brewer, John D. Fox, Bernardo A. Huberman, Stuart S. P. Parkin, Daniel Rugar

*Visiting Assistant Professor:* Dan Shahar

*Department Office:* Applied Physics 101

*Mail Code:* 94305-4090

*Phone:* (650) 723-4027

*Web Site:* <http://www.stanford.edu/dept/app-physics/>

Courses given in Applied Physics have the subject code APPPHYS. For a complete list of subject codes, see Appendix.

The Department of Applied Physics offers qualified students with backgrounds in physics or engineering the opportunity to do graduate course work and research in the physics relevant to technical applications and natural phenomena. These areas include accelerator physics, biophysics, condensed matter physics, nanostructured materials, optoelectronics, photonics, quantum optics, space science and astrophysics, synchrotron radiation and applications. Student research is supervised by the faculty members listed above and also by various members of other departments such as Biological Sciences, Chemistry, Electrical Engineering, Materials Science and Engineering, Physics, SLAC, and faculty of the Medical School who are engaged in related research fields. Research activities are carried out in research laboratories including the Geballe Laboratory for Advanced Materials, the Edward L. Ginzton Laboratory, the Hansen Experimental Physics Laboratory, the Stanford Linear Accelerator Center, and the Stanford Synchrotron Radiation Laboratory.

The number of graduate students admitted to Applied Physics is limited. Applications should be received by January 4, 2005. Graduate students normally enter the department only in Autumn Quarter.

## GRADUATE PROGRAMS

Admission requirements for graduate work in Applied Physics include a bachelor's degree in physics or an equivalent engineering degree. Students entering the program from an engineering curriculum should expect to spend at least an additional quarter of study acquiring the background to meet the requirements for advanced degrees in Applied Physics.

## MASTER OF SCIENCE

The University's basic requirements for the master's degree are discussed in the "Graduate Degrees" section of this bulletin. The minimum requirements for the degree are 45 units, of which at least 39 units must be graduate-level courses in applied physics, engineering, mathematics, and physics. The required program consists of the following:

1. Courses in physics and mathematics to overcome deficiencies, if any, in undergraduate preparation.
2. Basic graduate courses (letter grade required):
  - a) Advanced Mechanics—one quarter, 3 units: PHYSICS 210
  - b) Electrodynamics—two quarters, 6 units: PHYSICS 220, 221
  - c) Quantum Mechanics—two quarters, 6 units: PHYSICS 230, 231

3. 30 units of additional advanced courses in science and/or engineering. 15 of the 30 units may be any combination of advanced courses, Directed Study (APPPHYS 290), and 1-unit seminar courses, to complete the requirement of 45 units. At least 15 of these 30 units must be taken for a letter grade.
4. A final overall grade point average (GPA) of 3.0 (B) is required for courses used to fulfill degree requirements.

There are no department or University examinations, and a thesis is not required. If a student is admitted to the M.S. program only, but later wishes to change to the Ph.D. program, the student must apply to the department's Admissions Committee.

## DOCTOR OF PHILOSOPHY

The University's basic requirements for the Ph.D. (residency, dissertation, examination, and so on) are discussed in the "Graduate Degrees" section of this bulletin. The program leading to a Ph.D. in Applied Physics consists of course work, research, qualifying for Ph.D. candidacy, a research progress report, a University oral examination, and a dissertation as follows:

1. *Course Work*:
  - a) Courses in Physics and Mathematics to overcome deficiencies, if any, in undergraduate preparation.
  - b) Basic graduate courses\* (letter grades required):
    - 1) Advanced Mechanics—one quarter: PHYSICS 210
    - 2) Statistical Physics—one quarter: PHYSICS 212
    - 3) Electrodynamics—two quarters: PHYSICS 220, 221
    - 4) Quantum Mechanics—two quarters: PHYSICS 230, 231
    - 5) Laboratory—one quarter: APPPHYS 207, 208, 304, 305; BIOSCI 232; EE 410; MATSCI 171, 172, 173; PHYSICS 301.
  - c) 18 units of additional advanced courses in science and/or engineering, not including Directed Study (APPPHYS 290), Dissertation Research (APPPHYS 390), and 1-unit seminar courses. Only 3 units at the 300 or above level may be taken on a satisfactory/no credit basis.
  - d) 96 units of additional courses to meet the minimum residency requirement of 135. Directed study and research units as well as 1-unit seminar courses can be included.
  - e) A final average overall grade point average (GPA) of 3.0 (B) is required for courses used to fulfill degree requirements.
  - f) Students are normally expected to complete the specified course requirements by the end of their third year of graduate study.
2. *Research*: may be conducted in a science/engineering field under the supervision of a member of the Applied Physics faculty or appropriate faculty from other departments.
3. *Ph.D. Candidacy*: satisfactory progress in academic and research work, together with passing the Ph.D. Candidacy Qualifying Examination, qualifies the student to apply for Ph.D. candidacy which must be completed before the third year of graduate registration. The examination consists of a seminar on a suitable subject delivered by the student before the faculty academic adviser (or an approved substitute) and two other members of the faculty selected by the department.
4. *Research Progress Report*: normally before the end of the Winter Quarter of the fourth year of enrollment in graduate study at Stanford, the student arranges to give an oral research progress report of approximately 30 minutes, of which a minimum of 10 minutes should be devoted to questions from the Ph.D. reading committee.
5. *University Ph.D. Oral Examination*: consists of a public seminar in defense of the dissertation, followed by private questioning of the candidate by the University examining committee.
6. *Dissertation*: must be approved and signed by the Ph.D. reading committee.

\* Requirements for item 1b may be totally or partly satisfied with equivalent courses taken elsewhere, pending the approval of the Graduate Study Committee.

## ASSISTANTSHIPS

Research assistantships are available for Ph.D. candidates. Information on applying for financial aid is included in the admission packet received from Graduate Admissions, the Registrar's Office.

## COURSES

(AU) indicates that the course is subject to the University Activity Unit limitations (8 units maximum).

**APPPHYS 79Q. Energy Choices for the 21st Century**—Stanford Introductory Seminar. Preference to sophomores. Choices for meeting the future energy needs of the U.S. and the world. Basic physics of possible energy sources, technologies that might be employed, and related public policy issues. Trade-offs and societal impacts of different energy sources. Policy options for making rational choices for a sustainable world energy economy.

3 units, Aut (Fox, Geballe)

**APPPHYS 172. Physics of Solids I**—(Enroll in PHYSICS 172.)

3 units, Spr (I. R. Fisher)

**APPPHYS 192. Introductory Biophysics**—For advanced undergraduates or beginning graduate students. Quantitative models used in molecular biophysics. The relation of structure to function. Chemical equilibria, cooperativity, and control: elementary statistical mechanics, affinity plots, allostery, models of hemoglobin-oxygen binding, bacterial chemotaxis. Macromolecular conformations: polymer chain models, protein folding, taxonomy of globular proteins, general principles of sequence selection. Chemical kinetics. Multiple barriers: CO-myoglobin kinetics, ion diffusion through channels and ion selectivity, spectroscopy of ion channels-acetylcholine receptor. Supramolecular kinetics: conversion of chemical energy to mechanical force, myosin and kinesin, actin polymers. Nerve impulse propagation: membrane potentials, voltage sensitive ion gates, Hodgkin Huxley equations, propagation of the nerve impulse.

3 units (Doniach) alternate years, given 2005-06

**APPPHYS 207,208. Laboratory Electronics**—Lecture/lab emphasizing analog and digital electronics for lab research. RC and diode circuits. Transistors. Feedback and operational amplifiers. Active filters and circuits. Pulsed circuits, voltage regulators, and power circuits. Precision circuits, low-noise measurement, and noise reduction techniques. Circuit simulation tools. Principles of synchronous demodulation and applications of lock-in amplifiers. Combinatorial and synchronous digital circuits. Design using programmable logic. Analog/digital conversion. Microprocessors and real time programming. Current lab interface protocols. Techniques commonly used for lab measurements. Development of student lab projects during the last three weeks of 208. Limited enrollment. Prerequisites: undergraduate device and circuit exposure.

APPPHYS 207. 3 units, Win (Fox)

APPPHYS 208. 3 units, Spr (Fox) alternate years, not given 2005-06

**APPPHYS 210. Advanced Particle Mechanics**—(Enroll in PHYSICS 210.)

3 units, Win (Kallos)

**APPPHYS 211. Biophysics of Sensory Transduction**—(Enroll in BIOSCI 211.)

4 units (S. Block) not given 2004-05

**APPPHYS 212. Statistical Mechanics**—(Enroll in PHYSICS 212.)

3 units, Spr (Thomas)

**APPPHYS 213. Neuronal Biophysics**—(Enroll in BIOSCI 217.)

4 units, Aut (Schnitzer)

**APPPHYS 214. Randomness in the Physical World**—Topics include: random numbers, and their generation and application; disordered systems, quenching, and annealing; percolation and fractal structures; universality, the renormalization group, and limit theorems; path integrals, partition functions, and Wiener measure; random matrices; and optical estimation. Prerequisite: introductory course in statistical mechanics or analysis.

3 units, Win (Diaconis, S. Holmes, Kapitulnik, Shenker)

**APPPHYS 215A. Numerical Methods for Physicists and Engineers**—Review of basic numerical techniques with additional advanced material: derivatives and integrals; linear algebra; linear least squares fitting, FFT and wavelets, singular value decomposition, linear prediction; optimization, nonlinear least squares, maximum entropy methods; deterministic and stochastic differential equations, Monte Carlo methods.

3 units, Aut (Moler)

**APPPHYS 215B. Advanced Numerical Methods for Physicists and Engineers**—Analysis of data: Fourier filtering, linear prediction, singular value decomposition, error analysis, non-linear optimization, maximum entropy. Pattern recognition: neural nets, Hidden Markov methods. Simulation: Monte Carlo methods, molecular dynamics, stochastic differential equations. Prerequisite: 215A or equivalent.

3 units, Win (Doniach)

**APPPHYS 216. X-Ray and VUV Physics**—Research and classical concepts in photon science. Photon-electron interactions; x-ray absorption and Compton scattering. X-ray spectroscopy; EXAFS, SEXAFS, edge structure, magnetic circular dichroism, and linear dichroism. Photoemission spectroscopy and many-electron effects: angle-resolved and integrated photoemission, resonance photoemission, spin-polarized photoemission. Photoelectron diffraction and holography. X-ray interactions with condensed matter: diffraction and scattering. Photon sources: synchrotron, wigglers, and undulators. Photon and electron detectors and analyzers. Prerequisite: familiarity with quantum mechanics.

3 units, Aut (Shen) alternate years, not given 2005-06

**APPPHYS 217. Waves and Diffraction in Solids**—(Enroll in MAT-SCI 205.)

3-4 units, Win (Clemens)

**APPPHYS 218. X-Ray and Neutron Scattering in the 21st Century**—Interaction of x-rays and neutrons with matter. Modern sources of radiation: synchrotrons, x-ray free electron lasers, and spallation neutron sources. Scattering formulae. Determination of molecular, crystal, and magnetic structures, and their associated charge, lattice, and magnetic excitations. Applications from condensed matter physics, materials science, biophysics, medicine, and the arts. Examples include thermal and quantum phase transitions, excitations and competing phases in high-temperature superconductors, materials under extreme pressure, structure of nanoparticles, proteins and water, computer-aided tomography, and non-destructive testing of art objects.

3 units, Spr (Grevén)

**APPPHYS 219. Back of the Envelope Physics**—(Enroll in PHYSICS 216.)

3 units, Aut (Wagoner)

**APPPHYS 220. Classical Electrodynamics**—(Enroll in PHYSICS 220.)

3 units, Aut (Fetter)

**APPPHYS 221. Classical Electrodynamics**—(Enroll in PHYSICS 221.)

3 units, Spr (Church)

**APPPHYS 222. Applied Quantum Mechanics I**—(Enroll in EE 222.)

3 units, Aut (Vuckovic)

**APPPHYS 223. Applied Quantum Mechanics II**—(Enroll in EE 223.)

3 units, Win (Vuckovic)

**APPPHYS 226. Physics of Quantum Information**—Review of basic laws and concepts of quantum information science. Fundamental postulates of quantum mechanics: symmetrization postulate, quantum indistinguishability and multi-particle interference, commutation relation and quantum measurement, reduction postulate and impossibility of measuring, cloning and deleting a single wavefunction. Quantum information theory: von Neumann entropy, Holevo information and Schumacher data compression. Decoherence: Linbladlan, quantum error correction, and purification of entanglement.

3 units, Win (Yamamoto) alternate years, not given 2005-06

**APPPHYS 227. Applications of Quantum Information**—Review of concepts and constituent technologies of quantum information systems. Quantum cryptography: single photon and entangled photon-pair-based quantum key distributions, quantum teleportation, quantum repeater. Quantum computer: Deutsch-Josza algorithm, Grover algorithm, Shor algorithm, quantum simulation, quantum circuits. Quantum hardware: atomic physics, nuclear magnetic resonance, spintronics and quantum optics.

3 units, Spr (Yamamoto) alternate years, not given 2005-06

**APPPHYS 230A. Quantum Mechanics**—(Enroll in PHYSICS 230.)

3 units, Aut (Zaanen)

**APPPHYS 230B. Quantum Mechanics**—(Enroll in PHYSICS 231.)

3 units, Win (Kivelson)

**APPPHYS 231A. Introduction to Lasers**—(Enroll in EE 231.)

3 units Aut (Fejer)

**APPPHYS 231B. Laser Dynamics**—(Enroll in EE 232.)

3 units, Win (Fejer)

**APPPHYS 232. Advanced Imaging Lab in Biophysics**—(Enroll in BIOSCI 232.)

4 units, Spr (S. Block, Schnitzer, S. Smith, Stearns)

**APPPHYS 248. Fundamentals of Noise Processes**—(Enroll in EE 248.)

3 units, Aut (Yamamoto)

**APPPHYS 268. Introduction to Modern Optics**—(Enroll in EE 268.)

3 units, Aut (Byer) alternate years, not given 2005-06

**APPPHYS 270. Magnetism and Long Range Order in Solids**—Cooperative effects in solids, with an emphasis on experimental results for archetypical materials. Topics include the origin of magnetism in solids, phase transitions and long range order, measurement of thermodynamic and transport properties, elements of sample preparation and crystal growth, crystal electric field effects, ferromagnetism, antiferromagnetism, density waves, and superconductivity. Prerequisite: PHYSICS 172 or MATSCI 209, or equivalent introductory condensed matter physics course. GER:2a

3 units (Fisher) not given 2004-05

**APPPHYS 271. Concepts in Condensed Matter Physics**—(Enroll in PHYSICS 173B.)

1 unit, Spr (Beasley)

**APPPHYS 272. Solid State Physics I**—The properties of solids. Theory of free electrons, classical and quantum. Crystal structure and methods of determination. Electron energy levels in a crystal: weak potential and tight-binding limits. Classification of solids: metals, semiconductors, and insulators. Types of bonding and cohesion in crystals. Lattice dynamics, phonon spectra, and thermal properties of harmonic crystals. Pre- or corequisites: PHYSICS 120 and 121; and PHYSICS 130 and 131, or equivalents.

3 units, Win (Manoharan)

**APPPHYS 273. Solid State Physics II**—Electronic structure of solids. Electron dynamics and transport. Semiconductors and impurity states. Surfaces. Dielectric properties of insulators. Electron-electron, electron-phonon, and phonon-phonon interactions. Anharmonic effects in crystals. Electronic states in magnetic fields and the quantum Hall effect. Magnetism, superconductivity, and other related many-particle phenomena. Prerequisite: 272.

3 units, Spr (Manoharan)

**APPPHYS 275. Probing the Nanoscale**—Introduction to the theory, operation, and applications of nanoprobe of interest in physics and materials science. Lectures by experts. Topics include scanning tunneling microscopy, spectroscopy, and potentiometry; atomic manipulation; scanning magnetic sensors and magnetic resonance; scanning field-effect gates; scanning force probes; and ultra-near-field optical scanning.

3 units, Win (Beasley)



**APPPHYS 280. Phenomenology of Superconductors I**—Applications based on superconductivity as a phase-coherent macroscopic quantum phenomena. Topics include the superconducting pair wave function, London and Ginzburg Landau theories, their physical content, the Josephson effect and superconducting quantum interference devices, s- and d-wave superconductivity, the response of superconductors to currents, magnetic fields, and rf electromagnetic radiation.  
3 units, Aut (Beasley)

**APPPHYS 281. Phenomenology of Superconductors II**—Continuation of 280. Advanced topics include vortex states of matter, collective pinning, fluctuation effects, effects of dimensionality, the Kosterlitz-Thouless transition, Josephson junction arrays, quantum effects, and the superconductor/insulator transition.  
3 units (Beasley) alternate years, given 2005-06

**APPPHYS 290. Directed Studies in Applied Physics**—Special studies under the direction of a faculty member for which academic credit may properly be allowed. May include lab work or directed reading.  
1-15 units, Aut, Win, Spr, Sum (Staff)

**APPPHYS 291. Practical Training**—Opportunity for practical training in industrial labs. Arranged by student with the research adviser's approval. requires summary of activities, approved by research adviser.  
3 units, Sum (Staff)

**APPPHYS 304. Lasers Laboratory**—Theory and practice. Theoretical and descriptive background for lab experiments, detectors and noise, and lasers (helium neon, beams and resonators, argon ion, cw dye, titanium sapphire, semiconductor diode, and the Nd:YAG). Measurements of laser threshold, gain, saturation, and output power levels. Laser transverse and axial modes, linewidth and tuning, Q-switching and modelocking. Limited enrollment. Prerequisites: EE 231 and 232, or consent of instructor.  
3 units, Win (Byer)

**APPPHYS 305. Nonlinear Optics Laboratory**—Laser interaction with matter. Laser devices provide the radiation required to explore the linear and nonlinear properties of matter. Experiments on modulation, harmonic generation, parametric oscillators, modelocking, stimulated Raman and Brillouin scattering, coherent anti-Stokes scattering, other four wave mixing interactions such as wavefront conjugation and optical bistability. Optical pumping and spectroscopy of atomic and molecular species. Limited enrollment. Prerequisites: 304, EE 231 and 232, or consent of instructor.  
3 units (Byer) alternate years, given 2005-06

**APPPHYS 315. Methods in Computational Biology**—Introduction to genome databases; linear programming methods in genome sequence comparisons; hidden Markov models; exons, introns, and single nucleotide polymorphisms. Introduction to cluster analysis methods; applications to genetic microarrays. Computational methods in protein, RNA and DNA structure and dynamics: simplified representations, distance geometry methods, protein structure prediction methods. Molecular dynamics methods: applications to protein and RNA folding and unfolding and other conformational changes using massively parallel algorithms.  
3 units (Doniach) alternate years, given 2005-06

**APPPHYS 324. Introduction to Accelerator Physics**—Basic physics of linear and circular accelerators. Topics include acceleration, phase stability, transfer matrices, beam envelopes, emittance, and the effects of synchrotron radiation. Topics of current research including nonlinearities and instabilities.  
3 units (Siemann) alternate years, given 2005-06

**APPPHYS 325. Synchrotron Radiation and Free Electron Lasers**—Emission of electromagnetic radiation by a relativistic electron beam in accelerator devices such as storage rings, undulators, and free electron lasers. Fundamental concepts in particle and radiation beams. Basic properties of synchrotron radiation in bending magnets and the enhanced radiation from undulators (periodic magnetic devices). Physics of free electron lasers including self-amplified spontaneous emission.  
3 units, Win (Chao, Huang) alternate years, not given 2005-06

**APPPHYS 344A. Computational Nanotechnology**—(Enroll in ME 344A.)  
3 units, Win (Cho)

**APPPHYS 344B. Nanomaterials Modeling**—(Enroll in ME 344B.)  
3 units, Spr (Cho)

**APPPHYS 346. Introduction to Nonlinear Optics**—(Enroll in EE 346.)  
3 units, Spr (S. Harris)

**APPPHYS 366. Introduction to Fourier Optics**—(Enroll in EE 366.)  
3 units, Aut (Hesslink) alternate years, not given 2005-06

**APPPHYS 372. Condensed Matter Theory I**—Fermi liquid theory, many-body perturbation theory, response function, functional integrals, interaction of electrons with impurities.  
3 units (Staff) not given 2004-05

**APPPHYS 373. Condensed Matter Theory II**—Superfluidity and superconductivity. Quantum magnetism. Prerequisite: 372.  
3 units (Staff) not given 2004-05

**APPPHYS 377. Literature of Condensed Matter Physics**—(Enroll in PHYSICS 377.)  
3 units (Staff) not given 2004-05

**APPPHYS 383. Introduction to Atomic Processes**—Atomic spectroscopy, matrix elements using the Coulomb approximation, summary of Racah algebra, oscillator and line strengths, Einstein A coefficients. Radiative processes, Hamiltonian for two- and three-state systems, single- and multi-photon processes, linear and nonlinear susceptibilities, density matrix, brightness, detailed balance, and electromagnetically induced transparency. Inelastic collisions in the impact approximation, interaction potentials, Landau-Zener formulation. Continuum processes, Saha equilibrium, autoionization, and recombination.  
3 units (S. Harris) alternate years, given 2005-06

**APPPHYS 387. Quantum Optics and Measurements**—Fundamental postulates in quantum mechanics and quantum optics: Heisenberg's uncertainty principle, von Neumann's projection hypothesis, quantum non-demolition measurements, quantum states of light, cavity quantum electrodynamics, nonlocality and quantum entanglement. Second quantization of bosonic and fermionic fields; Glauber, Fock, Dicke, and Bloch states, first- and second-order coherence, quantum interference. Reservoir theory of open systems: Markoff and Born approximations, density operator master, Fokker-Planck, quantum Langevin, stochastic differential equations, quantum Monte-Carlo wavefunction method.  
3 units (Yamamoto) alternate years, given 2005-06

**APPPHYS 388. Mesoscopic Physics and Nanostructures**—Optical properties of semiconductor nanostructures: interband and intraband optical transitions, excitons and polaritons, semiconductor Bloch equations, bosonization, exciton BEC, exciton laser. Transport properties in mesoscopic and atomic systems: electron optics vs. photon optics, Landauer-Büttiker formula, noise in diffusive and dissipative transport, nonequilibrium Green's function, electron entanglement, Coulomb blockade, single electronics, and spin dynamics in semiconductor quantum dots. Partly Journal Club format with presentations by students on assigned topics.  
3 units (Yamamoto) alternate years, given 2005-06

**APPPHYS 390. Dissertation Research**  
1-15 units Aut, Win, Spr, Sum (Staff)

**APPPHYS 392. Topics in Molecular Biophysics**—Concepts from statistical mechanics are applied to problems in contemporary molecular biology: allosteric transitions; protein folding; molecular recognition; actin polymers and gels; molecular motors; lipids and membrane proteins; ion channels. Some of the basic models used to quantitate fundamental biomolecular functions. Prerequisites: elementary statistical mechanics and chemical kinetics.  
3 units, Spr (Doniach) alternate years, not given 2005-06

**APPPHYS 453A. Guided Electromagnetic Waves**—Unified treatment of electromagnetic wave guiding structures. Overmoded metallic cylindrical waveguides such as millimeter waves corrugated waveguides; surface impedance waveguides; open waveguides such as optical fibers; and natural waveguides such as mining tunnels. Periodic structures for particle accelerators and filters. Microwave circuit representations and multimoded structures. Applications of guiding structures to ultra-high-power rf transport and ultra-high power rf pulse compression systems. Excitation and mode converters.

3 units, Spr (Tantawi)

**APPPHYS 459. Frontiers in Interdisciplinary Biosciences**—(Cross-listed in departments in the schools of H&S, Engineering, and Medicine; student register through their affiliated departments; otherwise register for CHEMENG 459) See CHEMENG 459 or [http://biox.stanford.edu/courses/459\\_announce.html](http://biox.stanford.edu/courses/459_announce.html)

1 unit, Aut, Win, Spr (Robertson)

**APPPHYS 470. Condensed Matter Seminar**—Current research and literature; offered by faculty, students, and outside specialists. (AU)

1 unit, Aut, Win, Spr (Staff)

**APPPHYS 473A. Condensed Matter Physics**—Students undertake background study prior to each weekly seminar offered through 470 as an introduction to topics of contemporary interest in condensed matter physics, critique each seminar for success in oral communication, and present a one-hour seminar on a contemporary topic for critique by the class. Corequisite: 470.

2 units (Staff) not given 2004-05

**APPPHYS 473B. Disordered Superconductors and the Superconductor-Insulator Transition**—Types of disorder and their effect on superconductivity with emphasis on percolation and localization effects. Effects of disorder on superconductors of reduced dimensionality. Metal-superconductor and insulator-superconductor transitions. Bose insulator states.

