# ANTHROPOLOGICAL SCIENCES

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

A major goal of the Department of Anthropological Sciences is to provide students with the scientific tools needed to understand the unity and diversity of human beings in the past and present. First, the department provides a classic four subfield approach to anthropology, preparing students with the data and analytical tools of sociocultural anthropology, biological anthropology, linguistic anthropology and archaeology; each student is expected to have a basic literacy in at least three of these four areas of traditional anthropological study. Secondly, it provides integration of the subfields through a focus on the interrelations of biology, culture, social system, and environment. The undergraduate curriculum includes an explicit human evolution framework that highlights the contemporary and historical interplay of these four dimensions of human existence. In short, Anthropological Sciences graduates know the human species and how to make sense of it.

The undergraduate curriculum includes courses at three levels, designed to: (1) expose undergraduates to the theories, methods, and data of the anthropological sciences; (2) provide undergraduate majors and minors with a program of work leading to the bachelor's degree, including an honors program; and (3) prepare candidates for advanced degrees in the discipline. Whether at the undergraduate or graduate level, the curriculum emphasizes the use of scientific methodology. Students are also encouraged to pursue ethnographic area studies building on existing faculty research in Asia, Latin America, Africa, 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; or (4) Medical Anthropology and Genetics. (These concentrations are reported to the department; they are not declared on Axess.) Within each of these concentrations, students work with faculty advisers to design a course of study that includes at least one course from each of five areas of the human evolution framework, described 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 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 the department-wide ANTHSCI 291, Graduate Core Seminar, devoted to ongoing discussion of issues and approaches in the anthropological sciences. The

teaching assistant 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.

The department also offers hands-on research and training opportunities, including research assistantships, internships on- and off-campus, an undergraduate honors program, and field seminars with scholarships in the Amazon, Andes, American Southwest, Middle America, and the Galapagos. Undergraduates and graduate students are encouraged to work with faculty at their field sites each summer. The department maintains teaching and research collections featuring materials from the Americas, the Pacific Rim, and Africa. Under the Pritzker Summer Scholars Program and the Franz Boas Summer Scholars Program, the department also awards 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 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 preparation for careers in anthropology, business, economic development, education, environmental conservation, foreign service, health professions, international relations, law, and 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 (ANTHSCI) 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 (same as HUMBIO 2A and 2B), or 10 units of other introductory courses, numbered 3-19, listed below, from at least two concentration tracks. Students may substitute one introductory area course, numbered 20-39, for one of these courses.
- 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, STATS 60, STATS 141, 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. Concentration tracks are not declared on Axess; they do not appear on the transcript or diploma.

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)**

Crosscutting 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 (HEFI-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, 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 declare on Axess, obtain the signature of their student and faculty advisers, and contact the department's student services coordinator who reviews the degree requirements and gives 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) by the time they achieve junior status (85 units completed).

Undergraduates are actively encouraged to take advantage of funding opportunities to carry out independent research. Funding for undergraduate research is available from Undergraduate Advising and Research (UAR) 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 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. 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. No more than 5 of the 30 units may be in directed individual study.
- 3. Completion of ANTHSCI 2A and 2B (HUMBIO 2A and 2B) or 10 units of introductory courses, numbered 3-19, listed below, from at least two concentration tracks. Students may substitute one introductory area course, numbered 20-39, in place of an introductory course.
- 4. Completion of at least two courses 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 10 units of introductory courses, but they must take 30 units of ANTHSCI course work 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. 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 undergraduate 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 required to take ANTHSCI 193 Prefield 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. The honors paper is to be completed and two copies are to be handed in to the student services coordinator no later than the second Friday in May 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.

# 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 with strong academic records may apply by the third Friday of the Winter Quarter. Students planning field work are encouraged to take ANTHSCI 193 in Spring Quarter. Students apply by submitting application forms, 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/shared/publications. htm#Coterm.

- 1. Coterminal master's studies are normally carried out in the student's fifth year, subsequent to the undergraduate degree program.
- 2. As a graduation requirement, master's students defend their project before a committee comprised of a primary and secondary reader in a forum of the primary reader's choosing. This same committee ensures that the student has met all requirements before signing approval for the degree.
- 3. The deadline for completion of all requirements for the coterminal master's degree is the second Friday in May in the fifth year of study. Any exceptions to this rule must be approved by the departmental graduate affairs committee.
- 4. The primary reader/adviser for the coterminal master's degree must be an Academic Council member in the Department of Anthropological Sciences.
- 5. Students must meet all requirements for the Master of Arts or Master of Science listed in the graduate section (below).