3 units, Aut (Kapitulnik)

**APPPHYS 483. Optics and Electronics Seminar**—Weekly presentations and discussions of current research topics in lasers, quantum electronics, optics, and photonics by faculty, students, and invited speakers. (AU)

1 unit, Aut, Win, Spr (Staff)

## ARCHAEOLOGY PROGRAM

*Director:* Ian Morris (Classics, History)

*Professors:* Ian Hodder (Cultural and Social Anthropology), Richard Klein (Anthropological Sciences), Gail Mahood (Geological and Environmental Sciences), Ian Morris (Classics, History), Amos Nur (Geophysics), Michael Shanks (Classics)

*Associate Professors:* Jody Maxmin (Art History, Classics), John Rick (Anthropological Sciences)

*Assistant Professors:* Giovanna Ceserani (Classics), David DeGusta (Anthropological Sciences), Joanna Mountain (Anthropological Sciences), Jennifer Trimble (Classics), Barbara Voss (Cultural and Social Anthropology), Michael Wilcox (Cultural and Social Anthropology)

*Visiting Professor:* Lynn Meskell

*Associated Staff:* Laura Jones (Campus Archaeologist), Tom Seligman (Cantor Center)

*Fellows:* Tristan Carter, Kara Cooney, Brien Garnand, Patrick Hunt, Bill Rathje, Rob Schon, James Truncer

*Program Offices:* Building 60, Main Quad

*Mail Code:* 94305-2170

*Web Site:* <http://archaeology.stanford.edu>

Courses given in the Archaeology Program have the subject code ARCHLGY. For a complete list of subject codes, see Appendix.

Human beings and their ancestors have roamed the earth for at least five million years, but only invented writing five thousand years ago. And for most of the period since its invention, writing only tells us about small elite groups. Archaeology is the only discipline that gives direct access to the experiences of all members of all cultures, everywhere in the world. Stanford's Archaeology Program is unique in providing students with an interdisciplinary approach to the material remains of past societies, drawing in equal parts on the humanities, social sciences, and natural sciences.

The program has three goals:

1. To provide a broad and rigorous introduction to the analysis of the material culture of past societies, drawing on the questions and methods of the humanities, social sciences, and natural sciences.
2. To relate this analysis to the practice of archaeology in the contemporary world.
3. To help each student achieve a high level of understanding through concentrated study of a particular research area.

The Archaeology curriculum draws on faculty from a wide range of University departments and schools. To complete the requirements for the major, students must take courses from the offerings of the program and from the listings of other University departments. The program culminates in a B.A. in Archaeology.

Archaeology majors are well prepared for advanced training in professional schools (for example, education, law, journalism) and, depending on their choice of upper-division courses, graduate programs in the humanities, social sciences, and natural sciences.

## UNDERGRADUATE PROGRAMS BACHELOR OF ARTS

The B.A. in Archaeology requires a minimum of 65 units in the major, divided between five components:

1. *Core Program* (20 units), consisting of:
  - a) Gateway: ARCHLGY 1, Introduction to Prehistoric Archaeology (5 units)
  - b) Intermediate: ARCHLGY 102, Introduction to Scientific Methods in Archaeology (5 units)
  - c) Intermediate: ARCHLGY 103, History of Archaeological Thought (5 units)
  - d) Capstone: ARCHLGY 104, Archaeology of Modern Times (5 units; Writing in the Major)

ARCHLGY 1 (ANTHSCI 3) is recommended as a first course, and many upper-level courses in Archaeology require this course as a prerequisite. Students should normally take the capstone course in their final year of course work in the major.

2. *Analytical Methods and Computing* (at least 3-5 units): quantitative skills and computing ability are indispensable to archaeologists. It is recommended that students take either ANTHSCI 192, Data Analysis in Anthropological Science, or ANTHSCI 208, Models and Imaging in Archaeological Computing. Other courses that may satisfy this requirement are PSYCH 10/STATS 60, ECON 102A, and GES 160.
3. *Archaeological Skills* (at least 10 units): archaeological skills include archaeological formation processes, botanical analysis, cartography, ceramic analysis, dating methods, faunal analysis, geographic information systems, geology, geophysics, genetics, osteology, remote sensing, soil chemistry, and statistics. All students are required to take at least 5 units from section A, Formation Processes, and at least 5 units from section B, Archaeological Methods. Students are strongly encouraged, whenever possible, to take GES 186, Geoarchaeology, to fulfill the formation processes requirement. With the approval of the instructor and Archaeology director, undergraduates may fulfill part of this requirement from graduate-level courses (i.e., courses with numbers of 200 or higher). Note: this list combines historical and current offerings subject to change. Please contact the Archaeology administrator for course planning beyond 2004-05 and check the web site.

### Section A: Formation Processes

GES 1. Fundamentals of Geology	5
GES 49N. Field Trip to Death Valley and Owens Valley	5
GES 80. Earth Materials	5
GES 186/286. Geoarchaeology	5

GEOPHYS 50Q. Earthquakes and Archaeology in the Eastern Mediterranean	2	ANTHSCI 116. Research in Maya Hieroglyphic Writing	1-2
GEOPHYS 140. Introduction to Remote Sensing	3	ANTHSCI 122. The Ancient Maya	5
GEOPHYS 190. Near-Surface Geophysics	3	ANTHSCI 141. Hunter-Gatherers in an Archaeological Perspective	5
<b>Section B: Archaeological Methods</b>		ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeology	5
ANTHSCI 133A. Human Osteology	5	ANTHSCI 22. Archaeology of North America	5
ANTHSCI 133B. Advanced Human Osteology	5	CASA 16. Native Americans in the 21 <sup>st</sup> Century: Encounters, Identity, and Sovereignty in Contemporary America	5
ANTHSCI 146. Archaeological Ceramics	5	CASA 117. Archaeology of the American Southwest	5
ANTHSCI 149. Archaeological Field Methods	5	CASA 135. Native Peoples of the Americas: Prehistory and History of Indigenous Societies	5
CASA 103. Laboratory Methods in Historical Archaeology	5	<i>Archaeological Fieldwork</i> —Students may meet this requirement in three ways:	
CLASSART 150. Archaeological Fieldwork in the Mediterranean	5	1. by taking ANTHSCI 149, Archaeological Field Methods.	
4. <i>Theory</i> (at least 10 units): topics include archaeological, art-historical, sociocultural, historical, and material culture theory. With the approval of the instructor, undergraduates may fulfill part of this requirement from graduate-level courses (i.e., courses with numbers of 200 or higher). Note: the following list is a combination of historical and current offerings. Please contact the Archaeology administrator for course planning beyond 2004-05 and check web site.		2. by taking part in a month-long field project directed by a Stanford faculty member, and taking a directed reading during the returning academic year for credit. In 2004-05, field projects are underway in Peru, Rome, Sicily, Switzerland, Turkey, and San Francisco.	
ANTHSCI 111. Language and Prehistory	5	3. by completing a field school offered by another institution. Such field schools must be approved in advance by the student's undergraduate adviser and by the director of the Archaeology Program.	
ANTHSCI 130. Paleoanthropology Seminar	3-4	<i>Collateral Language Requirement</i> —All Archaeology majors must demonstrate competence in a foreign language beyond the first-year level. Students can meet this requirement by completing a course beyond the first-year level with a grade of 'B-' or better, and are encouraged to choose a language that has relevance to their archaeological region or topic of interest. Students may petition to take an introductory-level course in a second language to fulfill this requirement by demonstrating the connection between the language(s) and their research interest(s).	
ANTHSCI 141. Hunter-Gatherers in an Archaeological Perspective	5	To declare a major in Archaeology, students should contact the program administrator, who provides an application form, answer initial questions, and help the student select a faculty adviser and area of concentration. All majors must complete 65 units, which must form a coherent program of study and be approved by the student's faculty adviser and the program director.	
ANTHSCI 145. Evolutionary Theory in Archaeology	5	Students who plan to pursue graduate work in Archaeology should be aware of the admission requirements of the particular departments to which they intend to apply. These vary greatly. Early planning is advisable to guarantee completion of major and graduate school requirements.	
ANTHSCI 190. Social Theory in the Anthropological Sciences	5	<b>MINOR</b>	
CASA 108. History of Archaeological Thought	5	A minor in Archaeology provides an introduction to the study of the material cultures of past societies. It can complement many majors, including but not limited to Anthropological Sciences, Applied Physics, Art and Art History, Classics, Cultural and Social Anthropology, Earth Systems, Geological and Environmental Sciences, History, and Religious Studies.	
CASA112. Archaeology of Cities	3	To minor in Archaeology, the student must complete at least 27 units of relevant course work, including:	
CASA 131. Archaeology and Anthropology of Visual Culture	5	1. <i>Core Program</i> (10 units), consisting of:	
CASA 134. Archaeology of Architecture	5	a) Gateway: ARCHLGY 1, Introduction to Prehistoric Archaeology (5 units)	
CASA 138. Feminist Practice in Archaeology	5	b) Capstone: ARCHLGY 104, The Archaeology of Contemporary Issues (5 units; Writing in the Major)	
5. <i>Area of Concentration</i> (at least 20 units): in consultation with their faculty advisers, students choose an area of concentration in archaeological research. Concentrations can be defined in terms of time and space (e.g., Mediterranean Archaeology, New World Archaeology) or in terms of research problems (e.g., Hunter-Gatherer Archaeology, the Archaeology of Complex Societies). An area of concentration should provide both breadth and depth in a specific research area. Courses should be selected from the list given below. Courses other than those on this list can be used to fulfill this requirement with the prior approval of both the student's faculty adviser and the program director. With the approval of the instructor, undergraduates may fulfill part of this requirement from graduate-level courses (i.e., courses with numbers of 300 or higher). Some courses (e.g., ANTHSCI 140, Stone Tools in Prehistory) can be taken either to fulfill the skills requirement or as part of an area of concentration. However, each course may only count toward one component of the program. Students are encouraged to design their own area of concentration, with the prior approval of both the student's faculty adviser and the program director.		ANTHSCI 3 is highly recommended as a first course, and many of the upper-level courses in archaeology require this course as a prerequisite. Students should normally take the capstone course in their final year of course work in the minor.	
<i>Concentrations</i> —In addition to the following components, all majors must participate in an archaeological field project, and complete a collateral language requirement. Note: this list combines historical and current offerings subject to change. Please contact the Archaeology administrator for course planning beyond 2004-05 and visit the web site.		2. <i>Archaeological Skills</i> (2-5 units): archaeological skills include dating methods, faunal analysis, botanical analysis, ceramic analysis, geology, geophysics, soil chemistry, remote sensing, osteology, genetics, statistics, cartography, and geographic information systems. The course(s) must be selected from either section in the list above.	
<b>Hunter-Gatherer Archaeology:</b>		3. <i>Theory</i> (5 units): topics include archaeological, art-historical, sociocultural, historical, and material-culture theory. The course(s) must be selected from the list given above.	
ANTHSCI 141. Hunter-Gatherers in an Archaeological Perspective	5	4. <i>Area of Concentration</i> (10 units): in consultation with their faculty advisers, students choose an area of concentration in archaeological research. Concentrations can be defined in terms of time and space (e.g., Mediterranean Archaeology, New World Archaeology) or in	
ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeology	5		
<b>Archaeology of Complex Societies:</b>			
ANTHSCI 122. The Ancient Maya	5		
ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeology	5		
CLASSART 101. Archaic Greek Art	5		
CASA 178. Archaeology of the Middle East	5		
CLASSART 61. The Archaeology of the Greek World	5		
CLASSART 81. Introduction to Roman Archaeology	5		
CLASSART 102. Classical and 4th-Century Greek Art	4-5		
IHUM 31A,B. The Ancient Empires	5		
<b>Mediterranean Archaeology:</b>			
ARTHIST 202. Beazley and After	5		
CLASSART 61. The Archaeology of the Greek World	5		
CLASSART 81. Introduction to Roman Archaeology	5		
CLASSART 101. Archaic Greek Art	5		
CLASSART 102. Classical and 4th-Century Greek Art	4-5		
GEOPHYS 50Q. Earthquakes and Archaeology in the Eastern Mediterranean	5		
<b>New World Archaeology:</b>			
ANTHSCI 111. Language and Prehistory	5		
ANTHSCI 115. Maya Hieroglyphic Writing	5		



terms of research problems (e.g., Hunter-Gatherer Archaeology, the Archaeology of Complex Societies). An area of concentration should provide both breadth and depth in a specific research area. Courses must be selected from the list above. Students are encouraged to design their own area of concentration, with the prior approval of both the student's faculty adviser and the program director.

Students must complete the declaration process (both the planning form submission and Axxess registration) by the last day of the quarter, two quarters prior to degree conferral (for example, by the last day of Autumn Quarter if Spring graduation is intended).

## HONORS PROGRAM

The honors program in Archaeology gives qualified majors the chance to work closely with faculty on an individual research project culminating in an honors thesis. Students may begin honors research from a number of starting points including topics introduced in the core or upper-division courses, independent interests, research on artifacts in Stanford's collections, or fieldwork experiences.

Candidates of sophomore and junior standing with an overall Stanford grade point average (GPA) of 3.0 or better should submit an application to the program administrator no later than the end of the fourth week of the Spring Quarter. It must include a brief statement of the project, a transcript, a short paper, and a letter of recommendation from the faculty member who supervises the honors thesis. Students are notified of their acceptance by the Undergraduate Committee.

Approved candidates must complete all of the requirements for their major and submit an honors thesis no later than four weeks prior to the end of the quarter in which graduation is anticipated. The thesis is read by the candidate's adviser and a second reader appointed by the undergraduate committee. Honors candidates may enroll in one of the honors or thesis courses in Anthropological Sciences, Classics, Cultural and Social Anthropology, Geological and Environmental Sciences, or Geophysics for up to three quarters during their senior year (15 units maximum). No more than 5 of those units may count toward the 65-unit degree requirement.

## COURSES

### CORE COURSES

These courses are required of all Archaeology majors.

**ARCHLGY 1. Introduction to Prehistoric Archaeology**—(Same as ANTHSCI 3.) Aims, methods, and data in the study of human society's development from early hunters through late prehistoric civilizations. Archaeological sites and remains characteristic of the stages of cultural development are examined for selected geographic areas, emphasizing methods of data collection and analysis appropriate to each. (HEF II) GER:3b,4a

*3-5 units, Aut (Rick)*

**ARCHLGY 11. Archaeology and Ancient Technology: How Things Were Made**

*5 units, Sum (Hunt)*

**ARCHLGY 102. Introduction to Scientific Methods in Archaeology**—(Same as ANTHSCI 148.) Scientific methods used in archaeology to interpret the material traces of the past: research design, dating, methods, faunal analysis, botanical analysis, ceramic analysis, geology, geophysics, earth science, soil chemistry, osteology, genetics, statistics, geography, cartography, and geographic information systems. GER:3b

*5 units (Truncer) not given 2004-05*

**ARCHLGY 103. History of Archaeological Thought**—(Same as CASA 108.) Introduction to the history of archaeology and the forms that the discipline takes today, emphasizing developments and debates over the past five decades. Historical overview of culture, historical, processual and post-processual archaeology, and topics that illustrate the differences and similarities in these different theoretical approaches.

*5 units, Win (Voss)*

**ARCHLGY 104. Archaeology of Modern Times**—(Same as ANTHSCI 147.) Archaeological theory, method, and data are used to arrive at a better understanding of an issue of contemporary public concern. Issues include resource and energy management strategies such as the electricity situation in California, biodegradation and solid waste management, the relationship between human beings and dogs, ethnic wars in the Balkans and elsewhere, and Bill Gates' strategies in the rise of Microsoft. GER:3b, WIM

*5 units, Win (Rathje)*

**ARCHLGY 118/218. Geoarchaeology**—(Same as GES 186.) For juniors, seniors, and beginning graduate students with interests in archaeology and/or geosciences. Introduction to the use of geological concepts, techniques, and data in the study of artifacts and the interpretation of the archaeological record. Topics include: sediments and soils; sedimentary settings of site formation; postdepositional processes that disturb sites; paleoenvironmental reconstruction of past climates and landscapes using plant and animal remains and isotopic studies; raw materials (minerals, metals, stone, shells, clay, building materials) and methods used in sourcing; estimating age based on stratigraphic and radiometric techniques. Weekly lab; weekend field trips to local archaeological/geological localities. GER:2a

*5 units, Spr (Mahood) alternate years, not given 2005-06*

## INTERDEPARTMENTAL OFFERINGS

See respective department listings for course descriptions and General Education Requirements (GER) information.

### ANTHROPOLOGICAL SCIENCES

**ANTHSCI 13. Bioarchaeology**

*3-5 units, Spr (DeGusta)*

**ANTHSCI 108/208. Models and Imaging in Archaeological Computing**

*3-5 units (Rick) not given 2004-05*

**ANTHSCI 115/215. Maya Hieroglyphic Writing**

*5 units, Spr (Fox)*

**ANTHSCI 116/216. Research in Maya Hieroglyphic Writing**

*1-2 units (Fox) not given 2004-05*

**ANTHSCI 122/222. The Ancient Maya**

*2-5 units (Fox) not given 2004-05*

**ANTHSCI 133A/233A. Human Osteology**—(Same as HUMBIO 180.)

*5 units, Win (DeGusta)*

**ANTHSCI 133B/233B. Advanced Osteology**

*5 units, Spr (DeGusta)*

**ANTHSCI 141/241. Hunter-Gatherers in Archaeological Perspective**

*4-5 units, Aut (Truncer)*

**ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeology**

*3-5 units (Rick) not given 2004-05*

**ANTHSCI 143. Ethnoarchaeology**

*3-5 units, Win (D. Bird)*

**ANTHSCI 145B/245B. Evolution of Civilizations**

*3-5 units (Staff) not given 2004-05*

**ANTHSCI 145A/245. Evolutionary Theory in Archaeology**

*3-5 units (Staff) not given 2004-05*

**ANTHSCI 146/246. Archaeological Ceramics**

*4 units (Staff) not given 2004-05*

**ANTHSCI 149. Archaeological Field Methods**

*5 units (Rick) not given 2004-05*

**ANTHSCI 190. Social Theory in the Anthropological Sciences**

*5 units, Spr (Brown)*

**ANTHSCI 192/292. Data Analysis in the Anthropological Sciences**  
5 units, Spr (Klein)

**ANTHSCI 194. Post Field Seminar**  
5 units, Aut (K. Barrett)

**ANTHSCI 242. Beginnings of Social Complexity**  
5 units (Rick) not given 2004-05

### ART HISTORY

**ARTHIST 101/301. Archaic Greek Art**—(Same as CLASSART 101/201.)  
4 units, Aut (Maxmin)

**ARTHIST 102/302. Classical and 4th-Century Greek Art**—(Same as CLASSART 102/202.)  
4 units, Win (Maxmin)

**ARTHIST 104/304. Etruscan to Early Empire**—(Same as CLASSART 104/204.)  
4 units (Maxmin) not given 2004-05

### CLASSICS, ART/ARCHAEOLOGY

**CLASSART 126. Alpine Archaeology**  
3-5 units, Spr (Hunt)

**CLASSART 150/250. Archaeological Field Work in the Mediterranean**  
3 units, Spr (Jackman)

### CULTURAL AND SOCIAL ANTHROPOLOGY

**CASA 16. Native Americans in the 21st Century: Encounters, Identity, and Sovereignty in Contemporary America**  
5 units (Wilcox) not given 2004-05

**CASA 94. Postfield Research Seminar**  
5 units, Aut (Freidenfelds)

**CASA 102. Archaeological Field Methods: Presidio San Francisco**  
5 units, Aut (Voss)

**CASA 103/203. Laboratory Methods in Archaeology**  
5 units (Voss) not given 2004-05

**CASA 112/212. The Archaeology of Cities**  
5 units (Voss) not given 2004-05

**CASA 117/217. Archaeology of the American Southwest: Contemporary Peoples, Contemporary Debates**  
5 units (Wilcox) not given 2004-05

**CASA 131. Archaeology and Anthropology of Visual Culture**  
5 units (Staff) not given 2004-05

**CASA 134/234. Archaeology of Architecture**  
5 units (Voss) not given 2004-05

**CASA 135/235. Native Peoples of the Americas: Prehistory, Contacts, and Contemporary Debates**  
5 units (Wilcox) not given 2004-05

**CASA 137E/237E. Excavation at Catalhoyuk, Turkey**  
3-5 units, Spr (Hodder)

**CASA 138. Feminist Practice in Archaeology**  
5 units (Voss) not given 2004-05

**CASA 140/240. An Archaeology of Death**  
3-5 units, Aut (Carter)

**CASA 147/247. Archaeology and the Public Imagination**  
3-5 units, Win (Carter)

**CASA 152. Archaeology: World Cultural Heritage**  
5 units, Aut (Hodder)

**CASA 178/278. Archaeology of the Middle East**

5 units (Hodder) not given 2004-05

**CASA 190/290. History and Theory in Cultural and Social Anthropology**  
5 units, Win (Baviskar)

**CASA 346A. Sexuality Studies in Anthropology**  
5 units, Spr (Mankekar, Voss)

**CASA 372. Materiality**  
5 units (Hodder) not given 2004-05

**CASA 373. Introduction to Archaeological Theory**  
5 units, Win (Hodder)

**CASA 375. Archaeology and Globalism**  
4-5 units, Spr (Hodder)

**CASA 380. Practice and Performance: Bourdieu, Butler, and Giddens**  
5 units (Voss) not given 2004-05

### GEOLOGICAL AND ENVIRONMENTAL SCIENCES

**GES 1. Fundamentals of Geology**  
5 units, Aut (Egger), Win (Ernst), Spr (McWilliams)

**GES 49N. Field Trip to Death Valley and Owens Valley**  
3 units, Win (Mahood) alternate years, not given 2005-06

**GES 80. Earth Materials**  
4 units, Aut (Brown, Liou)

**GES 144. Fundamentals of Geographic Information Science (GIS)**  
4 units, Spr (Seto)

**GES 160. Statistical Methods for Earth and Environmental Sciences: General Introduction**  
3-4 units (Switzer) not given 2004-05

**GES 186. Geoarchaeology**  
5 units, Spr (Mahood) alternate years, not given 2005-06

### LINGUISTICS

**LINGUIST 160. Introduction to Language Change**—(Enroll in ANTHSCI 110.)  
4-5 units, Win (Fox)

### STATISTICS

**STATS 60/160. Introduction to Statistical Methods: Precalculus**—(Same as PSYCH 10.)  
5 units, Aut (Walther), Win (Thomas), Spr, Sum (Staff)



# ART AND ART HISTORY

*Emeriti: (Professors)* Keith Boyle, Lorenz Eitner, Suzanne Lewis, Frank Lobdell, Dwight C. Miller, Nathan Oliveira, Richard Randell, Michael Sullivan

*Chair:* Joel Leivick

*Associate Chair for Art History:* Bryan J. Wolf

*Associate Chair for Studio Art, Director of Studio Art Program, and Principal Adviser to Undergraduate Studio Majors:* Kristina Branch

*Principal Adviser to Undergraduate Art History Majors:* Jody Maxmin

*Director of Graduate Studies in Art History:* Wanda M. Corn

*Director of Graduate Studies in Studio Art:* David Hannah

*Professors:* Wanda M. Corn (American Art), Elliot Eisner (Art Education), David Hannah (Painting/Drawing), Matthew S. Kahn (Design), Michael Murrin (18th- and 19th-century European Art, on leave Spring), Melinda Takeuchi (Japanese Art), Paul V. Turner (Architectural History), Richard Vinograd (Chinese Art), Bryan Wolf (American Art)

*Associate Professors:* Kristina Branch (Painting/Drawing), Scott Bukatman (Film Studies), Enrique Chagoya (Painting/Drawing/Printmaking), Paul DeMarinis (Electronic Media), Maria Gough (Modern Art), Pamela M. Lee (Contemporary Art), Jody Maxmin (Ancient Art)

*Assistant Professors:* Pavle Levi (Film Studies), Bissera Pentcheva (Medieval Art), Gail Wight (Electronic Media)

*Professor (Teaching):* Joel Leivick

*Affiliated Professor:* John H. Merryman (Art and Art History, Law; emeritus)

*Department Offices:* Room 101, Cummings Art Building

*Mail Code:* 94305-2018

*Phone:* (650) 723-3404

*Web Site:* <http://www.stanford.edu/dept/art>

Courses given in Art have the subject codes ARTHIST and ARTSTU-DI. For a complete list of subject codes, see Appendix.

The department offers courses of study in: (1) the history of art, and (2) the practice of art (studio), with major concentrations in painting and drawing, sculpture, design, and photography. The undergraduate program of the department is designed to introduce students to the humanistic study of the visual arts. The courses are intended to increase an understanding of the meaning and purpose of the arts, their historical development, their role in society, and their relationship to other humanistic disciplines such as literature, music, and philosophy. Work in the classroom and studio is designed to intensify visual perception of the formal and expressive means of art and to encourage insight into a variety of technical processes. Integral to the program are student and faculty exhibitions in the Thomas Welton Stanford Art Gallery.

The Iris and B. Gerald Cantor Center for Visual Arts at Stanford University is a major resource for the department. The center offers a 22,000 object collection on view in rotating installations in 18 galleries, the Rodin Sculpture Garden, and a diverse schedule of special exhibitions, educational programs, and events. Through collaborations with the teaching program, student internships, and a range of student activities, the center provides a rich resource for Stanford students.

## ART HISTORY

Over the past two decades the study of Art History has changed dramatically to include the study of art forms made far afield from the traditional core of Western Europe and to re-examine its objects in light of new critical frameworks. The Art History program promotes a plurality of approaches to the study of art by encouraging majors to construct a program of study drawn from the broad offerings of the Art History curriculum and the University at large.

## UNDERGRADUATE PROGRAMS BACHELOR OF ARTS

Art History majors are defined by a passion for the visual; for traditional fine arts, including painting, sculpture, architecture, prints, and the decorative arts; for the study of everyday objects, including advertisements, billboards, commercial signs, and visual culture; and for film, new media, and computer graphics. They share close observation and curiosity about how society represents itself. Students majoring in the Art History pursue the ways in which cultures express themselves through the arts, and acquire the tools for visual analysis and historical understanding. They learn to analyze works of art in many media as they become proficient in cultural analysis and historical interpretation.

Art History majors combine courses in art, film, and visual culture with an area of concentration tailored to individual interests. The requirements are grouped into three clusters: foundation courses introduce students to visual analysis and provide an overview of the fields within Art History; distribution courses acquaint students with the art of different historical periods and geographical regions; individual areas of concentration, developed in consultation with a faculty adviser, allow students to pursue their specific interests. All majors are also required to take the junior seminar, offered each year in Autumn Quarter, in which they investigate methods and theories that have defined art historical scholarship. In their senior year, majors may elect to write an honors thesis, exploring a single topic in depth across several quarters of study in close collaboration with several professors.

All courses for the major in Art History must be taken for a letter grade.

*Foundation Courses*—Focus is on visual analysis, introducing students to the specialized vocabulary, forms of analysis, and principal concerns of Art History. ARTHIST 1, Introduction to the Visual Arts, provides training in art analysis and cultural interpretation; this course is required of all majors and should be taken early in a student's career.

Other Foundation courses introduce students to the broad concerns of Asian art (ARTHIST 2), architecture (ARTHIST 3), and film (ARTHIST 4). In addition to ARTHIST 1, History of Art majors are required to take at least one other foundation course.

Majors are also required to complete at least one introductory Studio Art course using the traditional materials of painting, sculpture, drawing, photography, or printmaking.

*Distribution Courses*—In order for students to acquire a broad overview of different historical periods and different geographic regions, majors must take at least four art history courses distributed among the following categories: ancient and medieval; Renaissance and early modern; modern, contemporary, and the United States; Asia, Africa, and the Americas; and film studies.

*Area of Concentration*—The department encourages students to pursue their interests by designing an area of concentration tailored to their own intellectual concerns. This area of concentration provides the student with an in-depth understanding of a coherent topic in Art History. It must consist of five courses: two must be seminars or colloquia; four of the five courses must be in a single field or concentration constructed by the student in consultation with a faculty adviser.

There are no pre-defined areas of concentration; students create their own concentration based on individual interests by focusing on topics, questions of genre, or historical or national traditions. Students with a strong interest in topics that cross disciplines may create an interdisciplinary concentration.

Students submit an area of concentration form, signed by their faculty adviser, during the Winter Quarter of the junior year. The form includes a brief statement defining the concentration and a list of the courses to be taken to complete it. Students must consult with their adviser in the Autumn Quarter of senior year to insure that all requirements for the major are being met.

*Sample Areas of Concentration*—

1. Topical concentrations: art and gender; art, politics, race, and ethnicity; art, science, and technology; urban studies; or any other concentration created by the student and approved by a faculty adviser.



2. Genre concentrations: architecture; painting; sculpture; film studies; prints and media; or decorative arts and material culture.
3. Historical and national concentrations: ancient and medieval; Renaissance and early modern; modern and contemporary; American; African; Asian; or the Americas.
4. Interdisciplinary concentration: students choosing the interdisciplinary concentration must take two upper-division courses outside Art History on topics related to their concentration; these courses are counted with three other courses within Art History to complete the concentration. Sample interdisciplinary areas of concentration include: art and literature, art and history; art and religion; art and economics; or any other interdisciplinary combination designed by the student and approved by a faculty adviser. The two outside courses for the interdisciplinary concentration are counted among the 13 courses required for the major.

**Junior Seminar**—This course is designed to introduce all majors to methods and theories underlying the practice of Art History. The seminar is offered annually in Autumn Quarter. Students are encouraged to take the seminar at the start of their junior year. The goal of the seminar is: to create a shared intellectual experience among all majors; to provide majors with in-depth knowledge of their own discipline; and to enrich the understanding that majors bring to other courses in Art History.

**Research**—An essential component of the major requires that students become familiar with works of art and how to write about them. This entails a familiarity with library research, the mechanics of art historical scholarship, the practice of focusing research on clearly defined problems, and the experience of presenting findings in written or oral form. Research requirements are designed to ensure that all majors in Art History leave Stanford with a mastery of these skills.

All majors are required to attend an orientation session, presented by the professional staff of the Art Library, that introduces the tools of research and reference available on campus or through the Internet. This requirement should be completed no later than the quarter following the major declaration. In addition, majors are permitted to place materials on reserve in the Art Library to facilitate research for seminars or other projects such as honors theses (see below).

All majors are required to include within their program of study at least two research-oriented seminars that entail preparation of a research paper, a formal presentation, or both. In some cases, students are allowed to substitute a colloquium for one of these seminars, although in such cases it is understood that the course requirements must include a substantial research component.

### HONORS THESIS

The minimum requirement for admission to the honors program in the department is a GPA of 3.5 overall, and at least 3.5 in Art History courses. Students wishing to write an honors thesis must announce their intention by the middle of their junior year, and enlist at least one member of the faculty to serve as thesis adviser. It is imperative that the thesis adviser be committed to being on campus and in residence during the candidate's senior year.

In concert with this adviser (who need not be the student's academic adviser), candidates for the honors program must submit for consideration by the entire faculty a short (five page) thesis proposal, along with at least one completed paper that demonstrates his or her ability to conceptualize issues and to write about them. This material must be submitted to the department no later than the third week of Spring Quarter of the candidate's junior year so that it can be read, discussed, and voted upon at the faculty's regular meeting in early May. A candidate is accepted into the honors program by a simple majority.

Once admitted to the honors program, a student works with his or her thesis adviser to define the scope of the study, to establish a research and writing timetable, and to enlist one other faculty member to serve as the thesis reading committee. To aid the process of research and writing, students preparing an honors thesis are paired with a graduate student mentor. The summer between junior and senior years is usually devoted to refining the topic and pursuing any off-campus research. During the

student's senior year, it is customary to register for up to 8 units of ARTHIST 240, Individual Work in Art History, while research and writing of the thesis is advanced. Students should be aware that they can apply for URO research grants to help finance trips or expenses relative to preparing the research for their honors thesis.

Students and thesis advisers should plan their schedule of work so that a complete and final manuscript is in the hands of each member of the thesis reading committee by the seventh week of the student's final quarter at Stanford. Although the thesis adviser assigns a letter grade to the completed work, both faculty readers must approve the thesis for honors before the student is qualified to graduate with that distinction.

### ART HISTORY MAJOR REQUIREMENTS

<i>Foundation:</i>	<i>Number of courses</i>
ARTHIST 1 and one other introductory-level course, either ARTHIST 2, 3, or 4	2
One introductory course in Studio Art	1
<b>Distribution:</b>	
Four Art History courses distributed among the following five categories: ancient and medieval; Renaissance and early modern; modern, contemporary, and the U.S.; Asia, Africa and the Americas; film studies	4
<b>Concentration:</b>	
Five courses, of which two must be seminars or colloquia. At least 4 of the 5 must be in a single field or concentration constructed by the student in consultation with an adviser	5
<b>Junior Seminar</b>	
A methods and theory seminar to be taken by all majors, preferably in Autumn Quarter of junior year	1
Honors Essay (optional)	
Total number of courses	<u>13</u>

### MINORS

#### ART HISTORY

A student declaring a minor in Art History must complete 25 units of course work in one of the following four tracks: Open, Modern, Asian, or Architecture. Upon declaring the minor, students are assigned an adviser with whom they plan their course of study and electives. A proposed course of study must be approved by the adviser and placed in the student's departmental file. Only one class may be taken for credit outside of the Stanford campus (this includes the Stanford Overseas Studies Programs). All minors are required to attend an orientation session presented by the professional staff of the Art Library, which introduces the many tools of research and reference available on campus or through the Internet. This requirement should be completed no later than the quarter following the minor declaration.

**Requirements for the Open Track:** ARTHIST 1 plus five lecture courses, colloquia or seminars in any field.

**Requirements for the Modern Track:** ARTHIST 1 plus five lecture courses, colloquia, or seminars in any aspect of 19th- to 20th-century art.

**Requirements for the Asian Track:** ARTHIST 2 plus five lecture courses, colloquia, or seminars in Asian art (ARTHIST 1 may be one of the five courses).

**Requirements for the Architecture Track:** ARTHIST 3 plus five lecture courses, colloquia, or seminars in architectural history (ARTHIST 1 may be one of the five courses).

#### FILM

A minor in Film Studies requires four core courses and three additional courses (electives) for a total of seven courses. The required core courses are comprised of ARTHIST 4, Introduction to Film Study, ARTHIST 263, Film Theory and Formal Analysis, and either COMM 141A or B, History of World Cinema I or II, and a fourth course in a national cinema or film history. These introduce concepts and contexts fundamental to an understanding of the medium. Electives can be selected from courses in other departments approved for the Film Studies minor by the coordinator and core faculty for their stress on methods of film analysis. These may include courses in national cinemas, film genres, experimental and documentary film, or film theory. Courses in which film study is not a central focus may not be eligible for credit in the minor.

Upon declaring the minor, students are assigned an adviser with whom they plan their course of study and electives. A proposed course of study must be approved by the adviser and placed in the student's departmental file. Only one class may be taken for credit outside of the Stanford campus (this includes the Stanford Overseas Studies Programs). All minors are required to attend an orientation session presented by the professional staff of the Art Library, which introduces the many tools of research and reference available on campus or through the Internet. This requirement should be completed no later than the quarter following the minor declaration.

## GRADUATE PROGRAMS

### MASTER OF ARTS

The Department of Art and Art History offers M.A. and Ph.D. degrees. The M.A. is granted as a step toward fulfilling requirements for the Ph.D. The department does not admit students who wish to work only toward the master's degree.

The University's basic requirements for the master's degree are set forth in the "Graduate Degrees" section of this bulletin. Completing the University's requirements for a B.A. degree in the History of Art, or equivalent training, is required of students entering a program of study for the M.A. The required curriculum for entering students is determined by the Director of Graduate Studies through an evaluation of transcripts and records during an individual meeting scheduled with each student prior to the opening of Autumn Quarter to discuss course deficiencies.

*Requirements for the Degree*—The requirements for the M.A. degree in the Art History are:

1. *Units*: completing a total of at least 45 units of graduate work at Stanford in the history of art in courses at the 200 level, including a seminar in art historiography/visual theory.
2. *Languages*: reading knowledge of two foreign languages, preferably German and French or Italian. Students in Chinese and Japanese art are ordinarily expected to demonstrate reading competence in modern and classical Chinese or Japanese depending on the student's area of focus. Final determination is made in consultation with the student's primary adviser.
3. *Papers*: submission for consideration by the faculty of two term papers from among those written during the year.
4. *Area Coverage*: demonstration to the faculty, by course work and/or examination, that the student has adequate knowledge of the major areas of the history of art.

### DOCTOR OF PHILOSOPHY

The University's basic requirements for the Ph.D. degree are set forth in the "Graduate Degrees" section of this bulletin. An expanded explanation of department requirements is given in the *Art History Graduate Student Handbook* available at <http://www.stanford.edu/group/adgsa/>.

*Residence*—To be eligible for the doctoral degree, the student must complete three years of full-time graduate work in Art History, at least two years of which must be in residence at Stanford.

*Unit Requirements*—To be eligible for the doctoral degree, the student must complete 135 units. Of these 135, the student must complete at least 100 units of graduate course work at the 200 level or above, including all required courses, with a minimum of 62 units in Art History lecture courses and seminars.

*Collateral Studies*—The student is required to take at least three courses in supporting fields of study (such as anthropology, classics, history, literature, or philosophy), determined in consultation with the department advisers. These courses are intended to strengthen the student's interdisciplinary study of art history.

*Graduate Student Teaching*—As a required part of their training, all graduate students in Art History, regardless of their source of funding, must participate in the department's teaching program. At least two one-quarter assignments in ARTHIST 1, 2, 3, or 4 are required, with concurrent registration in the Seminar in Teaching Praxis (ARTHIST 610). Students receiving financial aid are required to serve as a teaching assistant for four quarters. Further opportunities for teaching may be available.

*Admission to Candidacy*—A graduate student's progress is formally reviewed at the end of Spring Quarter of the second year. The applicant for candidacy must put together a candidacy file showing that he/she has completed the requirements governing the M.A. program in the History of Art (see above), and at least an additional 18-24 units by the end of Winter Quarter of the second year. The graduate student does not become a formal candidate for the Ph.D. degree until he/she has fully satisfied these requirements and has been accepted as a candidate by the department.

*Area Core Examination*—All graduate students conceptualize an Area Core and bibliography in consultation with their primary adviser and two other Stanford faculty members, one of whom is drawn from a field other than Art History, or, if in Art History, has expertise outside of the student's main area of interdisciplinary concentration. Students are required to pass an Area Core Examination, in either written or oral form, sometime in the third year of study. To prepare for the exam, students may enroll for up to three five-unit reading courses (ARTHIST 620), no more than one per quarter.

*Reading Committee*—After passing the Area Core Examination, each student is responsible for the formation of a Dissertation Reading Committee consisting of a principal adviser and three readers. Normally, at least two of the three readers are drawn from the department and one may come from outside the department.

*Dissertation Proposal*—By the beginning of the fourth year, students should have defined a dissertation subject and written a proposal in consultation with their principal adviser. To prepare the proposal, students may take one five-unit independent study course (ARTHIST 640) and apply for a funded Summer Quarter to research and write the proposal. The proposal is submitted to the Art History faculty at the beginning of the fourth year for comments. The student then meets with the adviser to discuss the proposal and faculty comments no later than 30 days after the submission of the proposal, at which time necessary revisions are determined.

*Dissertation*—A member of the Art History faculty acts as the student's dissertation adviser and as chair of the Reading Committee. The final draft of the dissertation must be in all the readers' hands at least four weeks before the date of the Oral Defense. The dissertation must be completed within five years from the date of the student's admission to the candidacy for the Ph.D. degree. A candidate taking more than five years must apply for an extension of candidacy.

*Oral Defense Examination*—Each student arranges an oral examination with the four members of the Reading Committee and a chair chosen from outside the department. The oral examination consists mainly of a defense of the dissertation but may range, at the committee's discretion, over a wider field. The student is required to discuss research methods and findings at some length and to answer all questions and criticisms put by members of the examining committee. At the end of the defense, the committee votes to pass or fail the student on the defense. The committee also makes recommendations for changes in the dissertation manuscript before it is submitted to the University as the final requirement for the granting of the Ph.D. degree in the History of Art. After incorporating the changes, the manuscript is given a final review and approval by the student's principal adviser.

### PH.D. MINOR

For a minor in History of Art, a candidate is required to complete 24 units of graduate-level art history courses (200 level or above), in consultation with a department adviser.

### JOINT PH.D. IN ART HISTORY AND HUMANITIES

The department participates in the Graduate Program in Humanities leading to the joint Ph.D. in Art History and Humanities. For a description of this program, see the "Interdisciplinary Studies in Humanities" section of this bulletin.

## PRACTICE OF ART (STUDIO)

### UNDERGRADUATE PROGRAMS

#### BACHELOR OF ARTS

The studio program is designed to develop in-depth skills in more than one area. It emphasizes the expressive potential of an integration of media, often via a crossdisciplinary, interactive path. Through collaboration and connections with scientists, engineers, and humanities scholars, the program addresses a breadth of topical and artistic concerns central to a vital undergraduate education.

Medium-based courses in digital art, drawing, painting, photography, and sculpture, along with a basic design course, introduce students to visual fundamentals. The student is required to take courses at Level 1 before moving to the intermediate Level 2 where investigations of content are emphasized. At this level, the student focuses on a range of subject matter from historical motifs (figure, still life, landscape) to contemporary ideas in design. After fulfilling Level 2 requirements, the student selects courses at Level 3, which feature combined practices. Level 3 courses are designed to stretch the student's understanding of materials and techniques. Experimental and challenging in nature, these courses cross area boundaries. Level 4 courses comprise a senior capstone experience. ARTSTUDI 249, Advanced Undergraduate Seminar, emphasizes the investigation of visual concepts interpreted by a single medium, by cross-practices, or by collaboration among students working in a variety of materials. This seminar gives the student an opportunity to be exposed to the work of other majors in a critique-based forum directed by a visiting artist or critic. Advanced courses with a particular focus such as design, photography, or painting are offered on a rotational basis. Independent study supervised by a member of the permanent faculty is also available to the advanced student.

Students are encouraged to move through the requirements for the major in the sequence outlined. Levels 1, 2, 3, and 4 describe a sequence of course choices, not to be confused with the years freshman, sophomore, junior, and senior. Students are exposed to a range of practices early in their development in order to have a good basis of comparison if they choose to concentrate on a particular medium. This sequence of courses also broadens the students' skills and enables them to combine materials and methods.

The major program in the Practice of Art (Studio) must total 65 units and include the following:

1. Four Level 1 courses (12-13 units) from ARTSTUDI 50, 51, 60, 70, 130, 140, 145, 173. Two courses are to be completed before moving to Level 2.
2. Two Level 2 courses from ARTSTUDI 131, 141, 146, 160, 170, 175 (6 units) are to be completed before taking Level 3 courses.
3. Two to three Level 3 courses (6-9 units) from ARTSTUDI 132, 148, 149, 152, 169, 172, 174, 175A, 176, 271 are to be completed before taking Level 4 courses.
4. Two to three Level 4 courses (6-9 units) from ARTSTUDI 133, 142, 147, 153, 175B, 248, 249, 268, 269, 270.
5. Five art history courses (21 units). ARTHIST 1 is taken as the basic course, followed by four additional courses. At least one of the courses must be in the modern art series, ARTHIST 140-159.
6. Electives, any level (7-11 units). As many as 6 elective units may be earned from workshops, internships, and independent study projects, supervised by a member of the permanent faculty. All units must be approved by the adviser prior to taking the workshop, internship, or independent study.
7. Total units: 65. All required course work must be taken for a letter grade; courses may not be taken satisfactory/no credit. University units earned by placement tests or advanced placement work in secondary school are not counted within the 65 units.
8. Majors are required to spend one quarter or summer pursuing studio interests at a site off campus. This requirement may be fulfilled in a number of ways including, but not limited to, Overseas Studies Programs, independent study sponsored by URO grants, and the Haas

Center. Students must meet with the Director of the Studio Art Program to discuss how the requirement can be met.

9. Each undergraduate major is required to attend an Art Library orientation session no later than the quarter following the major declaration. Majors are to consult with the Art Library staff for scheduling information.
10. Studio majors are required to meet with both their adviser and the department's undergraduate curriculum adviser during the first two weeks of each quarter to have course work approved and to make certain they are meeting degree requirements. The adviser's role is important both in regard to guiding the student's decisions within the program as well as in discussing plans for summer study and graduate work. An adviser is chosen by the student or assigned by the department.

*Transfer Credit Evaluation*—Upon declaring a Studio Art major, a student transferring from another school must have his or her work evaluated by a Department of Art and Art History adviser. A maximum of 13 transfer units are applied toward the 65 total units required for the Studio Art major. A student wishing to have more than 13 units applied toward the major must submit a petition to the adviser and then have his or her work reviewed by a studio committee.

#### MINORS

The minor program in the Practice of Art (Studio) must include the following:

1. Two Level 1 courses (6-7 units) from ARTSTUDI 50, 60, 70, 140, 145, 173 before taking Level 2 courses.
2. Two Level 2 courses (6 units) from ARTSTUDI 141, 146, 160, 170, 175 before taking Level 3 courses.
3. Two Level 3 and/or Level 4 courses (6 units) from ARTSTUDI 142, 147, 148, 149, 152, 153, 169, 172, 174, 175A, 175B, 176, 248, 249, 268, 269, 270, 271.
4. Three art history courses (13 units), including ARTHIST 1 and one course from the modern art series ARTHIST 140-159.
5. Total units: 31. All required course work must be taken for a letter grade; courses may not be taken satisfactory/no credit. University units earned by placement tests or advanced placement work in secondary school are not counted within the 31 units.
6. Each undergraduate minor is required to attend an Art Library orientation session no later than the quarter following the minor declaration. Minors are to consult with the Art Library staff for scheduling information.
7. Minors are required to meet with both their adviser and the department's undergraduate curriculum adviser during the first two weeks of each quarter to have course work approved and to make certain they are meeting degree requirements.

#### OVERSEAS CAMPUS CREDIT

A minimum of 52 of the 65 units required for the Studio Art major and a minimum of 21 of the 31 units required for the Studio Art minor must be taken at the Stanford campus. In all cases, a student should meet with his or her adviser before planning an overseas campus program.

## GRADUATE PROGRAMS

### MASTER OF FINE ARTS

Programs for the M.F.A. degree are offered in painting, sculpture, new genres, photography, and product or visual design.

#### PROGRAM IN PAINTING, SCULPTURE, NEW GENRES, AND PHOTOGRAPHY

The program provides a rigorous and demanding course of study designed to challenge and encourage advanced students. Participants are chosen for the program on the basis of work that indicates artistic individuality, achievement, and promise. Candidates should embody the intellectual curiosity and broad interests appropriate to, and best served by, work and study within a university context.



*Admission Requirements—*

1. Applicants must have a B.A. or B.S. from an accredited school. It is expected that the applicant have a strong background in studio art, either an undergraduate degree or at least three years of independent studio practice.
2. Applications and portfolios for the studio program must be submitted by January 18. Students accepted to the program are admitted for the beginning of the following Autumn Quarter. No applicants for mid-year entrance are considered.
3. Portfolio Specifications: 20 slides of creative work. Some of these can be drawings if relevant to the overall project. Send in a Kodak Universal carousel; no actual work is accepted. All slides must be labeled with the applicant's name and an accompanying slide list must be included indicating the size, date, and medium of each work. If the applicant wants the portfolio returned, a stamped, self-addressed container must be included.

*Requirements for the M.F.A. Degree—*

1. Completing a minimum of two years (six quarters) of graduate work in residence or its equivalent at Stanford.
2. Completing 48 units of study. Students must discuss their programs of study with the department's senior administrator to ensure that the most favorable registration arrangement is made.
3. Six quarters of the Master's Project, which includes two weekly seminars (the Object Seminar and the Concept Seminar) and Studio Practice, which is an individual tutorial with a selected member of the faculty. In addition, three courses of academic electives are required in the first year. These courses can be chosen from a large variety of disciplines in consultation with the faculty adviser.
4. The student is expected to pass three faculty reviews: (1) at the end of the first quarter (anyone judged to be making inadequate progress is placed on probation and requires an additional review at the end of the second quarter), (2) at the end of the third quarter, and (3) at the time of the M.F.A. exhibition. The purpose of these reviews is to evaluate development and to assess the progress of the student.
5. During the final quarter in the program, students must write a thesis paper addressing the development of their work over the two-year period at Stanford. Participation in the M.F.A. exhibition at the end of the year is required.
6. All students, regardless of their source of funding, are required to assist with the department's teaching program for a minimum of eight hours per week over the period of six quarters; the particulars of this assignment are at the department's convenience.

The studio faculty reserve the right to make use of graduate paintings, sculpture, and photographs in exhibitions serving the interests of the graduate program.

Graduate students must remain in residence at Stanford for the duration of the program.

**THE GRADUATE PROGRAM IN DESIGN**

Working jointly, the departments of Art and Art History and Mechanical Engineering offer graduate degrees in product and visual design. A large physical environment, the Design Yard, provides professional caliber studio space and well equipped shops. Flexible programs may include graduate courses in fields such as engineering design, biotechnology, marketing, microcomputers, or the studio and art history curriculum. The program centers on a master's project and may also include work in advanced art and design. The program is structured to balance independent concentration with rich utilization of the University and the community, and personal interaction with the students and faculty of the graduate Design program. Crossdisciplinary interaction is encouraged by a four-person graduate Design faculty.

*Admission Requirements for the M.F.A.—*

1. Applicants must have a B.A. or B.S. from an accredited school. It is expected that the applicant have a strong background in studio art, either an undergraduate degree or at least three years of independent studio practice.

2. Portfolio Specifications: 12 slides or photographs of creative work. All slides must be labeled with the applicant's name. If a carousel is sent, an accompanying slide list must be included indicating the size, date, and medium of each work; otherwise, slides should be labeled with the same information and sent in the standard cardboard box received from processing. If applicants want portfolios returned, a stamped, self-addressed container must be included.

*Requirements for the Degree—*The M.F.A. degree with a specialization in design requires:

1. Completing a minimum of two years (six quarters) of graduate work in residence or its equivalent at Stanford.
2. Completing 54 units of course work chosen in consultation with an adviser. At least 18 of the 54 units must be in ARTSTUDI 360A,B,C and ME 316 A,B,C.
3. Participating in a weekly seminar in which the student's work is criticized and discussed in detail.
4. Graduate students must remain in residence at Stanford for the duration of the program.

**ART EDUCATION**

Information concerning the M.A. in Teaching, Doctor of Education, Ph.D. in Education, and Teaching Credential (Single Subject-Secondary) degrees and programs may be secured from the Office of the Dean of the School of Education.

**COURSES**

WIM indicates that the course satisfies the Writing in the Major requirements.

**HISTORY OF ART**

Courses given in the History of Art have the subject code ARTHIST.

**BASIC**

**ARTHIST 1. Introduction to the Visual Arts—**Problems of understanding, analyzing, and writing about the visual arts. The approach is multicultural and topical rather than historical. GER:3a,WIM

*5 units, Aut (Marrinan)*

**ARTHIST 2. Asian Art and Culture—**The religious and philosophical ideas and social attitudes of India, China, and Japan and how they are expressed in architecture, painting, woodblock prints, sculpture, and in such forms as garden design and urban planning. Discussion sections. GER:3a,4a

*5 units, Spr (Vinograd)*

**ARTHIST 3. Introduction to the History of Architecture—**From antiquity to the 20th century, mostly Western with some non-Western topics. For each period, specific buildings and general principles relevant to the study of architecture are examined. Discussion sections. GER:3a

*5 units (Turner) not given 2004-05*

**ARTHIST 4. Introduction to Film Study—**Basic aesthetic and conceptual analytic skills with relevance to cinema, studying formal, historical, and cultural issues. Familiar models of narrative cinema are mixed with alternative structures, documentary, and experimental forms. Issues of cinematic language and visual perception, representations of gender, ethnicity, and sexuality. Weekly screenings, discussion sections. GER:3a

*5 units, Aut (Levi)*

**ARTHIST 10N. Sailing to Byzantium: The Art of the Court in Constantinople—**4th-15th centuries. How imperial power was manifested through palaces, squares, and avenues; the organization and staging of ceremonies such as triumphal processions and coronations; the production and the exchange of luxury gifts. Primary sources in translation include: manuals of court ceremonial; travel and trade accounts; descriptions of diplomatic gift exchanges, costume, and decoration; military expeditions; craftsmen's handbooks; and religious foundation documents and inventories.

*4 units, Win (Pentcheva)*

**ARTHIST 99A. Student Guides at the Cantor Center for the Visual Arts**—Open to all Stanford students. Introduction to museum administration; art registration, preparation, and installation; rights and reproductions of images; exhibition planning; and art storage, conservation, and security. Skill-building in public speaking, inquiry methods, group dynamics, theme development, and art-related vocabulary. Students research, prepare, and present discussions on art works of their choice.

*1 units, Aut (Young)*

## OVERVIEW COURSES

### THE CLASSICAL WORLD

**ARTHIST 101/301. Archaic Greek Art**—(Same as CLASSART 101/201.) The development of Greek art and culture from protogeometric beginnings to the Persian Wars, 1000-480 B.C.E. The genesis of a native Greek style; the orientalizing phase during which contact with the Near East and Egypt transforms Greek art; and the synthesis of East and West in the 6th century B.C.E. GER:3a

*4 units, Aut (Maxmin)*

**ARTHIST 102/302. Classical and 4th-Century Greek Art**—(Same as CLASSART 102/202.) The formation of the classical ideal in 5th-century Athenian art, and its transformation and diffusion in the 5th and 4th centuries against changing Greek history, politics, and religion. GER:3a

*4 units, Win (Maxmin)*

**ARTHIST 104/304. Etruscan to Early Empire**—(Same as CLASSART 104/204.) The art, architecture, and culture of Etruria, the Roman Republic, and the early Roman Empire. GER:3a

*4 units (Maxmin) not given 2004-05*

### THE MEDIEVAL WORLD

**ARTHIST 105/305. Introduction to Medieval Art**—Chronological survey of Byzantine and Western Medieval art and architecture from the early Christian period to the Gothic age. Broad art-historical developments and more detailed examinations of individual monuments and works of art. Topics include devotional art, court and monastic culture, relics and the cult of saints, pilgrimage and crusades, and the rise of cities and cathedrals. GER:3a

*4 units (Pentcheva) not given 2004-05*

**ARTHIST 106/306. Byzantine Art and Architecture, 300-1453 C.E.**—Art-historical developments, and monuments and works of art. Topics include: the transition from naturalism to abstraction; imperial art and court culture; pilgrimage and cult of saints; and secular art and luxury objects.

*4 units, Aut (Pentcheva)*

**ARTHIST 107/307. Age of Cathedrals**—Gothic art and architecture in W. Europe, 1150-1500. The structuring of a modern visual discourse within the ideological framework of a new monarchical church and state, emerging towns and universities, the rise of literacy, the cultivation of self, and the consequent shifts in patterns of art patronage, practice, and reception in Chartres, Paris, Bourges, Strasbourg, Canterbury, London, Oxford, and Cambridge. GER:3a

*4 units (Pentcheva) not given 2004-05*

### EUROPE 1400-1900

**ARTHIST 119A/319A. Spaces of Baroque Europe**—Urbanism, architecture, and décor, ca 1600-1750. Regional variations in space or structure on scales including the nation state, city, garden, neighborhood, square, town hall, palace, townhouse, church, chapel, theater, gallery, salon, cabinet, and staircase. Readings from primary and secondary sources on the roles of patrons, contractors, architects, artists, residents, and travelers in the production and use of these social spaces. GER:3a

*4 units, Spr (Larkin)*

**ARTHIST 121/321. 18th-Century Art in Europe, ca. 1660-1780**—Major developments in painting across Europe including the High Baroque illusionism of Bernini, the founding of the French Academy, and the revival of antiquity during the 1760s, with parallel developments in Venice, Naples, Madrid, Bavaria, and London. Shifts in themes and

styles amidst the emergence of new viewing publics. Artists: the Tiepolos, Giordano, Batoni, and Mengs; Ricci, Pellegrini, and Thornhill; Watteau and Boucher; Chardin and Longhi; Reynolds and West; Hogarth and Greuze; Vien, Fragonard, and the first works by David. Additional discussion for graduate students. GER:3a

*4 units (Marrinan) not given 2004-05*

**ARTHIST 122/322. The Age of Revolution**—Painting in Europe during the French Revolution and the Napoleonic conquest. As political events altered social formations, practices in the visual arts were similarly affected by shifts in patronage, public, and the social function of image making. An attempt to align ruptures in the tradition of representation with the unfolding historical situation. The first manifestations of a romantic alternative to the canons of classical beauty and stylistic restraint. GER:3a

*4 units (Marrinan) not given 2004-05*

**ARTHIST 124/324. The Age of Naturalism, ca. 1830-1874**—The origins, development, and triumph of naturalist painting in Europe. The creative tensions that emerged between traditional forms of history painting and the challenge of modern subjects drawn from contemporary life. Emphasis is on the development of open-air painting as an alternative to traditional studio practice, and to the rise of new imaging technologies, such as lithography and photography, as popular alternatives to the hand-wrought character and elitist appeal of high art. GER:3a

*4 units (Marrinan) not given 2004-05*

**ARTHIST 126/326. Post-Naturalist Painting**—How conceptual models from language, literature, new technologies, and scientific theory affected picture making following the collapse of the radical naturalism of the 1860s and 1870s. Bracketed in France by the first Impressionist exhibition (1874) and the first public acclamation of major canvases by Matisse and Picasso (1905), the related developments in England, Germany, Belgium, and Austria. Additional weekly discussion for graduate students. Recommended: some prior experience with 19th-century art. GER:3a

*4 units, Win (Marrinan)*

### BRITAIN AND AMERICA 1600-1900

**ARTHIST 132/332. American Art and Culture, 1528-1860**—The visual arts and literature of the U.S. from the beginnings of European exploration to the Civil War. Focus is on questions of power and its relation to culture from early Spanish exploration to the rise of the middle classes. Cabeza de Vaca, Benjamin Franklin, John Singleton Copley, Phillis Wheatley, Charles Willson Peale, Emerson, Hudson River School, American Genre painters, Melville, Hawthorne and others. GER:3a

*4 units, Spr (Wolf)*

**ARTHIST 133/333. American Art in the Gilded Age**—Interdisciplinary. Art, literature, patronage, and cultural institutions of the late 19th century. Aestheticism, conspicuous consumption, the grand tour, and the expatriate experience. The period's great collectors, taste makers, and artists: Thomas Eakins, Winslow Homer, Mary Cassatt, James Whistler, John Singer Sargent, Albert Pinkham Ryder, William Harnett, and John Peto. GER:3a

*4 units, Aut (Corn)*

### MODERN EUROPE

**ARTHIST 141/341. The Invention of Modern Architecture**—The creation and development of new architectural forms and theories, from the late 18th to the early 20th centuries, mainly in Europe but also in America. Emphasis is on the responses to new materials, technologies, and social conditions, and how they shaped the architecture of the present. Recommended as preparation for 142. GER:3a

*4 units (Turner) not given 2004-05*

**ARTHIST 142/342. Varieties of Modern Architecture**—The development of competing versions of modern and postmodern architecture and design in Europe and America, from the early 20th century to the present. Recommended: 141. GER:3a

*4 units, Aut (Turner)*

**ARTHIST 145/345. Modernism and the International Avant Gardes: European Art, 1895-1945**—GER:3a4 units (*Gough*) not given 2004-05**ARTHIST 147/347. Modern Sculptural Practices**4 units, *Win* (*Gough*)**MODERN AMERICA**

**ARTHIST 151/351. Transatlantic Modernism: Paris and New York in the Early 20th Century**—Modernism in the American arts at home and abroad, emphasizing transatlantic expatriation, cultural politics, and creative alliances. Painters and sculptors are the focus. Literary figures who interacted with artists such as Gertrude Stein, William Carlos Williams, and Langston Hughes. Topics and artists: the Armory Show, Marcel Duchamp, Francis Picabia, Futurism, Fernand Léger, Alfred Stieglitz, Charles Demuth, Georgia O'Keefe, Gerald Murphy, the Harlem Renaissance, John Storrs, and Florine Stettheimer. Discussion sections. GER:3a

4 units, *Win* (*Corn*)**FILM STUDIES**

**ARTHIST 161/361. Cinematic Spectacle**—How cinematic spectacle has been theorized by considering the adoption of new technologies such as sound, color, or special effects; theories of the sublime and the grotesque; spectacle as a vehicle for propaganda or pedagogy; the relation of spectacle to narrative; and the spectacle of gender. The role of spectacle in experimental cinema and the deconstructions of spectacle by Godard and others since Debord's *The Society of the Spectacle*. Recommended: 4 or equivalent. GER:3a

4 units, *Win* (*Bukatman*)

**ARTHIST 162/362. Cyborgs and Synthetic Humans**—The synthetic human has a long history in fairy tales and children's stories, and contemporary genres of horror and science fiction. Stories of artificially created life, living statues, clockwork automata, alien body snatchers, robots, cyborgs, and electronic simulations direct attention to definitions of the human and the self. The meaning of labor, gender, sexuality, death, emotion, rationality, bodies, consumerism, cosmetic surgery, and reproductive technologies. GER:3a

4 units (*Bukatman*) not given 2004-05

**ARTHIST 163/363. Studies in Authorship: Howard Hawks**—GER:3a

4 units (*Bukatman*) not given 2004-05

**ARTHIST 165/365. Film and Perceptual Experience**—How cinema has emphasized the subjective or perceptual. Techniques such as voice-over narration, first-person camerawork, impressionistic montage, special effects, and the unreliable. Clarity of vision and the coherence of perception in the context of modernity, attention, hallucination, dream, memory, synesthesia, and states of knowledge. Sources include experimental, narrative, and documentary traditions, film noir, and flicker, horror, and diary films. Films by Visconti, Brakhage, Akerman, Hitchcock, Deren, Epstein, Kubrick, and Powell. Recommended: 4. GER:3a

4 units, *Spr* (*Bukatman*)

**ARTHIST 166/366. Aesthetics and Politics in East European Cinema**—From 1945 to the mid-80s emphasizing Polish, Hungarian, Czech, Slovak, and Yugoslav contexts. The relationship between art and politics; the post-war establishment of film industries; and the emergence of national film movements such as the Polish school, Czech new wave, and new Yugoslav film. Thematic and aesthetic preoccupations of filmmakers such as Wajda, Jancso, Forman, and Kusturica. GER:3a

4 units, *Win* (*Levi*)

**ARTHIST 167/367. Genre Study: Hollywood Musicals, 1927-1944**—The liberation that arises in the film musical, a liberation that is reality and illusion and which can be physical, emotional, aesthetic, and social. The interplay among song, stage, and screen; and the interplay of cultural identities (regional, racial, gender, and sexual). The impact of African American and Jewish culture on the genre; issues of gay reception and interpretation. The history of the American stage musical. GER:3a,4b

4 units, *Spr* (*Bukatman*)

**ARTHIST 169/369. Film Aesthetics: Editing**—Practical and theoretical approaches to editing and montage. The role of editing in film meaning, and cognitive and emotional impact on the viewer. Developments in the history and theory of cinema including continuity system, Soviet montage, French new wave, postwar and American avant garde. Aesthetic functions, spectatorial effects, and ideological implications of montage. Film makers include Eisenstein, Godard, and Conner. GER:3a

4 units, *Spr* (*Levi*)**CONTEMPORARY EUROPE AND AMERICA**

**ARTHIST 178/378. Ethnicity and Dissent in United States Art and Literature**—The role of the visual arts of the U.S. in the construction and contesting of racial, class, and gender hierarchies. Focus is on individual artists and writers from the 18th century to 1990s. How power, domination, and resistance work historically. Topics include: minstrelsy and the invention of race; mass culture and postmodernity; hegemony and language; memory and desire; and the borderlands. GER:3a,4b

4 units (*Wolf*) not given 2004-05**ASIA**

**ARTHIST 180/380. Chinese Art and Culture**—Recent discoveries and interpretations in the art and archaeology of China from the late Neolithic to the present. Major archaeological sites and representative monuments of architecture, painting, calligraphy, sculpture, ceramics, and craft objects. Emphasis is on art production within contexts and structures of ritual, ideology, technology, politics, society, patronage, and art theory. GER:3a,4a

4 units (*Vinograd*) not given 2004-05

**ARTHIST 186/386. Theme and Style in Japanese Art**—Monuments of traditional Japanese architecture, sculpture, garden design, painting, and pots. Chronological framework representing the intersection of art and society from protohistoric times through the early 19th century. GER:3a

4 units, *Win* (*Takeuchi*)

**ARTHIST 187/387. Arts of War and Peace: Late Medieval and Early Modern Japan, 1500-1868**—Narratives of conflict, pacification, orthodoxy, nostalgia, and novelty through visual culture during the change of episteme from medieval to premodern, the 16th through early 19th centuries. The rhetorical messages of castles, teahouses, gardens, ceramics, paintings, and prints; the influence of Dutch and Chinese visuality; transformation in the roles of art and artist; tensions between the old and the new leading to the modernization of Japan. GER:3a,4a

4 units, *Spr* (*Takeuchi*)

**ARTHIST 190/390. African Art and Writing Traditions**—Classic African graphic writings south of the Sahara in historical and social context. What makes African graphic writing systems; how they are used as visual art, and as markers of identity, religion, and moral philosophy. Civilizations include Mali, Asante, Yoruba, Ejagham, and Kongo.

4 units, *Aut* (*Martinez-Ruiz*)

**ARTHIST 191/391. Afro-Atlantic Religion, Art, and Philosophy**—Afro-American graphic writing and other forms of visual communication including ancient rupestrian art and rock painting in Africa, and present-day forms in the Americas. The diversity of daily life, religion, social organization, politics, and culture in the African diaspora. Focus is on major contemporary Afro-Atlantic religions including: Palo Monte and Abakua in Cuba; Gaga in the Dominican Republic; Revival, Obeah, and Kumina in Jamaica; Vodun in Haiti; and Candomble and Macumba in Brazil.

4 units, *Win* (*Martinez-Ruiz*)**SEMINARS AND COLLOQUIA**

**ARTHIST 202. Beazley and After**—How Beazley's work provided the foundations for studying Greek painted pottery.

5 units (*Maxmin*) not given 2004-05



**ARTHIST 206. Virginity and Power: Mary in the Middle Ages**—The most influential female figure in Christianity whose state cult was connected with the idea of empire. The production and control of images and relics of the Virgin and the development of urban processions and court ceremonies through which political power was legitimized in papal Rome, Byzantium, Carolingian and Ottonian Germany, Tuscany, Gothic France, and Russia.

5 units (*Pentcheva*) not given 2004-05

**ARTHIST 207. Light and Power: Mosaics and Stained Glass Windows in the Middle Ages**—Painting with light in Byzantium, Norman Sicily, and Gothic France. Imperial and royal patronage. Aesthetics and political messages.

5 units, *Win* (*Pentcheva*)

**ARTHIST 221A. The Mediated Environment in Early Modern Europe**—The relationship between the built environment and its representations in Europe, ca. 1450-1800. How does increasing familiarity with maps and views affect the perception or fabrication of cities and gardens? What new forms and concepts result from the convergence of drawing, printing, surveying, and perspective? How do landscapes and cityscapes become aestheticized and politicized? Sources include original books, maps and views, and readings in the history of urbanism, landscape studies, cartography, and communications.

5 units, *Aut* (*Larkin*)

**ARTHIST 222. Chardin and Watteau: An Aesthetics of Touch**—These 18th-century painters preferred everyday life subjects, still-lives, and landscape; Watteau invented the *fête galante* as a new picture type. Common to their work is attention to the materials of art: surfaces, textures, and glazes of paint; graphic range of chalk, ink, and pencil; an objectness that signals the artist's creative presence. Readings in contemporary theory and historical criticism frame an aesthetics of touch at odds with the eye-centered bias of Academic theory. Student presentations. Recommended: 121.

5 units (*Marrinan*) not given 2004-05

**ARTHIST 231. Landscape and Power**

5 units (*Wolf*) not given 2004-05

**ARTHIST 243B. What was Conceptualism, and Why Has It Not Gone Away?**—The conceptual art movement, the legacy of its means and modes, and the hopes that shaped its political and aesthetic strata-gems. Topics include: dematerialization, invisibility, and the suppression of the beholder; its relation to dada, minimalism, performance, and photography; language as a mode of visual representation; the debt to structuralist linguistics; information and the technological imaginary; intersections with contemporaneous theories of systems and games; notions of the document, idea, and concept; and the persistence of its claims and ways.

5 units, *Aut* (*Meltzer*)

**ARTHIST 246. The Russian and Soviet Avant Garde**

5 units (*Gough*) not given 2004-05

**ARTHIST 251. Frank Lloyd Wright**—The influential American architect whose work transformed domestic architecture in particular. Students choose research subjects dealing with designs or aspects of Wright's career. Field trips to Wright's buildings in the Bay Area. Prerequisites: 141, 142, or 150. GER:3a

5 units, *Spr* (*Turner*)

**ARTHIST 254. Utopia and Reality in Modern Urban Planning**—(Same as URBANST 254.) Primarily for Urban Studies majors. Utopian urbanist thinkers such as Ebenezer Howard, Le Corbusier, and Frank Lloyd Wright who established the conceptual groundwork of contemporary urban planning practice. Research paper.

5 units, *Spr* (*Stout, Turner*)

**ARTHIST 261. Film Theory: Theories of the Moving Image: Cinema and Models of Perception**—GER:3a

5 units, *Win* (*Bukatman*)

**ARTHIST 280A. Encountering Contemporary Chinese Art**—Colloquium. Sources include concurrent Cantor exhibition, *On the Edge: Contemporary Chinese Artists Encounter the West*, visiting artists, and their work, methods, and themes. Issues include: transcultural encounters; art as political critique; globalization and art markets; urban displacements; language and history; and the body, sexuality, and trauma.

5 units, *Win* (*Vinograd*)

**ARTHIST 283. Court Art in Ming and Qing Dynasty China**—Seminar. Painting and other art production at the Ming and Qing dynasty courts: art institutions, collecting, court ideology and political agendas, thematic programs, and cultural regulation.

5 units (*Vinograd*) not given 2004-05

**ARTHIST 284A. Art Discourses and Art Production in Late Ming China**—The interplay of art theory, taste, and collecting with art production, especially painting from 1550-1664, in the context of regional and urban cultures.

5 units, *Win* (*Vinograd*)

**ARTHIST 285A. Asian Ceramics**—Asian ceramics, jades, and snuff bottles using objects from the Cantor collection. Period, style, materials, and processes. Comparison of ceramics from different cultures but similar technologies. What distinguishes Chinese Longquan celadon from Korean Koryo dynasty celadon and Thai sawankhalok ware? What are the differences among Vietnamese, Chinese, and Korean blue and white wares? How did these traditions and processes develop, and are they related?

5 units, *Aut* (*Listopad*)

**ARTHIST 286. Shini-e: The Performance of Death in Japanese Actor Prints**—Memorial prints, *shini-e*, issued upon the death of celebrated kabuki actors to celebrate the actor's life and ask for patron support for his descendants. They often included the actor's own death poem. Intellectual issues include the performative self in traditional Japan, the afterlife, commercialism of the theatrical milieu, lineage, fandom, and death protocols. Sources include a loan collection of more than 400 *shini-e*; students give intellectual shape to this material and present it as an exhibit at the Cantor.

5 units, *Aut* (*Guth, Takeuchi*)

**ARTHIST 290. Mapping Africa: Cartography and Architecture**—Visual forms of spatial representation of Africa and implications for understanding the cultures they depict. Examples include early Renaissance cartography and written accounts by explorers, travelers, geographers, and missionaries. African concepts of design, meaning in architecture, and spatial solutions. Case studies of African models.

5 units, *Aut* (*Martinez-Ruiz*)

**ARTHIST 291. African and Afro-Atlantic Graphic Writing Systems**—African notions of communication and visual writing informed by Western linguistic and semiotic theory. Examples of African graphic writing systems emphasizing rupestrian art, wall painting, scarification, textiles, furniture, pottery, and metal work. Gestures, music, and oral literature. Negotiations between traditional practices and modernity.

5 units, *Spr* (*Martinez-Ruiz*)

**ARTHIST 296. Junior Seminar**—How to be an art historian. Focus is on methods and writing. The history of art history: its origins and great past and present practitioners. Writing styles and approaches used by art historians.

5 units, *Aut* (*Wolf*)

**ARTHIST 297. The Practice of Art Criticism**—The historiography and methodology of the discipline of art history.

5 units (*Lee*) not given 2004-05

**ARTHIST 298. Individual Work: Art History**—For approved independent research with individual faculty members. Letter grades only.

1-15 units, *Aut, Win, Spr* (*Staff*)

**ARTHIST 299. Research Project: Art History**

1-15 units, *Aut, Win, Spr* (*Staff*)

**GRADUATE SEMINARS****HISTORICAL STUDIES**

**ARTHIST 410. Aesthetics of the Icon**—The icon as material object: its painted surface, metal revetment, pearls and gemstone decoration, poetic verses written on the frame, and silk cloths covering the panel or draped at its lower border. How the icon was staged in a church or private setting; how it became a magnet for social groups; and how it functioned as a membrane oscillating between the material and divine.

5 units, Aut (*Pentcheva*)

**ARTHIST 428. Eakins and Vermeer**

5 units (*Wolf*) not given 2004-05

**ARTHIST 430A. Modernity and 19th-Century Visual Culture**—The relationship between visibility and modernity; the privileged role played by seeing. Sources include paintings and literary texts organized around questions of perception. Topics include: visibility and the public sphere; landscape and depoliticized speech; genre and hegemony; race and identity; post-liberal and postmodern culture.

5 units, Win (*Wolf*)

**ARTHIST 430B. Modernity and 19th-Century Visual Culture**—Writing workshop and reading group. The relationship between publication and professionalization. Students submit publishable papers to an appropriate journal. Recommended: 430A.

5 units (*Wolf*) not given 2004-05

**ARTHIST 440. El Lissitzky's Permanent Revolution**

5 units (*Gough*) not given 2004-05

**ARTHIST 441. Constructivism in Circulation**

5 units (*Gough*) not given 2004-05

**ARTHIST 442A. Psychoanalysis and Art History**—Topics include the unconscious, desire and language, identification, narcissism, sexuality, fetishism, the death drive, the bodily ego, the gaze, mimicry. The lacanian registers: imaginary, symbolic, and real. Elaborations, transformations, uses, and abuses of psychoanalysis within art historical texts. How these terms coexist. Psychoanalytic readings include: *The Interpretation of Dreams*, *Beyond the Pleasure Principle*, *Leonardo da Vinci and a Memory of his Childhood*, *The Mirror Stage*, and *Four Fundamental Concepts of Psychoanalysis*. Art historical readings from Krauss, Foster, Kris, Reff, Silverman, Davis, and Versani.

5 units, Win (*Meltzer*)

**ARTHIST 457. New Histories of Photography**—Method and cultural history. Image makers such as itinerant, amateur, spirit, postcard, fashion, celebrity, and journalist photographers. Research projects.

5 units, Aut (*Corn*)

**ARTHIST 473. Minimalism: Seriality, Systems, Repetition**—Minimalist or minimal art, primary structures, or ABC art in the 60s. New scholarship on the theories, criticism, and genealogies of minimalism in sculpture, painting, performance, music, and film. Considerations of the afterlife of minimalism in contemporary art.

5 units, Spr (*Lee*)

**ARTHIST 485. The Situation of the Artist in Traditional Japan**—Topics may include: workshop production such as that of the Kano and Tosa families; the meaning of the signature upon objects including ceramics and tea wares; the folk arts movement; craft guilds; the ghost painters in China; individualism versus product standardization; and the role of lineage. How were works of art commissioned? What institutions supported the artist? How did makers purvey their goods? How were artists integrated into and recognized by society? What was the relationship between patrons' desires and artists' modes of production?

5 units, Spr (*Takeuchi*)

**CRITICAL STUDIES**

**ARTHIST 507. Medieval Image Theory**—The Middle Ages saw the development of a theoretical framework on visual representation in response to charges of idolatry. The defenders of religious images drew on

the dogma of Incarnation; as the Virgin gave human flesh to the Logos/Christ, the image offered a material manifestation of the divine. Focus is on the change in perception and staging of the image. Early in the period, the icon or relic expressed the presence of the sacred; later in the period, visual representation was designed to trigger an emotional response that led the viewer to a union with the divine.

5 units (*Pentcheva*) not given 2004-05

**ARTHIST 513. Methods and Historiography of Art History**

5 units (*Lee*) not given 2004-05

**RESEARCH**

**ARTHIST 600. Art History Bibliography and Library Methods**

3 units, Aut (*Ross*)

**ARTHIST 601. Graduate Studies in Art History**—For first-year art history graduate students only. Introduction to fields, issues, and practices in art history.

2 units, Aut (*Staff*)

**ARTHIST 610. Teaching Praxis**

1-5 units, Aut, Win, Spr (*Staff*)

**ARTHIST 620. Area Core Examination Preparation**—For Art History Ph.D. candidates. Prerequisite: consent of instructor.

5 units, Aut, Win, Spr, Sum (*Staff*)

**ARTHIST 640. Dissertation Proposal Preparation**

5 units, Aut, Win, Spr, Sum (*Staff*)

**ARTHIST 650. Dissertation Research**

5 units, Aut, Win, Spr, Sum (*Staff*)

**ARTHIST 660. Independent Study**—For graduate students only. Reserved for approved independent research project with individual faculty members.

1-15 units, Aut, Win, Spr, Sum (*Staff*)



**PRACTICE OF ART**

Courses given in the Practice of Art have the subject code ARTSTUDI.

**ARTSTUDI 14. Drawing for Non-Majors**

2 units, Aut, Win (*Hewicker, Kemp*)

**ARTSTUDI 15. Printmaking for Non-Majors**

2 units (*Staff*) not given 2004-05

**ARTSTUDI 16. Sculpture for Non-Majors**

2 units, Aut, Win (*Harris, Syjuco*)

**ARTSTUDI 17. Photography for Non-Majors**

2 units, Spr (*Staff*)

**ARTSTUDI 18. Video for Non-Majors**

2 units, Spr (*Hicks*)

**ARTSTUDI 50. Clay Modeling**—Entry level. The representational ideas and techniques of Rodin, Picasso, Medardo Rosso, Segal, and Duane Hanson, and the irrational approach of Jean Arp, Dubuffet, and Giacometti. Students work from life models; library readings and slide lectures. (Level I)

3 units (*Staff*) not given 2004-05

**ARTSTUDI 60. Design I : Fundamental Visual Language**—Formal elements of visual expression (color, composition, space, and process) experienced analytically and intuitively through hands-on projects. Two- and three-dimensional mediums. Emphasis is on originality and inventiveness. Content is realized abstractly. Centered in design, but relevant to all visual art study and meaningful to the general university student seeking to develop visual perception. (Level I)

3 units, Aut, Win, Spr (*Edmark, Kahn*)

**ARTSTUDI 70. Photography I**—The critical, theoretical, and practical aspects of creative photography are addressed through basic camera and lab techniques. Lecture/discussion, viewing of slides, and field work. Stanford Museum and Art Gallery viewing are scheduled according to current exhibitions. 35mm camera required. (Level I)

3 units, Aut, Win, Spr (*Dawson, Felzmann*)

**ARTSTUDI 110. Cartographies of Race: The Institute for Diversity in the Arts at Stanford**—(Enroll in DRAMA 110.)

5 units, Win (*Elam*)

**ARTSTUDI 117. History and Philosophy of Design**—(Enroll in ME 120.)

3-4 units, Spr (*Katz*)

**ARTSTUDI 130. Interactive Art I: Objects**—Sensors, processors, and actuators needed to create artworks that interact, record, and communicate. Emphasis is on the sculpture and interactive dimensions. (Level I)

3 units, Win (*DeMarinis*)

**ARTSTUDI 131. Sound Art I**—Acoustic, digital and analog approaches to sound art. Familiarization with techniques of listening, recording, digital processing and production. Required listening and readings in the history and contemporary practice of sound art. (Level II)

3 units, Aut (*DeMarinis*)

**ARTSTUDI 133. Phenomena Art**—Focus is on the creation of works of art that have natural or unnatural phenomena at their root: the movements of light and water, the chaos of living and computing systems, and the response characteristics of the human sensory apparatus. (Level IV)

3 units (*DeMarinis*) not given 2004-05

**ARTSTUDI 134. Voice, Word, Glyph**—Introduction to mixed media and mixed metaphors with emphasis on the application of linguistic, numerical, and digitally mediated processes in art making. A process of translation that occurs as the artist makes transitions from flow-of-experience to coded meanings and thence into objects or signs of ambiguous significance. Students create works in media including performance, text, video, and object. Lab fees for use of SUDAC facilities. (Level III)

3 units (*DeMarinis*) not given 2004-05

**ARTSTUDI 135. Interactive Art II: Environments**—(Level III)

3 units, Spr (*DeMarinis*)

**ARTSTUDI 136. Media Archaeologies**—Hands-on exploration of media technologies from their origins to the recent past. Students create artworks based on Victorian era discoveries and inventions, early developments in electronic media, and orphaned technologies from the recent past. Research, rediscover, invent, and create devices of wonder and impossible objects. Readings in history and theory. How and what media technologies mediate. (Level II)

3 units, Spr (*DeMarinis*)

**ARTSTUDI 140. Drawing I**—Introduction to functional anatomy and perspective as these apply to problems of drawing the form in space. Individual and group instruction as students work from still life set-ups, nature, and the model. Emphasis is on the development of critical skills and perceptual drawing techniques for those with little or no previous experience with pastels, inks, charcoal, conte, and pencil. Lectures alternate with studio work in the investigation of drawing fundamentals. (Level I)

3 units, Aut, Win, Spr (*Staff*)

**ARTSTUDI 141. Drawing II**—Intermediate/advanced. Observation, invention, and construction. Development of conceptual and material strategies, with attention to process and purpose. May be repeated for credit. Prerequisite: 40 or 140, or consent of instructor. (Level II)

3 units, Aut (*Staff*)

**ARTSTUDI 142. Drawing III**—Advanced. Emphasis is on student initiative with respect to composition, color, and use of a variety of drawing materials. Work from imagination, still life, and model. May be repeated for credit. Prerequisite: 40 or 140, or consent of instructor. (Level IV)

3 units, Aut, Win, Spr (*Staff*)

**ARTSTUDI 145. Painting I**—Introduction to techniques, materials, and vocabulary in oil painting. Still life, landscape, and figure are used as subject matter. Painting and drawing directly from life is emphasized. (Level I)

3 units, Aut, Win, Spr (*Staff*)

**ARTSTUDI 146. Painting II**—Symbolic, narrative, and representational self-portraits. Introduction to the pictorial strategies, painting methods, and psychological imperatives of Dürer, Rembrandt, Cézanne, Kahlo, Beckmann, Schiele, and Munch. Students paint from life, memory, reproductions, and objects of personal significance to create a world in which they describe themselves. Prerequisites: 140, 145, or consent of instructor. (Level II)

3 units, Win (*Staff*)

**ARTSTUDI 147. Painting III**—Advanced. Emphasis is on the individual point of view. May be repeated for credit. Prerequisites: three quarters of 145, 146, or equivalent, or consent of instructor. (Level IV)

3 units, Spr (*Staff*)

**ARTSTUDI 148. Printmaking**—Introduction to printmaking using monotype, a graphic art medium used by such artists as Blake, Degas, Gauguin, and Pendergast. May be repeated for credit. Prerequisite: 40 or 140. (Level III)

3 units, Win (*Chagoya*)

**ARTSTUDI 149. Collage**—The generative principles of this characteristic 20th-century art form. Along with assemblage (its three dimensional equivalent) and montage (its counterpart in photography, film, and video), collage introduced crucial aesthetic issues of the modern and postmodern eras. Typically, collage creates an expressive visual language through juxtaposition and displacement, and through materiality, difference, and event. Issues of location (where it happens), object (what it is), process (how it is realized), and purpose (why it is). Prerequisites: 140, 145, or consent of instructor. (Level III)

3 units, Spr (*Hannah*)



**ARTSTUDI 151. Sculpture I**

3 units, Aut (Staff)

**ARTSTUDI 152. Constructed Art**—The non-objective inventions of the Russian constructivists are the departure point which parallels the development of non-representational sculpture beginning in the early 20th century. Found art, welded sculpture, assemblage, and kinetic art projects direct attention to the evolution of art ideas. Lectures, readings, and projects culminate in sculptures concerning art of the 60s and 70s: minimalism, earth works, and process art. (Level III)

3 units (Randell) not given 2004-05

**ARTSTUDI 153. Recent Sculpture Projects and Concepts**—Study and practice of the art of recent decades, emphasizing current post-abstract procedures. Various materials and nonmaterials. Prerequisite: any one of 50, 60, or 70. (Level IV)

3 units (Randell) not given 2004-05

**ARTSTUDI 160. Design II: The Bridge**—The historical spectrum of design, from practical to ritual, while maintaining contact with the basic values and the conceptual orientation of visual fundamentals. Two- and three-dimensional projects are sequentially grouped to relate design theory to application, balancing imaginative and responsible thinking. Prerequisite: 60. (Level II)

3 units, Win, Spr (Edmark, Kahn)

**ARTSTUDI 161. Catalysts for Design: Nature, Science, and Technology as Sources of Design Inspiration**—Nature, science, and technology as sources of design inspiration. Field trips to nature and science museums, lectures, demonstrations, investigations of artists and designers, and readings provide creative support for projects that emphasize creative synthesis in the design process. Projects take the form of physical constructions as opposed to renderings or computer models and range in scope from in-class activities to multi-week studies. Prerequisite: 60 or consent of instructor. (Level II)

3 units, Spr (Edmark)

**ARTSTUDI 163. Color**—Hands-on exploration of color to develop color sensitivity and the ability to manipulate color to exploit its expressive potential. Topics include color relativity, color and light, color mixing, color harmony, and color and content. (Level I)

3 units, Aut (Edmark)

**ARTSTUDI 168A. Introduction to Urban Design**—(Enroll in UR-BANST 170.)

5 units, Win (Gast)

**ARTSTUDI 169. Professional Design Exploration**—Six to eight mature projects are stimulated by weekly field trips into significant areas of design activity or need. (Level III)

3 units, Spr (Kahn)

**ARTSTUDI 170. Photography II**—Students individually pursue a topic of their own definition. Class sessions meet for individual and group critiques, lab demonstration, discussions, and slide lectures. (Level II)

3 units, Aut, Win, Spr (Dawson, Felzmann)

**ARTSTUDI 171. Color Photography**—Intermediate level. Topics include techniques, history, color theory, and perception of color. Contemporary color photography issues and concepts. Students work with color slides and negatives, digital color, and non-traditional techniques. Field trip to a color lab. Prerequisite: 70.

3 units, Aut (Dawson)

**ARTSTUDI 172. Alternative Processes**—Priority to advanced students. Technical procedures and the uses of primitive and hand-made photographic emulsions. Enrollment limited to 10. Prerequisites: 70, 170, 270, or consent of instructor. (Level III)

3 units, Spr (Leivick)

**ARTSTUDI 174. Digital Art in Public Spaces**—Interventions in public space with focus on social networks on- and offline. How individuals become distributed and localized participants in shared

digital and non-digital interventions that allow public participation. Student projects collectively challenge the role of accepted forms and uses of technology in public spaces. New technologies and tools to increase the ease of shared resources and provoke collective practice. For further information and additional Stanford University Digital Art Center (SUDAC) courses, see <http://www.stanford.edu/dept/art/SUDAC/>. Prerequisites: 60 or 145, 70; working knowledge of Photoshop and Illustrator. (Level II)

3 units, Spr (Franceschini)

**ARTSTUDI 175. Topics in Computer Graphics**—(Enroll in CS 448.)

3-4 units (Staff)

**ARTSTUDI 176. Web Projects**—Creating art works using the Internet as a medium. How the web has been conceptualized as mutable archive, multitude of communities, performance space, and medium through which one may perceive, act, and understand at a distance. Interactive works created using tools such as Dreamweaver, Flash, HTML, and PHP. (Level II)

3 units, Win (Wight)

**ARTSTUDI 177. Experimental Video I**—Students create experimental video works. Conceptual, formal, and performance-based approaches to the medium. The history of video art since the 70s and its influences including experimental film, television, minimalism, conceptual art, performance, and electronic art. Technical topics: camera technique, lighting, sound design, found footage, cinematic conventions, and non-linear digital editing. Screenings and readings. For further information and additional Stanford University Digital Art Center (SUDAC) courses, see <http://www.stanford.edu/dept/art/SUDAC/>. (Level II)

3 units, Aut (Triglio)

**ARTSTUDI 177A. Experimental Video II: Installation**—Advanced work in video, criticism, and contemporary media theory investigating the time image. Students create multi-channel works for a collaborative, closed-circuit network performance. Architecturally site-specific responses, the integration of video with traditional art media such as sculpture and painting, and live streaming video. Prerequisite: 177 or consent of instructor. (Level III)

3 units, Win (Valdés)

**ARTSTUDI 178. Electronic Art I**—The use of analog electronics in contemporary art practice. Electrical components and their practical use in artworks. Students create art that employs simple electronics. Technical topics: soldering, construction of simple circuits, elementary electronics theory. Readings, viewings, and field trips.

3 units, Aut (Wight)

**ARTSTUDI 179. Digital Media I**—Contemporary electronic art. Students create works exploring two- and three-dimensional, and time-based uses of the computer in fine art. History and theoretical underpinnings. Common discourse and informative resources for material and inspiration. Technical topics: imaging and sound software, hypertext, hardware concerns, and peripherals. (Level I)

3 units, Aut (Wight)

**ARTSTUDI 181. The Art of the Archive**—From the Greek *arkheion* (treasure house), archives transcend their individual elements to become works of art in themselves. Examples include the clay tablets of Mesopotamia and Wunderkammern, Eschelon, and the Internet. The cultural relevance of archives as a backdrop for creating archival art works using hypertext, scripting languages, and cd-rom authoring (Flash, Director, HTML), and traditional media.

3 units (Wight) not given 2004-05

**ARTSTUDI 182. Art and the Politics of Media**—How do the politics of media inform its use as a medium and tool for artists? Issues of surveillance, data collection and databases; advertising and personalized profiling; global networks and their attendant economies; search engines and filters; intellectual property and copyright law; and identity politics provide conceptual groundwork for creating art.

3 units (Wight) not given 2004-05

**ARTSTUDI 184. Art and Life Forms**—The relationship between biology and art. Rather than how art has assisted the biological sciences as in medical illustration, focus is on how biology has influenced art making practice. New technologies and experimental directions, historical shifts in artists' relationship to the living world, the effects of research methods on the development of theory, and changing conceptions of biology and life. Projects address these themes and others that emerge from class discussions and presentations.

*3 units, Spr (Wight)*

**ARTSTUDI 200. The Work of Art and the Creation of Mind**—(Enroll in EDUC 200.)

*4 units, Win (Staff)*

**ARTSTUDI 246. Individual Work: Drawing and Painting**—Prerequisites: two quarters of painting or drawing and consent of instructor.

*1-15 units, Aut, Win, Spr (Staff)*

**ARTSTUDI 248. Advanced Printmaking**—Continuation of monotype, dealing with advanced technical and aesthetic problems in the medium. Prerequisite: 148. (Level IV)

*1-15 units, Aut, Win, Spr (Chagoya)*

**ARTSTUDI 250. Individual Work: Sculpture**

*1-15 units, Aut, Win, Spr, Sum (Staff)*

**ARTSTUDI 260. Individual Work: Design**

*1-15 units, Aut, Win, Spr (Kahn)*

**ARTSTUDI 268. Design Synthesis**—Mature semi-elective problems in composite and multimedia design areas. Prerequisites: any two design courses above 160. (Level IV)

*4-6 units, Spr (Kahn)*

**ARTSTUDI 269. Advanced Creative Studies**—Seminar based on elective design projects in areas of individual specialization. Prerequisite: consent of instructor. (Level IV)

*1-15 units, Aut, Win (Kahn)*

**ARTSTUDI 270. Photography III**—Student continues with own work, showing it in weekly seminar critiques. (Level IV)

*1-5 units, Aut, Win, Spr (Leivick)*

**ARTSTUDI 271. The View Camera: Its Uses and Techniques**—For students of photography who wish to gain greater control and refine skills in image making. 4x5 view cameras provided. Enrollment limited to 8. (Level III)

*3 units, Win, Spr (Staff)*

**ARTSTUDI 272. Individual Work: Photography**—Student continues with own work, showing it in weekly seminar critiques.

*1-5 units, Aut, Win, Spr (Leivick)*

**ARTSTUDI 273. Individual Work: Digital Media**

*1-15 units, Aut, Win, Spr (Staff)*

**ARTSTUDI 274. Individual Work: Digital Art**

*1-15 units, Aut, Win, Spr (Staff)*

**ARTSTUDI 275. Photography IV**

*3 units, Spr (Staff)*

**ARTSTUDI 310A,B,C. Directed Reading: Studio**

*1-15 units, Aut, Win, Spr (Staff)*

**ARTSTUDI 342. MFA Project: Studio**—Two weekly seminars and studio practice (individual tutorial). The object seminar is a forum in which student work is critiqued on issues of identity, presentation, and the development of coherent critical language. The concept seminar explores modes of conceptualization to broaden the base of cognitive and generative processes. Readings, discussions, writing.

*1-15 units, Aut, Win, Spr (Hannah)*

**ARTSTUDI 360A,B,C. Master's Project: Design**

*1-15 units, Aut, Win, Spr (Kahn)*

## OVERSEAS STUDIES

Courses approved for the Art major and taught overseas can be found in the Overseas Studies section of this bulletin, or in the Overseas Studies office, 126 Sweet Hall.

### BERLIN

**ARTHIST 110Y. Architecture and the City, 1871-1990: Berlin as a Nucleus of Modernity**—(Same as HISTORY 229V, STS 119V, URBANST 143U.)

*4 units, Spr (Neckenig)*

**ARTHIST 141Y. The Industrial Revolution and its Impact on Art, Architecture, and Theory**—(Same as STS 117V.)

*5 units, Aut (Neckenig)*

**ARTHIST 162Y. Film and Writing**

*3-4 units, Spr (Maerker)*

### FLORENCE

**ARTHIST 111Y. From Giotto to Michelangelo: Introduction to the Renaissance in Florence**

*4 units, Win (Verdon)*

**ARTHIST 112Y. High Renaissance and Maniera**—(Same as ITALGEN 150F.)

*5 units, Spr (Verdon)*

**ARTHIST 115Y. The Duomo and Palazzo della Signoria: Symbols of a Civilization**

*4 units, Aut (Verdon)*

**ARTHIST 160Y. The Cinema Goes to War: Fascism and World War II as Represented in Italian and European Cinema**—(Same as ITALGEN 191F, HISTORY 235V, COMM 53.)

*5 units, Win (Campani)*

**ARTHIST 161Y. Modernist Italian Cinema**—(Same as ITALGEN 134F, STS 125.)

*5 units, Aut (Campani)*

**ARTSTUDI 70Y. Photography in Florence**

*4 units, Win (Loverme)*

**ARTSTUDI 141Y. Becoming an Artist in Florence: Contemporary Art in Tuscany and New Tendencies in the Visual Future**

*3-5 units, Spr (Rossi)*

**ARTSTUDI 147Y. The Contemporary Art Scene in Tuscany: Theory and Practice**

*3-5 units, Aut (Rossi)*

**ARTSTUDI 198F. Academy of Fine Arts: Studio Art**

*1-5 units, Aut, Win, Spr (Staff)*

### OXFORD

**ARTHIST 221Y. Art and Society in Britain**—(Same as HISTORY 244V.)

*5 units, Aut (Tyack)*

### PARIS

**ARTHIST 107Y. The Age of Cathedrals: Religious Art and Architecture in Medieval France**

*4 units, Aut (Deremble)*

**ARTHIST 123Y. French Painting**

*4 units, Win (Halevi)*

**ARTHIST 129Y. Paris of the Surrealists**

*5 units, Win (Lee)*

**ARTHIST 179Y. Postwar European Art**

*5 units, Win (Lee)*

**ARTSTUDI 60Y. EAP: Graphic Art**

*2 units, Aut, Win, Spr (Staff)*

**ARTSTUDI 61Y. EAP: Perspective, Interior Decorating, Volume, and Design**

2 units, Aut, Win, Spr (Staff)

**ARTSTUDI 140Y. EAP: Drawing with Live Models**

2 units, Aut, Win, Spr (Staff)

**ARTSTUDI 144Y. EAP: Painting and Use of Color**

2 units, Aut, Win, Spr (Staff)

## ASIAN LANGUAGES

*Emeriti:* (Professors) Albert E. Dien, David S. Nivison, Makoto Ueda; (Associate Professors) William A. Lyell, Susan Matisoff; (Senior Lecturer) Yin Chuang\*

*Chair:* Yoshiko Matsumoto

*Directors of Graduate Studies:* Steven Carter (Japanese), John C. Y. Wang (Chinese)

*Directors of Undergraduate Studies:* Mark E. Lewis (Chinese), Yoshiko Matsumoto (Japanese)

*Professors:* Steven Carter, Mark E. Lewis (Asian Languages, History), Haun Saussy (Asian Languages, Comparative Literature, on leave), Peter Sells (Asian Languages, Linguistics), Melinda Takeuchi (Asian Languages, Art and Art History), John C. Y. Wang

*Associate Professors:* Yoshiko Matsumoto, Chao Fen Sun

*Assistant Professors:* Indra Levy, Wan Liu (on leave), James Reichert

*Consulting Associate Professor:* Richard Dasher

*Postdoctoral Fellows:* Adrienne Hurley (Stanford Institute for International Studies), Bruce Rusk (Stanford Humanities Fellow)

**Chinese-Japanese Area Studies Faculty:**

*Professors:* Masahiko Aoki (Economics), Carl W. Bielefeldt (Religious Studies), Peter Duus (History), Bernard Faure (Religious Studies), Harold L. Kahn (History, emeritus), Lawrence Lau (Economics), John W. Lewis (Political Science, emeritus), Jean Oi (Political Science), Daniel I. Okimoto (Political Science), David Palumbo-Liu (Comparative Literature), Richard Vinograd (Art and Art History), Andrew Walder (Sociology), Arthur P. Wolf (Anthropological Sciences), Lee H. Yearley (Religious Studies)

*Associate Professors:* Matthew Sommer (History), Kären Wigen (History)

*Assistant Professors:* Melissa Brown (Anthropological Sciences), Miyako Inoue (Cultural and Social Anthropology), Matthew Kohrman (Cultural and Social Anthropology)

\* Recalled to active duty.

*Department Office:* Building 50, Room 51D

*Mail Code:* 94305-2034

*Phone:* (650) 725-2742

*Email:* asianlanguages@stanford.edu

*Web Site:* <http://asianlanguages.stanford.edu>

Courses given in Asian Languages have subject codes CHINGEN, CHINLIT, JAPANGEN, and JAPANLIT. For a complete list of subject codes, see Appendix.

The Department of Asian Languages offers courses in the languages, linguistics, cultures, and literatures of China and Japan. The department accepts candidates for the degrees of Bachelor of Arts, Master of Arts, and Doctor of Philosophy in Chinese or Japanese. It also offers an undergraduate and a Ph.D. minor in Chinese or Japanese language and literature.

For information concerning other opportunities for study in the Asian field, see listings under the following departments and programs: Anthropological Sciences, Art and Art History, Business, Comparative Literature, East Asian Studies, Economics, History, Interdisciplinary Studies in Humanities, Law, Linguistics, Philosophy, Political Science, Religious Studies, and Sociology. Courses in Chinese, Japanese, and Korean language instruction are listed in the "Language Center" section of this bulletin. Students interested in Asian languages not listed should contact the Special Language Program, Language Center.

## UNDERGRADUATE PROGRAMS BACHELOR OF ARTS

The B.A. degree is granted both in Chinese and in Japanese. The following courses and their prerequisites must be completed with a grade point average (GPA) of 2.0 or better:

1. Concentrations in Chinese:
  - a) CHINGEN 91 and JAPANGEN 92
  - b) Chinese language requirement:
    - 1) first-year modern Chinese (one of the following series: CHINLANG 1, 2, 3, or CHINLANG 1B, 2B, 3B, or CHINLANG 5)
    - 2) second-year modern Chinese (one of the following series: CHINLANG 21, 22, 23, or CHINLANG 21B, 22B, 23B, or CHINLANG 25)
    - 3) third-year modern Chinese (one of the following series: CHINLANG 101, 102, 103, or CHINLANG 101B, 102B, 103B, or CHINLANG 105) or beginning classical Chinese (CHINLIT 125, 126, 127)
  - c) three courses offered by Asian Languages at the 100 level with one in each of the following areas, pre-modern China, modern China, and Chinese language/linguistics
  - d) four other content courses dealing with China primarily at the 100 level, as approved by the undergraduate adviser
  - e) CHINGEN 133 is the required Writing in the Major (WIM) course.
2. Concentrations in Japanese:
  - a) CHINGEN 91 and JAPANGEN 92
  - b) Japanese language requirement:
    - 1) first-year modern Japanese (one of the following series: JAPANLNG 1, 2, 3, or JAPANLNG 7B, 8B, 9B, or JAPANLNG 5)
    - 2) second-year modern Japanese (one of the following series: JAPANLNG 21, 22, 23, or JAPANLNG 17B, 18B, 19B, or JAPANLNG 25)
    - 3) third-year modern Japanese (one of the following series: JAPANLNG 101, 102, 103, or JAPANLNG 127B, 128B, 129B, or JAPANLNG 105)
  - c) three courses offered by Asian Languages at the 100 level with one in each of the following areas, pre-modern Japan, modern Japan, and Japanese language/linguistics
  - d) four other content courses dealing with Japan primarily at the 100 level, as approved by the undergraduate adviser
  - e) JAPANGEN 138 is the required WIM course.

JAPANGEN 71N can be used to satisfy the Japanese language/linguistics area requirement. JAPANGEN 51/151 and Japanese 30/130 are not counted toward the major. Students who complete third-year Japanese at KCJS satisfy the language requirement but are required to take a placement test if they wish to enroll in JAPANLNG 211, 212, 213.

Students who want to concentrate in Chinese or Japanese language/linguistics can substitute the four other content courses primarily at the 100 level with LINGUIST 1 and three other linguistic courses at the 100 level, as approved by the undergraduate adviser in consultation with the student's academic adviser.

These requirements are in addition to the University's basic requirement for the bachelor's degree. Letter grades are mandatory for all required courses.

### MINORS

The undergraduate minor in Asian Languages has been designed to give students majoring in other departments an opportunity to gain a substantial introduction to Chinese (Mandarin) or Japanese language, as well as an introduction to the culture and civilization of East Asia. The minor consists of:

1. Completion of one year of language study at the second-year level (that is, CHINLANG 21, 22, 23 or JAPANLNG 21, 22, 23 or 17B, 18B, 19B) for students with no previous training in Chinese or Japanese. Students who already have first-year competence in Chinese or Japanese must complete the third-year course (CHINLANG 101, 102,



103 or JAPANLNG 101, 102, 103 or 127B, 128B, 129B) before undertaking any training in the Department of Asian Languages. Students who already have a competence at the second-year level may fulfill the language component of the minor by taking three courses in the department using materials in either Chinese or Japanese. These courses may be language courses such as the third-year sequence mentioned above, or they may be advanced literature and linguistics courses, depending on the capabilities and interests of the student in question.

2. The core courses, CHINGEN 91, Traditional East Asian Civilization: China, and JAPANGEN 92, Traditional East Asian Civilization: Japan.
3. Two courses selected from among the department's other offerings in the literature, linguistics, and civilization of a given minor area. All courses for the minor must be completed with a GPA of 2.0 or better.

## HONORS PROGRAM

Majors with an overall GPA of 3.5 may apply for the honors program by submitting a senior thesis proposal to the honors committee during Winter or Spring Quarter of the junior year. The proposal must include a thesis outline, a list of all relevant courses the student has taken or plans to take, a skeleton reading list including a work or works in Chinese or Japanese, and the name of a faculty member who has agreed to act as honors supervisor.

If the proposal is approved, research and writing begins in the Spring Quarter of the junior year, and for the first two quarters takes the form of directed reading with the chosen supervisor; the finished essay (normally about 15,000 words) is submitted to the committee no later than the end of the Winter Quarter in the senior year. From 10 to 15 units of credit are granted for the finished thesis.

## COTERMINAL PROGRAMS

With department approval, students may be able to combine programs for the B.A. and M.A. degrees in Chinese or Japanese. For details, see the "Graduate Degrees" section of this bulletin.

## EAST ASIAN STUDIES THEME HOUSE

EAST House, located at Governor's Corner on campus, is an undergraduate residence that houses 60 students and offers them a wide variety of opportunities to expand their knowledge, understanding, and appreciation of East Asia. Assignment is made through the regular undergraduate housing draw.

## SUMMER PROGRAM

A nine-week summer program of intensive instruction is offered, on three different levels, in both Chinese and Japanese. The intensive courses provide the equivalent in instruction to regular academic-year courses. (See courses CHINLANG 5, 25, 105, and JAPANLNG 10, 20, 130, as described in the "Language Center" section of this bulletin.) For detailed information about these and other aspects of the summer program, inquire at the Language Center.

## GRADUATE PROGRAMS

*Admission*—All students contemplating application for admission to graduate study must have a creditable undergraduate record. The applicant need not have majored in Chinese or Japanese as an undergraduate, but must have had the equivalent of at least three years of training in the language in which he or she intends to specialize, and must also demonstrate a command of English adequate for the pursuit of graduate study. Applicants should not wish merely to acquire or improve language skills, but to pursue study in one of the following fields: Chinese history (pre-modern), Chinese linguistics, Chinese literature, Chinese philosophy, Japanese cultural history, Japanese literature, and Japanese linguistics.

## MASTER OF ARTS

The M.A. is granted in Chinese and in Japanese. The normal length of study for the degree is two years.

Applicants who wish to obtain only the M.A. and who do not intend to proceed to the Ph.D. are considered only if no financial aid is requested.

Students who wish to spend the first year of graduate study at the Beijing or Yokohama centers must obtain department approval first.

Candidates for the degree must be in residence at Stanford in California during the final quarter of registration.

A thesis or an annotated translation of a text of suitable literary or historical worth is required for the M.A. degree. Under special circumstances, a paper approved by the graduate adviser may be substituted.

The University's basic requirements for the master's degree, including a 45-unit minimum requirement, are given in the "Graduate Degrees" section of this bulletin. Department requirements are set forth below.

## CHINESE

The candidate must:

1. Meet the department's requirements for the B.A. in Chinese or their equivalent.
2. Complete the following course work: CHINLANG 103, CHINLIT 201, 221, 222, 223, 299; four courses in Chinese numbered between CHINLIT 230 and 292; and two upper-division or graduate-level courses in fields such as Chinese anthropology, art, history, philosophy, and politics as approved by the graduate adviser in consultation with the student's individual adviser. Students may be exempted from CHINLANG 101, 102, 103, and CHINLIT 221, 222, 223 by passing examinations to demonstrate that they have attained equivalent language competence. Letter grades are mandatory for all required courses and their prerequisites.

## JAPANESE

The candidate must:

1. Meet the department's requirements for the B.A. in Japanese or their equivalent.
2. Complete the following course work: JAPANLIT 201, JAPANLNG 211-213, JAPANLIT 246, 247, 248, 299; four courses in Japanese numbered between JAPANLIT 256 and 298; one course in literary theory or methodology at the 100 level or higher; and two courses in such fields as Japanese anthropology, art, history, politics, and religion, as approved by the graduate adviser in consultation with the student's individual adviser. Students may be exempted from JAPANLNG 211, 212, 213, and JAPANLIT 246 by passing examinations to demonstrate that they have attained equivalent language competence. Letter grades are mandatory for all required courses and their prerequisites.

## DOCTOR OF PHILOSOPHY

The Ph.D. degree is granted in Chinese and Japanese. Candidates for the degree are expected to acquire a thorough familiarity with Chinese or Japanese literature, an adequate command of both languages, and a comprehensive knowledge of East Asian history, social institutions, and thought. The University's basic requirements for the Ph.D. are given in the "Graduate Degrees" section of this bulletin. Department requirements are set forth below.

## ADMISSION TO CANDIDACY

Students admitted with a B.A. only are evaluated by the graduate faculty during the Autumn Quarter of their second year at Stanford. The evaluation is based on written work and at least a portion of the M.A. thesis or translation. If the faculty have serious doubts about a student's ability to work for the Ph.D., they convey this to the student. During the subsequent Spring Quarter, the faculty formally decides whether a student should be admitted to candidacy for the Ph.D. or be terminated. In the case of a student who already has an M.A. in Chinese or Japanese when admitted to the department, the evaluation takes place in the Spring Quarter of the student's first year. If a student goes to the Taipei or Yokohama center during his or her first two years, the department will consider an extension for admission to candidacy. The timing of the evaluation of a student admitted with an M.A. in East Asian Studies is decided on an individual basis.

Admission to candidacy does not mean that the student has fulfilled all requirements for the degree except the dissertation, but that the department faculty consider the student qualified to pursue a program of study leading to the Ph.D. and that, subject to continued satisfactory progress, the student's status in this department is secure.

## REQUIREMENTS

A candidate must fulfill the following requirements:

1. Demonstrate a reading knowledge of French, German, or another European language approved by the graduate adviser.
2. Complete two seminars at the 300 level. These seminars must be in different subjects.
3. Pass an examination in the supporting Asian language. A candidate whose field is Chinese is examined on his or her ability to read modern Japanese works relevant to his or her field of study. This requirement may be met by taking JAPANLNG 101, 102, 103, or JAPANLNG 217B, 218B, 219B, or 105, for letter grades. A candidate whose field is Japanese is examined on the ability to read classical Chinese works relevant to his or her field of study. This requirement may be met by taking CHINLIT 205, 206, and 207 for letter grades.
4. Pass a set of four comprehensive written examinations, one of which tests the candidate's methodological competence in a discipline. The remaining three fields are chosen, with the approval of the graduate adviser in consultation with the student's individual adviser, from the following: anthropology, art, Chinese literature, history, Japanese literature, linguistics, philosophy, and religion.
5. Demonstrate pedagogical proficiency by serving as a teaching assistant for a minimum of one quarter, and taking APPLING 201, The Learning and Teaching of Second Languages.

*University Oral Examination*—General regulations governing the oral examination are found in the "Graduate Degrees" section of this bulletin. The candidate is examined on questions related to the dissertation after acceptable parts of it have been completed in draft form.

*Dissertation*—The candidate must write a dissertation demonstrating ability to undertake original research based on primary materials in Chinese or Japanese.

## PH.D. MINOR

A student taking a minor in Asian Languages must complete at least 30 units of work within the department at the 200 and 300 level, chosen in consultation with a department adviser. The student must elect either CHINLIT or JAPANLIT 201 unless the department is satisfied that work done elsewhere has provided similar training. The student must also pass a written examination in the Chinese or Japanese language.

## STUDYING ABROAD

Students interested in a serious study of Japanese language, history, culture, and social organization are encouraged to apply to the Kyoto Center for Japanese Studies (KCJS), a September-to-April program managed by Stanford and including students from other American universities. Students with two years of Japanese may attend the full academic year, or Autumn or Spring semester. In Spring Quarter, the Stanford Center for Technology and Innovation (SCTI), also in Kyoto, focuses on Japanese organizations and the political economy of research, development, and production of high technology and advanced industries, followed by a two-to-three month internship in an agency, firm, or laboratory in Japan. For students in a technical major, two quarters of Modern Japanese or Japanese Language, Culture, and Communication B (5 units), or five quarters of Japanese Language, Culture, and Communication A (3 units) fulfill the SCTI language requirement; for students in a non-technical major, five quarters of Japanese Language, Culture, and Communication B (5 units) fulfill the SCTI language requirement. For information about either program in Kyoto, students should contact the Overseas Studies office in Sweet Hall.

Students should take note of the programs of the Inter-University Board for Chinese Language Studies and the Inter-University Center for Japanese Studies located in Yokohama. Stanford is a member of these consortia programs. See "The Institute for International Studies" section in this bulletin.

Attention is also called to the exchange program established with the Department of Chinese at Peking University in Beijing. Those interested in the program should consult the chair of the department early in the academic year.

## COURSES

WIM indicates that the course satisfies the Writing in the Major requirements.

Students interested in literature and literary studies should also consult course listings in the departments of Classics, Comparative Literature, English, French and Italian, German Studies, Slavic Languages and Literatures, and Spanish and Portuguese, in the Program in Modern Thought and Literature, and in the Division of Literatures, Cultures, and Languages.

Since unavoidable changes occasionally have to be made in course offerings after the *Stanford Bulletin* has gone to print, students are advised to consult the department each quarter.

## GENERAL

These courses are open to all undergraduates and graduate students, are taught in English, and do not require a knowledge of an Asian language.

## CHINESE

**CHINGEN 51. Chinese Calligraphy**—Practice in writing Chinese characters with a brush, composition of the characters, and improving handwriting. Limited enrollment. May be repeated for credit. Prerequisite: CHINLANG 3 or equivalent. (AU)

*1-2 units, Spr (Chuang)*

**CHINGEN 73/173. Chinese Language, Culture, and Society**—Language in Chinese culture and society. Topics: the origin of Chinese, developments of dialects, emergence of the standard, evolution of writing, language policies in greater China, preferred formulaic expressions. Recommended: CHINLANG 1 or 1B, or equivalent. GER:3b,4a

*4 units, Aut (Sun)*

**CHINGEN 91. Traditional East Asian Civilization: China**—Required of Chinese and Japanese majors. Introduction to Chinese culture in a historical context. GER:3a,4a

*5 units, Aut (Rusk)*

**CHINGEN 131/231. Chinese Poetry in Translation**—The Chinese poetic tradition from the first millennium B.C.E. to the 14th century. Traditional verse forms representative of the classical tradition; highlights of the most distinguished poets. History, language, and culture relevant to the literary works under study. GER:3a,4a

*4 units, Aut (Jahshan)*

**CHINGEN 132/232. Chinese Fiction and Drama in Translation**—Fiction and drama from early times to the 18th century. GER:3a,4a

*4 units, Win (J. Wang)*

**CHINGEN 133/233. Modern and Contemporary Chinese Literature in Translation**—Required for Chinese majors. Developments in literature and literary theory in 20th-century China. The May 4th Period; Mandarin Ducks and Butterfly urban popular fiction; socialist realism in the 30s and the Yan'an days in the 40s; the Cultural Revolution, and the changing literary forms of post-Mao society. GER:3a,4a, WIM

*4 units, Win (Lyell)*

**CHINGEN 135. Lovers, Drinkers, and Fighters: The World of the Chinese Martial Arts Novel**—Cultural context and characters. Readings in translation from the best writers of the mid-20th century. GER:3a

*4 units, Spr (Kam)*

**CHINGEN 200. Directed Readings in Asian Languages**—By instructor's assignment. For Chinese literature.

*1-12 units by arrangement, Aut, Win, Spr, Sum (Staff)*

**JAPANESE**

**JAPANGEN 51/151. Japanese Business Culture**—Japanese group dynamics in industrial and corporate structures, negotiating styles, decision making, and crisis management. Strategies for managing intercultural differences.

*1-5 units, Win (Dasher)*

**JAPANGEN 72N. Nature and the Japanese Condition**—Stanford Introductory Seminar. Preference to freshmen. The Japanese are frequently represented as having a special relationship with the natural world. The nature of that claim as articulated in literary texts and in Japanese garden culture, from the 10th-20th centuries. Readings in English. GER:3a

*4 units, Win (Carter)*

**JAPANGEN 77. Telling the Difference: Reading Race in Modern Japan**—Literary and visual images of ethnic minorities in Japan (Ainu, burakumin, Okinawans, and Koreans). The place of race and ethnicity in the Japanese national and cultural imagination. Issues of narration and representation, and the historical, political, and social contexts of minority discourse. Primary texts and secondary material from literature, history, anthropology, and cultural studies. Readings in English. GER:3a

*4 units, Aut (Scott)*

**JAPANGEN 92. Traditional East Asian Civilization: Japan**—Required for Chinese and Japanese majors. Introduction to Japanese culture in a historical context. Focus is on the intersection of gender and performance paradigms in the traditional literary and performance arts from the Nara to the Edo period. GER:3a,4a

*5 units, Win (Levy)*

**JAPANGEN 115/215. History of Japanese Popular Culture**—Current and historical trends in Japanese popular culture focusing on puppet plays, woodblock prints, detective novels, theatrical reviews, comic books, and animated films. How individual cultural products operate in conjunction with contemporaneous networks of social, technological, economic, and political signification. GER:3a,4a

*4 units, Spr (Reichert)*

**JAPANGEN 136/236. Classical Japanese Poetry and Non-Narrative Prose in Translation**—Major genres of the Japanese poetic tradition including the *uta*, linked verse, and haiku. Methods and purposes of poetic composition, and poetic culture in broader social terms with attention to religious, political, and discursive assumptions in poetic practice and theory. GER:3a,4a

*4 units (Carter) not given 2004-05*

**JAPANGEN 138/238. Survey of Modern Japanese Literature in Translation**—Required for Japanese majors. Japanese literature since 1868. Authors include Futabatei Shimei, Higuchi Ichioy, Natsume Soseki, and Yoshimoto Banana. GER:3a,4a,WIM

*5 units, Aut (Reichert)*

**JAPANGEN 148/248. Modern Japanese Narratives: Literature and Film**—Issues of central concern in modern Japanese visual and written narrative. Focus is on competing views of modernity, war, and crises of individual and collective identity and responsibility within these contexts. Directors and authors include Kurosawa, Mizoguchi, Ozu, Ogai, Akutagawa, Tanizaki, Abe, and Oe. GER:4a

*4 units, Spr (Levy)*

**JAPANGEN 200. Directed Reading in Asian Languages**—By instructor's assignment. For Japanese literature.

*1-12 units by arrangement, Aut, Win, Spr, Sum (Staff)*

**CHINESE****CHINESE LANGUAGE COURSES**

The following courses in Chinese language instruction represent a typical sequence for three years of Chinese language study. Majors and prospective majors should consult the requirements for a B.A. in Chinese above. For descriptions, other information, and additional courses including special emphasis, intensive, and summer courses, see the "Language Center" section of this bulletin.

**CHINLANG 1,2,3. First-Year Modern Chinese**

*5 units, 1: Aut, 2: Win, 3: Spr (Zeng, Staff)*

**CHINLANG 21,22,23. Second-Year Modern Chinese**

*5 units, 21: Aut, 22: Win, 23: Spr (Chung)*

**CHINLANG 101,102,103. Third-Year Modern Chinese**

*5 units, 101: Aut, 102: Win, 103: Spr (Wang)*

**CHINESE COURSES: UPPER DIVISION**

**CHINLIT 114/214. Introduction to Modern Chinese Literature**—Short stories, novels, plays, and poetry through annotated texts. Discussions in Chinese. Prerequisite: three years of modern Chinese. GER:3a  
*5 units (Staff) not given 2004-05*

**CHINLIT 125,126,127. Beginning Classical Chinese** (Graduate students register for 205,206,207.) Goal is reading knowledge of classical Chinese. Students with no background in classical Chinese and who are taking 127 to satisfy Chinese major requirements must begin with 125. Basic grammar and commonly used vocabulary. Prerequisite: CHINLANG 23 or equivalent.

*2-5 units, 125: Aut, 126: Win, 127: Spr (Sun)*

**CHINLIT 160/260. Writing in Early China**—Major genres and classic works produced in China through the Han dynasty. Works considered in relation to their social background, use as historical sources, and aesthetic interest. Readings include primary sources in translation and secondary sources. GER:3a

*4 units (Lewis) not given 2004-05*

**CHINLIT 161/261A. Passion in Late Imperial Literature**—The treatment of romantic passion and related emotions in late imperial fiction and theater. Focus is on secondary literature. GER:3a

*4 units, Win (Lewis)*

**CHINLIT 175. Introduction to Traditional Chinese Narrative Writing**—Emphasis is on formal and linguistic structures including the difference between classical and spoken styles, devices such as dialog, summary, interreference, and interruption, and interpretative issues. Prerequisite: written Chinese.

*3 units (Saussy) not given 2004-05*

**CHINLIT 191/291. The Structure of Modern Chinese**—Introduction to the grammatical structure of Chinese, focusing on syntax and semantics. Prerequisite: CHINLANG 3 or equivalent, or consent of instructor. GER:3b

*4 units (Sun) not given 2004-05*

**CHINLIT 192/292. The History of Chinese**—Emphasis is on syntactic and semantic changes in the last 2,000 years and grammaticalization. Students use a computer corpus to do research on the history of Chinese. Prerequisite: 206 or consent of instructor. GER:3b

*4 units (Sun) not given 2004-05*

**CHINLIT 199. Individual Reading in Chinese**—Asian Language majors only. Prerequisite: CHINLANG 103 or consent of instructor.

*1-4 units by arrangement, Aut, Win, Spr, Sum (Staff)*

**GRADUATE****CHINLIT 200. Directed Reading in Chinese**

*1-4 units by arrangement, Aut, Win, Spr, Sum (Staff)*



**CHINLIT 201. Proseminar**—Introduction to the research tools and sources relevant to Chinese humanistic studies, taught as a workshop with participation by faculty from various departments. Prerequisite: classical Chinese.

5 units (Lewis) not given 2004-05

**CHINLIT 205,206,207. Beginning Classical Chinese, First Quarter**—(Same as 125,126,127; see 125,126,127.)

2-5 units, 125: Aut, 126: Win, 127: Spr (Sun)

**CHINLIT 214. Introduction to Modern Chinese Literature**—(Same as 114; see 114.)

5 units (Staff) not given 2004-05

**CHINLIT 215. Introduction to Modern Chinese Literature II**—Continuation of 214. Prerequisite: advanced Chinese.

3-5 units (Staff) not given 2004-05

**CHINLIT 217. Modern Chinese Poetry**—From 1918 to the outbreak of the Sino-Japanese War. Emphasis is on representative poets and their works, and modern poetry's relationship with traditional poetry.

3-5 units (Staff) not given 2004-05

**CHINLIT 221,222,223. Advanced Classical Chinese: Philosophical Texts**—Prerequisite: 207 or equivalent.

**CHINLIT 221. Philosophical Texts**

5 units (Lewis) not given 2004-05

**CHINLIT 222. Historical Narration**

2-5 units (J. Wang) not given 2004-05

**CHINLIT 223. Literary Essays**

2-4 units, Spr (J. Wang)

**CHINLIT 264. Lyric (Shih) II**—Tang poetry, focusing on major figures and forms.

2-4 units, (Staff) not given 2004-05

**CHINLIT 266. Chinese Tz'u Poetry (Song Lyrics)**—Highlights from the Northern and Southern Sung periods. Patterns of generic development correlated to social changes in historical context. Prerequisite: classical Chinese.

4 units (Staff) not given 2004-05

**CHINLIT 269. New Perspectives in Lu Xun's Works**—New material on and point of view of Lu Xun's works; his prose poems (*Wild Grass*) and short stories.

5 units (Staff) not given 2004-05

**CHINLIT 271,272. Traditional Chinese Fiction**—Early times to Qing. Prerequisite: 127/207 or consent of instructor.

**CHINLIT 271. Short Stories**

4 units, Win (J. Wang)

**CHINLIT 272. Novels**

4 units, Spr (J. Wang)

**CHINLIT 273. Chinese Drama**—Yuan, Ming, and Qing periods emphasizing literary rather than theatrical qualities. Prerequisite: 127/207 or consent of instructor.

2-4 units (J. Wang) not given 2004-05

**CHINLIT 288. Gender and Genre: Women Poets in Premodern China**—Literary convention and cultural tradition contexts.

4 units (W. Liu) not given 2004-05

**CHINLIT 299. Master's Thesis or Translation**—A total of 5 units taken in one or more quarters.

1-5 units, Aut, Win, Spr (Staff)

**CHINLIT 369. Introduction to Graduate Studies: Criticism as Profession**—(Enroll in COMPLIT 369, GERLIT 369.)

5 units, Aut (Berman)

**CHINLIT 371. Seminar in Chinese Literary Criticism**—Chinese critical texts vis-à-vis Western literary theories. May be repeated for credit. Prerequisite: 127/207 or consent of instructor.

5 units (J. Wang) not given 2004-05

**CHINLIT 373. Seminar on the Shiji**—As history and literature. Prerequisite: 127/207 or consent of instructor.

2-5 units (J. Wang) not given 2004-05

**CHINLIT 381. Early Chinese Thought**—Early and medieval Chinese thought and literature. Focus varies annually. Primary sources in classical Chinese and secondary literature. Students present research papers.

5 units, Spr (Lewis)

**CHINLIT 391. Seminar in Chinese Syntax**—May be repeated for credit.

4 units (Staff) not given 2004-05

**CHINLIT 392. Topics in East Asian Syntax**—(Same as LINGUIST 278C.) Claims and analyses in the transformational syntax literature concerning the structure of modern Chinese; comparisons include Japanese and Korean. Basic literacy in modern transformational approaches. Topics include: Chinese clausal structure, the syntax-phonology and syntax-semantics interfaces, including the notion of logical form. Readings according to student interest.

1-4 units, Spr (Sells)

**CHINLIT 399. Dissertation Research**

1-15 units, Aut, Win, Spr (Staff)

**CHINLIT 400. Advanced Language Training**—For students in the Inter-University Board for Chinese language programs in Beijing or Taipei. For more information, contact the consortium office at UC Berkeley: (510) 642-3873.

1-15 units, Aut, Win, Spr (Staff)

## JAPANESE

### JAPANESE LANGUAGE COURSES

The following courses in Japanese language instruction represent a typical sequence for three years of Japanese language study. Majors and prospective majors should consult the requirements for a B.A. in Japanese above. For descriptions, other information, and additional courses including special emphasis, intensive, and summer courses, see the "Language Center" section of this bulletin.

**JAPANLNG 7B,8B,9B. First-Year Japanese Language, Culture, and Communication B**

5 units, 7B: Aut, 8B: Win, 9B: Spr (Lipton, Staff)

**JAPANLNG 17B,18B,19B. Second-Year Japanese Language, Culture, and Communication B**

5 units, 17B: Aut, 18B: Win, 19B: Spr (Lowdermilk, Staff)

**JAPANLNG 127B,128B,129B. Third-Year Japanese Language, Culture, and Communication B**

5 units, 127B: Aut, 128B: Win, 129B: Spr (Tomiyama)

### JAPANESE COURSES: UPPER DIVISION

**JAPANLIT 157. Points in Japanese Grammar**—Focus is on meaning and grammatical differences of similar expressions based on linguistic research, and distinctions that may not be salient in English. Prerequisites: JAPANLNG 18B, 22, or equivalent. GER:3b

4 units, Win (Matsumoto)

**JAPANLIT 170/270. Tale of Genji**—Issues including authorial or narrative voice. Student chooses version used whether English, Japanese, or other. Graduate students required to read part in Japanese. GER:3a

4 units (Carter) not given 2004-05

**JAPANLIT 188/288. Diversity in Japanese Language: Regional Dialects and their Images**—Prerequisites: one year of Japanese and consent of instructor.

2-4 units (Matsumoto) not given 2004-05

**JAPANLIT 199. Individual Reading in Japanese**—Asian Languages majors only. Prerequisite: JAPANLNG 103 and consent of instructor.

1-4 units by arrangement, Aut, Win, Spr, Sum (Staff)

**JAPANLIT 200. Directed Reading in Japanese**

1-4 units by arrangement, Aut, Win, Spr, Sum (Staff)

**GRADUATE**

**JAPANLIT 201. Proseminar: Introduction to Graduate Study in Japanese**—Bibliographical and research methods; major trends in literary and cultural theory and critical practice. Prerequisites: JAPANLNG 103 or consent of instructor.

4-5 units, Win (Carter)

**JAPANLIT 246. Introduction to Premodern Japanese**—Readings from Heian, Kamakura, Muromachi, and early Edo periods with focus on grammar and reading comprehension. Prerequisite: JAPANLNG 103 or equivalent.

3-5 units, Aut (Carter)

**JAPANLIT 247. Readings in Premodern Japanese**—Edo and Meiji periods with focus on grammar and reading comprehension. Prerequisite: 246 or equivalent.

5 units, Win (Reichert)

**JAPANLIT 248. Readings in Classical Japanese**—Edo and Meiji periods including travel writings, fictions, miscellanies, and poetry. Focus is on grammar, stylistic analysis, and rhetoric. Can be taken independently. Prerequisite: 246.

5 units (Carter) not given 2004-05

**JAPANLIT 260. Japanese Poetry and Poetics**—Heian through Meiji periods with emphasis on relationships between the social and aesthetic. Works vary each year. Prerequisites: 246, 247, or equivalent.

2-4 units, by arrangement (Carter) not given 2004-05

**JAPANLIT 281. Japanese Pragmatics**—Focus is on sociocultural and discourse factors reflected in the choice of linguistic forms and their theoretical implications. Prerequisite: one year of Japanese, one course in linguistics or two years of Japanese, or consent of instructor.

4 units (Matsumoto) not given 2004-05

**JAPANLIT 289. Topics in Japanese Linguistics: Implications of Diversity in Language**—Japanese from the viewpoint of inter- and intra-language diversity, and the theoretical and pedagogical implications. Topics include Japanese linguistic phenomena against the background of claimed universal principles, forms and styles, factors influencing variations, and how such diversity is an exploitation and reflection of the contexts in which the language is used. Prerequisite: JAPANLNG 102 or 128B, and Linguistics courses.

2-4 units (Matsumoto) not given 2004-05

**JAPANLIT 291. Readings in Japanese Linguistics**—Scholarly articles in Japanese. Prerequisite: JAPANLNG 129B/213 or equivalent, and a Linguistics course.

2-4 units (Matsumoto) not given 2004-05

**JAPANLIT 296. Readings in Modern Japanese Literature**—Meiji fictions of the new educated elite. Focus is on works featuring schoolgirls and college boys as emblems of the age of civilization and enlightenment. Major movements and critical issues in the Meiji literary scene from the development of *genbun-itchi* to the rise and fall of naturalism.

4 units, Spr (Levy)

**JAPANLIT 298. The Theory and Practice of Japanese Literary Translation**—Readings highlight chronological developments in translation studies and shifts in Japanese literary translation. 20-page translation of publishable quality. Prerequisite: third-year Japanese or equivalent.

4 units (Staff) not given 2004-05

**JAPANLIT 299. Master's Thesis or Translation**—A total of 5 units, taken in one or more quarters.

1-5 units, Aut, Win, Spr, Sum (Staff)

**JAPANLIT 350. Japanese Historical Fiction**—Authors include Mori Ogai, Akutagawa Ryunosuke, Tanizaki Jun'ichiro, Enchi Fumiko, Shiba Ryotaro, Fujisawa Shuhei, and Hiraiwa Yumie. Genre theory, and historical and cultural context. Works vary each year.

3-5 units, Spr (Carter)

**JAPANLIT 381. Topics in Pragmatics and Discourse Analysis**—Naturally occurring discourse (conversational, narrative, or written) and theoretical implications. Focus this year is on discourse of different age groups including the elderly, expressions of identity and persona, and individual styles.

3-5 units, Aut (Matsumoto)

**JAPANLIT 395. Early Modern Japanese Literature**—May be repeated for credit. Prerequisite 247.

3-5 units, Win (Reichert)

**JAPANLIT 396. Modern Japanese Literature**—May be repeated for credit. Prerequisite: JAPANLNG 213.

3-5 units (Staff) not given 2004-05

**JAPANLIT 399. Dissertation Research**—Exclusively for graduate students in Japanese working on doctoral dissertations.

1-12 units by arrangement, Aut, Win, Spr, Sum (Staff)

**JAPANLIT 400. Advanced Language Training**—For students at the Yokohama Center. For more information, see the program description under the "Inter-University Center for Japanese Studies in Yokohama" section in this bulletin.

1-15 units, Aut, Win, Spr (Staff)

**OVERSEAS STUDIES**

Courses approved for the Asian Languages major and taught overseas can be found in the "Overseas Studies" section of this bulletin, or in the Overseas Studies office, 126 Sweet Hall.

**BEIJING**

**CHINGEN 157V. Beijing: The City and its Significance in History and Tradition**—(Same as URBANST 157B.)

3 units, Aut (Dien)

**CHINGEN 158B. The Chinese Past: The Golden Age of Chinese Archaeology**—(Same as HISTORY 193V.)

5 units, Aut (Dien)



# ASTRONOMY COURSE PROGRAM

*Emeriti: (Professors)* Ronald N. Bracewell, Von R. Eshleman, Peter A. Sturrock

*Committee in Charge: (Director)* Vahé Petrosian; Roger W. Romani, Robert V. Wagoner

*Professors:* Roger Blandford (Physics), Blas Cabrera (Physics), Steven Kahn (Physics), Peter Michelson (Physics), Vahé Petrosian (Physics, Applied Physics), G. Leonard Tyler (Electrical Engineering), Robert V. Wagoner (Physics)

*Associate Professor:* Roger W. Romani (Physics)

*Assistant Professor:* Sarah Church (Physics)

*Professor (Research):* Philip H. Scherrer (Physics)

*Program Offices:* Varian, Room 316

*Mail Code:* 94305-4060

*Phone:* (650) 723-1439

*Web Site:* <http://www.stanford.edu/dept/astro/>

Courses given in Astronomy have the subject code ASTRNMY. For a complete list of subject codes, see Appendix.

Although Stanford University does not have a degree program in astronomy or astrophysics, teaching and research in various branches of these disciplines is an ongoing activity in the departments of Applied Physics, Electrical Engineering, and Physics. For the convenience of students interested in astronomy, astrophysics, and cosmology, a course program for undergraduate and graduate study is listed below.

The program is especially committed to providing introductory courses for the student who wishes to be informed about the fields of astronomy without the need for prerequisites beyond high school algebra and physics. Astronomy courses numbered below 100 are designed to serve this group of students.

Astronomy courses numbered 100-199 serve the student interested in an initial scientific study of astronomy. The courses numbered 200 and above are for graduate students and advanced undergraduates, subject to prior approval by the course instructor.

## UNDERGRADUATE PROGRAMS

The University does not offer a separate undergraduate major in Astronomy. Students who intend to pursue graduate study in astronomy or space science are encouraged to major in physics, following the advanced sequence if possible, or in electrical engineering if the student has a strongly developed interest in radioscience. The course descriptions for these basic studies are listed under the appropriate department sections of this bulletin. Students desiring guidance in developing an astronomy-oriented course of study should contact the chair of the Astronomy Program Committee. The following courses are suitable for undergraduates and are recommended to students considering advanced study in astronomy or astrophysics: PHYSICS 100, Introduction to Observational and Laboratory Astronomy; PHYSICS 160, Introduction to Stellar and Galactic Astrophysics; PHYSICS 161, Introduction to Extragalactic Astrophysics and Cosmology; PHYSICS 164, Planetary Systems: Dynamics and Origins. Students planning study in astronomy beyond the B.S. are urged to take PHYSICS 260 and 262, Introduction to Astrophysics and to Gravitation, and to consider an undergraduate thesis (PHYSICS 169) or honors thesis in an astrophysics related area. The above-mentioned courses are required for physics majors who choose the curriculum with a concentration in astrophysics (see the "Physics" section of this bulletin). The student observatory, located in the hills to the west of the campus and equipped with a 24-inch and other small reflecting telescopes, is used for instruction of the observation oriented courses.

## MINORS

The minor program in Astronomy is described in the "Physics" section of this bulletin. The non-technical minor, intended for students whose major does not require the PHYSICS 50 series, requires 10 units of Physics courses (PHYSICS 21, 23, 25/26) and 9-10 units of Astronomy courses (PHYSICS 50 or 100, 3-4 units; PHYSICS 15, 16, 17, 18N, 6 units). The technical minor for other students consists of PHYSICS 70, 100, 160, 161, 164, 14 units in addition to the 50 series.

To be accepted to the minor program, students need to obtain an adviser selected from the faculty in the Astronomy Course Program. The minor declaration deadline is three quarters before graduation (that is, beginning Autumn Quarter if the student is graduating at the end of Spring Quarter). All courses for the minor must be taken at Stanford University, and a letter grade of 'C' or better must be received for all units applied toward the minor.

## GRADUATE PROGRAMS

Graduate programs in astronomy and astrophysics, and related topics, are carried out in the departments of Applied Physics, Electrical Engineering, and Physics. Students should consult the course listings, degree requirements, and research programs of these departments for more detailed information. For graduate research opportunities, see the "Center for Space Science and Astrophysics" section of this bulletin.

Stanford is a member of a consortium using the Hobby Eberly telescope, a 10-meter-class telescope located at McDonald Observatory in Texas. Opportunities to do research projects using this telescope are available for graduate students.

Students planning to conduct research in astronomy and astrophysics are required to take PHYSICS 360, Physics of Astrophysics, and at least one of the following: PHYSICS 361, Stellar and Galactic Astrophysics, 362, Extragalactic Astrophysics and Cosmology, or 363, Solar and Solar-Terrestrial Physics. Students lacking a background in astrophysics, gravitation, and plasma physics are recommended to take PHYSICS 260 and 262, Introduction to Astrophysics and to Gravitation, and PHYSICS 312 Basic Plasma Physics. Students with special interests in gravitation are recommended to take PHYSICS 364, Advanced Gravitation.

Students interested in research programs in space physics involving spacecraft studies of the planets, their satellites, and their near-space environments should see the "Center for Space Science and Astrophysics" section of this bulletin.

## COURSES

### ELEMENTARY LECTURES

The following courses provide a descriptive knowledge of astronomical objects and astrophysics of the universe. PHYSICS 15, 16, and 17 are for students not majoring in the sciences and are taught in different quarters by different instructors, but are related in topic. PHYSICS 18N is a freshman seminar and 81Q, 82Q, and 85Q are sophomore dialogues.

### PHYSICS

#### PHYSICS 15. The Nature of the Universe

3 units, Win (Cabrera)

#### PHYSICS 16. Cosmic Horizons

3 units, Aut (Romani)

#### PHYSICS 17. Black Holes

3 units, Spr (Blandford, Wagoner)

#### PHYSICS 18N. Revolutions in Concepts of the Cosmos

3 units, Spr (Wojcicki)

#### PHYSICS 85Q. Cosmology in the 21st Century

1 unit, Spr (Thomas)



**OBSERVATORY**

The following courses are intended to familiarize students with observational methods and analysis of astronomical data. PHYSICS 100 involves more advanced observations and is intended for students with some background in physics.

**ELECTRICAL ENGINEERING****EE 106. Planetary Exploration**

3 units, Spr (Fraser-Smith)

**PHYSICS****PHYSICS 50. Astronomy Laboratory and Observational Astronomy**

3 units, Aut (Church)

**PHYSICS 100. Introduction to Observational and Laboratory Astronomy**

4 units, Spr (Romani)

**ADVANCED UNDERGRADUATE**

The following courses are for students with a more advanced knowledge of basic physics and mathematics, and form the core courses for a concentration in astrophysics for Physics majors.

**PHYSICS****PHYSICS 160. Introduction to Stellar and Galactic Astrophysics**

3 units, Win (Romani)

**PHYSICS 161. Introduction to Extragalactic Astrophysics and Cosmology**

3 units, Spr (Petrosian)

**PHYSICS 169A,B,C. Independent Study in Astrophysics and Honors Thesis**

1-9 units, A: Aut, B: Win, C: Spr (Staff)

**GRADUATE****PHYSICS****PHYSICS 260. Introduction to Astrophysics and Cosmology**

3 units, Aut (Petrosian)

**PHYSICS 262. Introduction to Gravitation**

3 units, Spr (Kallos)

**PHYSICS 301. Astrophysics Laboratory**

3 units, Spr (Romani)

**PHYSICS 312. Basic Plasma Physics**

3 units, Win (Kosovichev)

**PHYSICS 360. Physics of Astrophysics**

3 units, Aut (Madejski)

**PHYSICS 361. Stellar and Galactic Astrophysics**

3 units, Win (Petrosian)

**PHYSICS 362. Advanced Extragalactic Astrophysics and Cosmology**

3 units, Spr (Wagoner, Blandford)

**PHYSICS 363. Solar and Solar-Terrestrial Physics**

3 units (Kosovichev) not given 2004-05

**PHYSICS 364. Advanced Gravitation**

3 units, Aut (Linde)

**PHYSICS 463. Special Topics in Astrophysics: Experimental Cosmology**

3 units (Staff) not given 2004-05

**ATHLETICS, PHYSICAL EDUCATION, AND RECREATION**

*Emeriti:* (Professor) Wesley K. Ruff; (Associate Professor) William P. Fehring; (Athletic Director) Joseph H. Ruetz; (Associate Director) Robert C. Young; (Assistant Director) Shirley Schoof

*Athletic Director:* Ted Leland

*Senior Associate Athletic Director, Finance and Business Affairs:* Debra Gore-Mann

*Senior Associate Athletic Director, External Relations:* Darrin Nelson  
*Associate Athletic Director, Development:* Mike Izzi

*Associate Athletic Director, Intercollegiate Sports and Championships:* Earl Koberlein

*Associate Athletic Director, Facilities, Operations, and Events:* Ray Purpur

*Associate Athletic Director, Athletic Services:* Scott Schuhmann

*Assistant Athletic Director, Facilities:* Skip Braatz

*Assistant Athletic Director, Student Services:* Susan Burk

*Assistant Athletic Director, Marketing, Tickets:* Bob Carruesco

*Senior Assistant Athletic Director, Media Relations:* Gary Migdol

*Assistant Athletic Director, Finance:* Joe Mitchner

*Assistant Athletic Director, NCAA and Recruiting Services:* Karen Peters  
*Assistant Athletic Director, Physical Education, Club Sports, Intramurals, and Recreation:* Sherry Posthumus

*Assistant Athletic Director, Events and Operations:* Carl Reed

*Assistant Athletic Director, Capital Planning:* David Schinski

*Director, Human Resources:* Ron Coverson

*Senior Lecturer:* Anne Gould

*Sport Directors:* Al Acosta (Lightweight Crew, women), Craig Amerkhanian (Crew, men), Aimee Baker (Crew, women), John Dunning (Volleyball, women), Dena Evans (Cross Country, women), Edrick Floreal (Track and Field, women), Lele Forood (Tennis, women), Andrew Gerard (Cross Country, men), Thom Glielmi (Gymnastics, men), Lesley Irvine (Field Hockey), Trent Johnson (Basketball, men), Jay Kehoe (Sailing), Skip Kenney (Swimming, men), Mark Marquess (Baseball), Lisa Milgram (Fencing), Caroline O'Connor (Golf, women), Heather Olson (Synchronized Swimming), Richard Quick (Swimming, women), Paul Ratcliffe (Soccer, women), Conrad Ray (Golf, men), John Rittman (Softball), Richard Schavone (Diving), Don Shaw (Volleyball, men), Bret Simon (Soccer, men), Kristen Smyth (Gymnastics, women), John Tanner (Water Polo, women), Buddy Teevens (Football), Michele Uhlfelder (Lacrosse), Tara VanDerveer (Basketball, women), John Vargas (Water Polo, men), Robert Weir (Track and Field, men), John Whitlinger (Tennis, men)

*Sport Assistant Coaches:* Jon Allbin (Crew, men), Jay Boulware (Football), Frankie Brennan (Tennis, women), Kira Ching (Softball), AJ Christoff (Football), Jay Cooney (Soccer, women), Denise Corlett (Volleyball, women), Bill Cubit (Football), Carrie Davis (Crew, women), Trisha Dean (Softball), Larissa Fontaine (Gymnastics, women), Tony Fuller (Basketball, men), Amy Gross-Kehoe (Sailing), Jennifer Hayden (Lightweight Crew, women), David Hodge (Tennis, men), Jay Jackson (Wrestling), Kevin Klemm (Wrestling), Ted Knapp (Swimming, men), John Kosty (Volleyball, men), Brian Kreutzkamp (Water Polo, men), Jason Mansfield (Volleyball, women), Ken Margerum (Football), Geroge McDonald (Football), Karen Middleton (Basketball, women), Shannon Montague (Synchronized Swimming), Steve Morton (Football), Dave Nakama (Baseball), Sarah Kate Noftsinger (Soccer, women), Susan Ortwein (Water Polo, women), George Pogosov (Fencing), Tom Quinn (Football), J.D. Reive (Gymnastics, men), Eric Reveno (Basketball, men), Charmin Smith (Basketball, women), Matt Stimson (Soccer, men), Dean Stotz (Baseball), Chris Swircek (Gymnastics, women), Dave Tipton (Football), Amy Tucker (Basketball, women), Jason Turcotte (Swimming, women), Russell Turner (Basketball, men), Tom Williams (Football)

Department Offices: Arrillaga Family Sports Center  
Mail Code: 94305-6150  
Phone: (650) 723-4591  
Web Site: <http://www.stanford.edu/dept/pe>

Courses in Athletics, Physical Education, and Recreation have the subject code ATHLETIC. For a complete list of subject codes, see Appendix.

From the founding of the University, Stanford's leaders have believed physical activity is valuable for its own sake and complementary to the educational purpose of the University. The mission of the Department of Athletics, Physical Education, and Recreation is to offer the widest possible range of quality programs for athletic participation and physical fitness at all levels of skill and interest. Within the limitations of its resources, the department provides a broad range of instructional, recreational, and intramural competitive programs for all who wish to participate. The intrinsic value to the participant is the primary criterion by which the worth of the programs should be judged.

The goals of the department's programs are to promote understanding of the value and role of physical activity as an important dimension of the human condition, to develop performance skills in sport, to develop the habit of participation, and to provide leadership opportunities in aquatics, sports, and other physical activities. To this end, the program encompasses a diversity of learning and participating opportunities from informal recreation through organized intramural competition, basic instructional classes, and theoretical study to, and including, intercollegiate athletic competition.

## PROGRAMS

No degrees are offered in Physical Education.

### INTERCOLLEGIATE ATHLETICS

In keeping with American university tradition, Stanford offers a broad intercollegiate athletic program. The objectives are to provide the opportunity to compete at the highest possible level without jeopardizing the integrity of the individual or the institution; to adhere strictly to all University, association, and conference rules governing athletic participation; and to encourage effectively the achievement of academic goals by student athletes at the same rate as other University students. As a member of the National Collegiate Athletic Association (NCAA), Stanford fields both men's and women's varsity teams. Those for men are baseball, basketball, crew, cross country, fencing, football, golf, gymnastics, sailing, soccer, swimming and diving, tennis, track and field, volleyball, water polo, and wrestling. Those for women are basketball, crew, cross country, fencing, field hockey, golf, gymnastics, lacrosse, sailing, soccer, softball, swimming and diving, synchronized swimming, tennis, track and field, volleyball, and water polo.

Both men's and women's teams are affiliated with the Pacific Ten Conference, one of the premier athletic conferences in the nation. Additional or alternative intercollegiate athletic competition is available for all teams.

### CLUB SPORTS

The Stanford Club Sports program provides competition in sports not included in the intercollegiate varsity program and instruction in classes or activities not included in the Physical Education program. It also develops student leadership in organizing, administering, and funding activities. The club program is actively supervised by the Director of Club Sports, but the emphasis is on student interest and leadership to initiate, organize, and conduct the respective clubs. Those students in clubs that meet the criteria for inclusion in the formal curriculum may apply for units of credit.

### INTRAMURAL SPORTS (IM)

Students interested in intramural competition may receive information through the intramural web site: <http://www.stanford.edu/group/Intramurals/>. They may also receive information from the IM Office in

Burnham Pavilion or through their campus residences. The program includes formal competition in league and tournament play for many different sports. Competing organizations, teams, and individuals are urged to check the web site at the beginning of each quarter to obtain registration and league information. Registration occurs on the second Thursday of each quarter, with mandatory captain meetings held on the same evening. Intramurals run Autumn, Winter, and Spring quarters.

## RECREATION

The department provides facility use for faculty, staff, and students (and, for some activities, their immediate families) to participate in aquatics, conditioning, and sports for general recreation. Specific recreation hours for all the facilities are posted throughout the year at the respective facilities and at <http://www.stanford.edu/dept/pe/>.

The golf course and driving range are available for faculty, staff, and student use on a fee basis; information is available from the Golf Pro Shop.

## FACILITIES

Athletic facilities are located throughout the campus. On the west side of campus are the Golf Course, the Golf Driving Range, the Red Barn Stables, Roble Gym, the Sand Hill Intramural Fields, and the West Campus Tennis Courts. Centrally located is the Tresidder Fitness Center. On the east side of campus are the Arrillaga Family Sports Center, the Baker Recreation Pool and Avery Aquatic Center, Burnham Pavilion, the Climbing Wall, Cobb Track and Angell Field, DeGuerre Courts, the Ford Center for Sports and Recreation, the Maloney Fields, Maples Pavilion, the Stanford Stadium, Sunken Diamond, Taube South Courts, and Taube Tennis Stadium.

Off campus facilities include a sailing center and a rowing facility.

## CURRICULUM AND SERVICES

The diverse instructional program strives to accommodate the sports interests of all undergraduate and graduate students. Only intercollegiate varsity men's and women's teams are limited to undergraduates. Homogeneous skill groupings and limited class sizes enable the beginning student or the advanced performer to achieve success within the limits of individual motivation and potential. Skill level in, and knowledge about, a specific activity as well as available space are the only limitations to enrollment. Physically disabled students are encouraged to contact Sherry Posthumus for enrollment advice.

*Academic Credit*—Activity classes carry 1 unit of credit for satisfactory completion of work. Although there is no limitation on the number of activity classes in which a student may enroll, no more than 8 units of these activity classes (and/or other University activity classes) may be applied toward undergraduate graduation requirements (see the "Undergraduate Degrees" section of this bulletin).

*Auditing*—No auditing is allowed in activity classes. Faculty and staff may take an activity class as space is available with instructor consent after student enrollment is completed.

*Class Fees*—Fees are charged for enrollment in all physical education classes and club sports.

Class fees are payable only by check or money order payable to Stanford University. Cash is not acceptable. Fees are payable at the first, and are required by the second, class meeting for a student to remain in class. Late enrollees must submit fees no later than the second time they attend the class.

Full refund is given to students who drop a class during the first two weeks of classes and request a refund at that time. No refund is given if a student either neglects to request a refund under the conditions listed previously or drops the class after the second week.

*Class Sign-ups versus Axess*—Information on sign-up procedures can be found on the department's web site at <http://www.stanford.edu/dept/pe/>, or under Athletics in the *Time Schedule*. Students must attend the first class meeting. If accepted into the class, they can register for that class through Axess.

*Deadline for Adding a Class*—Students who have never appeared in a class may not enroll in that class after the fourth class meeting has

passed. Students may add the class after the fourth meeting if they have been in attendance and, for whatever reason, did not get registered until the fourth week (the University deadline for adding courses).

**Equipment**—Specific information on equipment and recommended class attire is available from the department or instructor.

**Lockers**—Lockers are available for rent to faculty/staff and students at the Arrillaga Family Sports Center and Roble Gym. The fee for faculty/staff is \$20 per quarter or \$50 per year. The fee for students is \$15 per quarter or \$35 per year.

## COURSES

(AU) indicates that the course is subject to the University Activity Unit limitations (8 units maximum). See <http://www.stanford.edu/dept/pe> for further information on course descriptions and sign-up procedures.

## PHYSICAL EDUCATION AND SPORTS THEORY

**ATHLETIC 74. Introduction to Nutrition and Fitness**—How to discriminate between media hype and healthy information. Speakers present latest research in nutrition: the high protein myth, good versus bad fats, the importance of fiber, and how to maximize exercise performance with healthy food and water. Fundamentals of endurance exercise, stretching, and core strength exercises. A practical approach to decreasing body fat while increasing muscle mass and overall health.

2 units, Aut (Wilson)

**ATHLETIC 190. Analysis of Human Movement**—Overview of skeletal and muscular anatomy and the mechanical principles of movement as related to efficient performance in aquatics, dance, and sports.

3 units, Win (Wilson)

## LEADERSHIP OPPORTUNITIES IN PHYSICAL EDUCATION

**ATHLETIC 85. Manager: Athletic Team**—For student managers of intercollegiate teams. Prerequisite: consent of respective varsity team head coach. (AU)

1 unit, Aut, Win, Spr (Staff)

## AQUATIC ACTIVITY

**ATHLETIC 83. Lifeguard Training**—Priority to those with summer jobs requiring certification and for those wishing to guard at Stanford during the year. Lifeguard characteristics and responsibilities, recognition of hazards and emergencies, patron and facility surveillance, interaction with the public, rescue skills. Community first aid and CPR for the professional rescuer. Bring letter from employer to first class meeting. Fee. Prerequisite: pass swim test (swimmer/advanced swimmer level).

2 units, Spr (Staff)

**ATHLETIC 99. Sailing, Beginning: Keelboat**—Basic skills, theory, and techniques enable beginners to sail a 24'-30' fixed keel boat with confidence. Emphasis is on safety and seamanship skills. Fee. (AU)

1 unit, Aut, Spr (Gross-Kehoe)

**ATHLETIC 100. Sailing, Beginning: Dinghy**—Basic skills, theory, and techniques to enable beginners to sail with confidence in small centerboard boats. Fee. (AU)

1 unit, Aut, Spr (Gross-Kehoe)

**ATHLETIC 101. Sailing, Intermediate: Dinghy**—Refine skills. Introduction to racing. Fee. Prerequisite: consent of instructor. (AU)

1 unit, Spr (Gross-Kehoe)

**ATHLETIC 102. Sailing, Advanced: Dinghy**—Refinement of heavy weather sailing skills, with emphasis on racing. Fee. Prerequisite: 101 or consent of instructor. (AU)

1 unit, Spr (Gross-Kehoe)

**ATHLETIC 104. Sailing: Assistant Instructor (Beginning Level)**

2 units, Aut, Spr (Gross-Kehoe)

**ATHLETIC 105. Sailing: Assistant Instructor (Intermediate/Advanced Level)**

2 units, Aut, Spr (Gross-Kehoe)

**ATHLETIC 131. Swimming: Beginning**—For non-swimmers or those who can swim about 10 yards but are not comfortable in deep water. Instruction in safety skills, front crawl, and a back stroke. Additional strokes introduced as ability warrants. Fee. (AU)

1 unit (Neuhold-Huber, Vargas)

**ATHLETIC 132. Swimming: Advanced Beginning**—For those with limited swimming ability and safety skills who may not be fully comfortable in deep water. Work on safety skills, crawl, and elementary backstroke or back crawl. Introduction to sidestroke and breaststroke. Improve skills and increase time and distance of swim. Prerequisite: ability to swim 25-50 yards on front and on back reasonably comfortably. Fee. (AU)

1 unit, Aut, Win, Spr, Sum (Neuhold-Huber, Turcotte)

**ATHLETIC 133. Swimming: Intermediate**—Continued work on crawl, elementary backstroke, backstroke, and sidestroke. Safety skill work as needed. Introduction to or review of breaststroke. Open turns. Introduction to butterfly, flip turn, and conditioning. Fee. Prerequisites: fair technique in crawl, elementary backstroke, backstroke; some sidestroke and breaststroke; ability to swim approximately 100-200 yards continuously by mixing strokes. Fee. (AU)

1 unit, Aut, Win, Spr, Sum (Neuhold-Huber, Turcotte)

**ATHLETIC 134. Swimming: Advanced**—Review and refine all basic strokes and safety skills. Introduction to or review of butterfly and flip turn. Stroke drills and information on conditioning and designing individual workouts. Prerequisite: average to good strokes; ability to swim approximately 400-500 yards continuously. Fee. (AU)

1 unit, Aut, Win, Spr (Quick, Tanner, Vargas)

**ATHLETIC 135. Swim Conditioning**—Improve cardio-respiratory endurance through directed swimming workouts. Technique corrections as needed. Prerequisite: advanced swimmer. Fee. (AU)

1 unit, Aut, Win, Spr (Kenney, Knapp, Vargas)

**ATHLETIC 168. Water Polo: Beginning**—Introduction to basic skills and game play. For those who have never played or have had limited experience. Fee. (AU)

1 unit, Spr (Vargas)

**ATHLETIC 169. Water Polo: Intermediate/Advanced**—Further work on skills. Game strategies. Fee. (AU)

1 unit, Aut, Spr (Tanner, Vargas)

## FITNESS, INDIVIDUAL, AND TEAM SPORT ACTIVITIES

**ATHLETIC 1. Aerobics, Step**—A mix of creativity and aerobic training that is challenging, fun, and effective. Appropriate for all fitness levels. Emphasis is on cardiovascular health. Steps and risers are provided. Fee. (AU)

1 unit, Aut, Win, Spr (Gittens)

**ATHLETIC 3. Agility and Plyometrics**—Introduction to Plyometrics. Build explosiveness, power, speed, and agility through a variety of conditioning drills. Fee. (AU)

1 unit, Aut (Uhlfelder)

**ATHLETIC 13. Boot Camp**—A high energy class for total body conditioning. Drill-based format. Suitable for a wide range of fitness levels. Designed to promote cardiovascular fitness, agility, balance and coordination. Fee. (AU)

1 unit, Aut (Evans, Floreal)

**ATHLETIC 37. Fencing: Beginning**—The sport of swordmanship develops quick hands, strong legs, and a strategic mind. Basic footwork, handwork, and bouting. Emphasis is on foil technique. All equipment provided. Fee. (AU)

1 unit, Aut, Win, Spr, Sum (Pogosov)



**ATHLETIC 38. Fencing, Intermediate**—Continuation of 37; learn advanced footwork and handwork. Strategy and bouting. Introduction to epee and saber. All equipment provided. Prerequisite: 37 or consent of instructor. Fee. (AU)

*1 unit, Aut, Win, Spr (Pogosov)*

**ATHLETIC 44. Field Hockey, Advanced for Women**—Techniques and skills under competitive pressure. Must know team strategies and positioning. Prerequisite: consent of instructor, tryouts. Fee. (AU)

*1 unit, Win (Irvine)*

**ATHLETIC 52. Golf: Beginning**—The fundamentals of the golf swing; introduction to putting, chipping, sand play. Golf etiquette and knowledge of rules enable a beginner to play a round of golf. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Marrone, Miller, Shaw, Uchiyama)*

**ATHLETIC 53. Golf: Advanced Beginning**—Further development of the golf swing and short game. How to practice effectively and gain the confidence to play a round of golf. Rules and etiquette. Prerequisite: 52 or previous golf experience. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Marrone, Miller, Uchiyama)*

**ATHLETIC 54. Golf: Intermediate**—Improvement through the use of drills and practice on all facets of golf game. Utilization of these skills in the game. Lower your score and manage your game on the course. Prerequisite: 53 or the equivalent. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Marrone, Miller, Stotz, Uchiyama)*

**ATHLETIC 55. Golf: Advanced**—Understand and refine the golf swing and increase power, distance, and accuracy. Course management, mental preparation, visualization techniques. Prerequisites: 54 or experience playing and practicing, and the ability to hit shots with relative accuracy and distance. Fee. (AU)

*1 unit, Aut, Win, Spr (Marrone, Miller, Uchiyama)*

**ATHLETIC 59. Gymnastics: Beginning**—Fundamental gymnastics movement for men and women, including flexibility and strength exercises taught on the Olympic apparatus including floor, balance beam, bars, and rings. Fee. (AU)

*1 unit, Aut, Win, Spr (Reive, Swircek)*

**ATHLETIC 60. Gymnastics: Intermediate**—For students who have completed 59 or have a background in gymnastics. Emphasis is on tumbling and somersaulting. Group work and individualized instruction for men and women. Limited apparatus work. Fee. (AU)

*1 unit, Aut, Win, Spr (Reive, Swircek)*

**ATHLETIC 64. Hip Hop**—Syncopated dance to the latest Hip-Hop music for cardiovascular fitness. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Bobo)*

**ATHLETIC 65. Horsemanship: Beginning Riding**—No background or very little. Includes walk, trot, and canter. Fee. (AU)

*1 unit, Spr (Staff)*

**ATHLETIC 66. Horsemanship: Advanced Beginning Riding**—Can walk and trot, but not with very secure seat. Gymnastic work develops position and rhythm. Fee. (AU)

*1 unit, Spr (Staff)*

**ATHLETIC 67. Horsemanship: Intermediate Riding and Jumping**—Walk, trot, and canter. Cross rails up to two-foot jumps. Fee. (AU)

*1 unit, Spr (Staff)*

**ATHLETIC 73. Interval Training**—For students who want to improve their overall fitness level. Workouts include brief periods of high intensity exercise interspersed with lower intensity exercise or rest. Short duration agility runs, weight lifting, and cardiovascular improvement. Emphasis is on proper stretching techniques, warm-ups, cool-downs, and monitoring heart rate. Fee. (AU)

*1 unit, Win, Spr (Irvine)*

**ATHLETIC 78. Kickboxing**—High energy workout incorporating kicks, punches, elbow/knee, and other combinations used in martial arts, boxing, and athletic drills. For beginning and advanced. Fee (AU)

*1 unit, Aut, Win, Spr, Sum (Mandell)*

**ATHLETIC 86. Introduction to Martial Arts**—Techniques, training methods, history, and culture of Asian martial arts. Three styles per quarter. Warm-ups, fundamental techniques, basic application, and conditioning. Class supported by the Stanford Martial Arts Program, <http://smap.stanford.edu>.

*1 unit, Aut, Win, Spr (Staff)*

**ATHLETIC 88. Pilates Mat**—Learn to move with economy, grace, and balance. Use your body to the greatest advantage making the most of its strengths and correcting its imbalances. The Pilates Method is comprised of a few well designed movements properly performed in a balanced sequence. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Conniff)*

**ATHLETIC 89. Pilates II**—For those who have mastered Pilates fundamentals. How to stretch, strengthen, streamline, and isolate the deep muscles of the body using small apparatus and techniques. Fee (AU)

*1 unit, Aut, Win, Spr (Conniff)*

**ATHLETIC 90. Posture**—Individual standing posture evaluation; exercises for proper body alignment emphasizing flexibility and balance of muscle strength development. Techniques for correct body mechanics: push, pull, lift, carry, reach, sit, lie, walk. Some nutrition, relaxation, and weight management; group and individualized exercise program. Fee. (AU)

*1 unit, Aut, Win, Spr (McCracken)*

**ATHLETIC 111. Soccer: Coed Recreational**—Introduction to soccer for the true beginner. The rules of the game and basic skills for dribbling, passing, control, shooting, and defending. Small game tactics, small-sided games. Fee. (AU)

*1 unit, Aut, Spr (Ratcliffe)*

**ATHLETIC 112. Soccer: Intermediate Coed**—For the player with club or high school experience. Small group offensive and defensive tactics. Drills and small-sided games. Fee.

*1 unit, Win (Ratcliffe)*

**ATHLETIC 113. Soccer: Intermediate Men**—For the player with club or high school experience. Small group offensive and defensive tactics. Drills and small-sided games. Fee. (AU)

*1 unit, Aut, Spr (Simon)*

**ATHLETIC 114. Soccer: Intermediate Women**—For the player with club or high school experience. Small group offensive and defensive tactics. Drills and small-sided games. Fee. (AU)

*1 unit, Aut, Spr (Ratcliffe)*

**ATHLETIC 115. Soccer: Advanced for Men**—Techniques under pressure; small group and team tactics. Fitness for the soccer player. Prerequisites: consent of instructor, tryouts. Fee. (AU)

*1 unit, Win (Simon)*

**ATHLETIC 116. Soccer: Advanced for Women**—Techniques under pressure; small group and team tactics Fitness for the soccer player. Prerequisites: consent of instructor, tryouts. Fee. (AU)

*1 unit, Win (Ratcliffe)*

**ATHLETIC 117. Soccer, Indoor: Men**—Smaller ball and playing area. Emphasis is on individual ball skills through small sided games. Fee. (AU)

*1 unit, Win (Simon)*

**ATHLETIC 118. Soccer, Indoor: Women**—For the intermediate player. Emphasis is on skill development through technical sessions and small sided games. Basic tactics and the rules of the game. Limited enrollment. Fee. (AU)

*1 unit, Win (Ratcliffe)*

**ATHLETIC 141. Tennis: Beginning**—Fundamental strokes (forehand, backhand, serve, and net play), rules, and scoring. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Staff)*

**ATHLETIC 142. Tennis: Low Intermediate**—Review of fundamental strokes and utilization of these skills in a game situation. Prerequisites: beginning-level class or knowledge of rules and scoring and average ability in fundamental strokes, but limited playing experience. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Staff)*

**ATHLETIC 143. Tennis: Intermediate**—Fundamental stroke review and increased emphasis on singles and doubles tactics. Prerequisites: low intermediate class or average ability in fundamental strokes, and regular playing experience. NTRP rating of 3.0 or equivalent. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Staff)*

**ATHLETIC 144. Tennis: Advanced**—Review of fundamental strokes. Drills emphasize footwork, serve and return, approach shots, volleys, lobs, and overheads. Strategy for competition in singles and doubles. Prerequisites: well above average stroking and game playing ability; NTRP rating above 4.0 or equivalent. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Staff)*

**ATHLETIC 145. Tennis: Tournament**—Advanced drills and practice sessions for tournament-experienced players of near-varsity-level ability. Tryouts at Taube Tennis Stadium in Autumn Quarter for autumn enrollment and position on all-University ladder for spring class. Prerequisite: consent of instructor. Fee. (AU)

*1 unit, Aut, Spr (Staff)*

**ATHLETIC 146. Tennis: Analysis**—Use of computer for analyzing tennis matches. Assist players and coaches by collecting data on player performance. Prerequisite: consent of instructor. Recommended: excellent knowledge of tennis, background in computers and statistics. (AU)

*2 units, Aut, Win, Spr (Forood)*

**ATHLETIC 159. Volleyball: Introduction to Sand**—Introduction/review of fundamental skills and rules. Basic strategy in two- and four-person sand volleyball. Fee. (AU)

*1 unit, Aut (Kosty)*

**ATHLETIC 160. Volleyball: Intermediate Sand**—Fundamental skills and rules. Strategy in two- and four-person sand volleyball. Fee. (AU)

*1 unit, Aut, Spr (Kosty)*

**ATHLETIC 161. Volleyball: Advanced Sand**—Refine and improve skills and game playing strategy in two- and four-person sand volleyball. Must have strong skills and general knowledge of team concepts. Prerequisite: 160 or consent of the instructor. Fee. (AU)

*1 unit, Spr (Kosty)*

**ATHLETIC 163. Volleyball: Intermediate**—Drills to improve skills and game playing strategy. As ability indicates, more emphasis on team play and strategy. Fee. (AU)

*1 unit, Aut, Win (Corlett, Shaw)*

**ATHLETIC 164. Volleyball: Advanced**—Refine all skills, emphasizing offensive and defensive team play. Fee. Prerequisites: strong skills and general knowledge of team concepts. Fee. (AU)

*1 unit, Aut, Win (Corlett, Shaw)*

**ATHLETIC 174. Weight Training: Beginning**—Introduction to improving fitness level through progressive resistance exercises using machines and free weights. Individualized weight training programs once basic exercises are learned. Stretching program. Basics of exercise physiology. Fee. (AU)

*1 unit, Aut, Win, Spr (Staff)*

**ATHLETIC 175. Weight Training: Intermediate**—Review of basic exercises and techniques. Emphasis is on individualized programs and learning the use of all available machines and free weights. Further discussion on exercise physiology. Prerequisite: 174 or thorough knowledge of basic weight training principles. Fee. (AU)

*1 unit, Aut, Win, Spr (Staff)*

**ATHLETIC 176. Weight Training for Women**—All levels welcome, but designed for the beginner. Introduction to the techniques and equipment for weight training. Emphasis is on stretching, proper form and progressions, and injury prevention. The basics of the physiology of strength training and planning individual programs. Fee. (AU)

*1 unit, Aut, Win, Spr (Staff)*

**ATHLETIC 179. Wrestling: Beginning/Intermediate**—Introduction to intercollegiate wrestling. Conditioning, cultivating the spirit of one-on-one competition. Basic skills and high-level sequences of upper- and lower-body technique. Fee. (AU)

*1 unit, Spr (Buddie)*

**ATHLETIC 180. Wrestling, Assistant Instructor**

*1 unit, Spr (Buddie)*

**ATHLETIC 186. Yoga**—Challenging practice designed for beginning-intermediate student. Focus is on a completely integrated and balanced body. Promotes increased flexibility; strengthens skeletal, muscular, and nervous systems; improves circulation; releases tension and stress; improves concentration and clarity of mind. Fee. (AU)

*1 unit, Aut, Win, Spr, Sum (Staff)*

**ATHLETIC 187. Yoga: Intermediate**—Builds and expands on the basic asanas. Student should be comfortable with the beginning class and ready for more challenging poses. More inverted poses, i.e., shoulder stand. Range of motion is increased as is length of time in poses. Deeper understanding of pranayama. Fee. Prerequisite: beginning yoga or previous yoga experience. Fee. (AU)

*1 unit, Aut, Win, Spr (Staff)*

## INTERCOLLEGIATE ATHLETIC TEAMS

**ATHLETIC 9V. Baseball, Varsity Men**—(AU)

*1-2 units, Aut, Win, Spr (Marquess, Stotz)*

**ATHLETIC 11V. Basketball, Varsity Men**—(AU)

*1-2 units, Aut, Win (Johnson, Staff)*

**ATHLETIC 12V. Basketball, Varsity Women**—(AU)

*1-2 units, Aut, Win (Van Derveer, Staff)*

**ATHLETIC 19V. Crew, Varsity Men**—(AU)

*1-2 units, Aut, Win, Spr (Amerkhanian)*

**ATHLETIC 20V. Crew, Varsity Women**

*1-2 units, Aut, Win, Spr (Baker)*

**ATHLETIC 22V. Cross Country, Varsity Men**—(AU)

*1-2 units, Aut (Gerard)*

**ATHLETIC 23V. Cross Country, Varsity Women**—(AU)

*1-2 units, Aut (Evans)*

**ATHLETIC 31V. Diving, Varsity Men**—(AU)

*1-2 units, Aut, Win, Spr (Schavone)*

**ATHLETIC 32V. Diving, Varsity Women**—(AU)

*1-2 units, Aut, Win, Spr (Schavone)*

**ATHLETIC 41V. Fencing, Varsity Men**—(AU)

*1-2 units, Aut, Win (Milgram)*

**ATHLETIC 42V. Fencing, Varsity Women**—(AU)

*1-2 units, Aut, Win (Milgram)*

**ATHLETIC 45V. Field Hockey, Varsity Women**—(AU)

*1-2 units, Aut, Spr (Irvine)*

**ATHLETIC 48V. Football, Varsity**—(AU)

*1-2 units, Aut, Spr (Teevens, Staff)*

**ATHLETIC 57V. Golf, Varsity Men**—(AU)

*1-2 units, Aut, Win, Spr (Ray)*

**ATHLETIC 58V. Golf, Varsity Women**—AU

*1-2 units, Aut, Win, Spr (O'Connor)*

- ATHLETIC 61V. Gymnastics, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Glielmi)*
- ATHLETIC 62V. Gymnastics, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Smyth)*
- ATHLETIC 81V. Lacrosse, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Uhlfelder)*
- ATHLETIC 107V. Sailing, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Kehoe)*
- ATHLETIC 108V. Sailing, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Kehoe)*
- ATHLETIC 119V. Soccer, Varsity Men**—(AU)  
*1-2 units, Aut, Spr (Simon)*
- ATHLETIC 120V. Soccer, Varsity Women**—(AU)  
*1-2 units, Aut, Spr (Ratcliffe)*
- ATHLETIC 122V. Softball, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Rittman)*
- ATHLETIC 137V. Swimming, Synchronized: Varsity**—(AU)  
*1-2 units, Aut, Win (Olson)*
- ATHLETIC 138V. Swimming, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Kenney)*
- ATHLETIC 139V. Swimming, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Quick)*
- ATHLETIC 148V. Tennis, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Whitlinger)*
- ATHLETIC 149V. Tennis, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Forood)*
- ATHLETIC 153V. Track and Field, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Weir)*
- ATHLETIC 154V. Track and Field, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Floreal)*
- ATHLETIC 165V. Volleyball, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Shaw)*
- ATHLETIC 166V. Volleyball, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Dunning)*
- ATHLETIC 171V. Water Polo, Varsity Men**—(AU)  
*1-2 units, Aut, Win, Spr (Vargas)*
- ATHLETIC 172V. Water Polo, Varsity Women**—(AU)  
*1-2 units, Aut, Win, Spr (Tanner)*
- ATHLETIC 182V. Wrestling, Varsity**—(AU)  
*1-2 units, Aut, Win, Spr (Buddie)*

## CLUB SPORTS

The Stanford Club Sports Program is affiliated with the department but is initiated, organized, and conducted by students. All clubs are co-educational except as specified. Clubs, whose instructional classes meet the criteria for academic credit, are scheduled for meeting times as published each quarter in the *Time Schedule*. For additional information, contact the Club Sports Director.

- ATHLETIC 5C. Badminton Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 28C. Cycling Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 34C. Equestrian Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 69C. Horse Polo Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 71C. Ice Hockey Club Team**—Men. (AU)  
*1 unit, Aut, Win (Staff)*
- ATHLETIC 76C. Judo Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 79C. Lacrosse Club Team (Men)**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 96C. Rugby Club Team (Men)**—(AU)  
*1 unit, Aut, Win (Holder)*
- ATHLETIC 97C. Rugby Club Team (Women)**—(AU)  
*1 unit, Aut, Win (Staff)*
- ATHLETIC 98C. Running Club**  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 110C. Ski Club Team**—(AU)  
*1 unit, Win (Staff)*
- ATHLETIC 126C. Squash Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 140C. Tae Kwon Do Club**  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 151C. Triathlon Club Team**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 156C. Ultimate Frisbee Club Team (Men)**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*
- ATHLETIC 157C. Ultimate Frisbee Club Team (Women)**—(AU)  
*1 unit, Aut, Win, Spr (Staff)*