# 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. Details of the graduate programs in Anthropological Sciences are outlined in the Guide to the Ph.D. Program in Anthropological Sciences, 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. Complete three fundamentals courses, each for a letter grade: ANTH-SCI 290A, Advanced Social Theory in Anthropological Sciences; ANTHSCI 290B, Evolutionary Theory in Anthropological Sciences;

- and ANTHSCI 292, Data Analysis in the Anthropological Sciences, 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 ANTHSCI 291, Graduate Core Seminar, while in residence for at least 1 unit each quarter.
- 5. Submit a master's-level field, laboratory, or library research paper to be read and approved by at least two department faculty members. The master's paper is to be completed and two bound and signed copies are to be handed in to the student services coordinator no later than the sixth Friday of the quarter in which the student intends to graduate. As a graduation requirement, master's students defend their project before a committee comprised of a primary and secondary reader in a forum of the primary reader's choosing. This committee ensures that the student has met all requirements before signing approval for the degree.

# **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**

- 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 sciences, 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.
- Complete three fundamentals courses, each for a letter grade: ANTH-SCI 290A, Advanced Social Theory in Anthropological Sciences;
  ANTHSCI 290B, Evolutionary Theory in Anthropological Sciences;
  and ANTHSCI 292, Data Analysis in the Anthropological Sciences,
  plus any two 200-level courses other than special courses. Units earned
  in these courses count toward the 45-unit M.S. requirement.
- Enroll in ANTHSCI 291, Graduate Core Seminar, while in residence for at least 1 unit each quarter.
- 5. Submit a master's-level field, laboratory, or library research paper to be read and approved by at least two department faculty members. The master's paper is to be completed and two bound and signed copies are to be handed in to the student services coordinator no later than the sixth Friday of the quarter in which the student intends to graduate. As a graduation requirement, master's students defend their project before a committee comprised of a primary and secondary reader in a forum of the primary reader's choosing. This committee ensures that the student has met all requirements before signing approval for the degree.

# **DOCTOR OF PHILOSOPHY**

Prospective graduate students should request application materials from http://gradadmissions.stanford.edu. The deadline for applications is January 2, 2007. The Graduate Record Exam (GRE) is required. Successful applicants for the Ph.D. program may enter only in Autumn Quarter. It is the policy of the department not to defer admission.

# **REQUIREMENTS**

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

 Within the first two years, complete 87 units of course work for a letter grade (including 10 units each summer). Of these 87 units, at least 60 units must come from graduate-level courses within the department, with an overall average of 'B+' or better. 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.
- Enroll in ANTHSCI 200 during Autumn Quarter of the first year, unless exempted by petition. This course must be taken for a letter grade.
- 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.
- Complete three fundamentals courses, each for a letter grade: ANTH-SCI 290A, Advanced Social Theory in Anthropological Sciences; ANTHSCI 290B, Evolutionary Theory in Anthropological Sciences; and ANTHSCI 292, Data Analysis in the Anthropological Sciences.
- 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)
  - 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. Apply for outside funding during their first quarter in the program; this applies only to students who entered without outside funding. See the *Guide to the Ph.D. Program in Anthropological Sciences*, downloadable at http://www.stanford.edu/dept/anthsci/graduate.html, for details.
- 7. Submit a written graduate research plan (GRP) by the first Monday in May of their first year in the program. The GRP describes the intellectual framework for the student's graduate program, emphasizing research, and the steps needed to meet those aims (for detailed guidelines, see the *Guide to the Ph.D. Program in Anthropological Sciences*). The written GRP and an oral presentation of it are evaluated by a student-selected, three-person faculty committee, at least two members of which must be full-time Academic Council members in the department. The resulting evaluation and plan of action guide the student towards the University orals, which take the form of a prospectus exam (see below).
- 8. Submit a master's-level research paper to a faculty committee of at least two readers by the first Monday in December of the third year in the program. To be considered acceptable, the paper must receive a grade of 'B+' or better from each reader. Students must specify in their GRP (see #6 above) how they plan to meet this requirement (for detailed guidelines, see the Guide to the Ph.D. Program in Anthropological Sciences).
- Enroll in a methods course in the chosen area of specialization. This course must contain an ethics component and be taken for a letter grade.
- 10. 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.)
- 11. 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 completion of 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:

 Take at least one quarter of Proposal Writing (ANTHSCI 294) and prepare a dissertation proposal. If appropriate, 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 on a form available from the student services coordinator, no less than 2 weeks prior to the University orals; (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. As noted above, first-year students in the Ph.D. program who have entered without outside funding are required to apply for such funding during their first quarter.

## 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 ANTHSCI 290B, 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:

- 1- 99 Introductory Courses
  - 1-19 General Introductory Courses
  - 20-39 Introductory Area Courses
  - 40-49 SIS Courses (freshmen)
  - 50-59 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 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:DB-SocSci, EC-GlobalCom

3-5 units, Aut (Rick, J; Robertson, I)

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: DB-NatSci

4-5 units, not given this year (Fox, J)

ANTHSCI 6. Human Origins—(Graduate students register for 206; same as HUMBIO 6.) 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.E. Emphasis is on broad evolutionary trends and the natural selective forces behind them. (HEF I, III; DA-B) GER: DB-NatSci

5 units, Win (Klein, R)

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 contrasted with Europe and E. Asia. (HEF I) GER:DB-SocSci, EC-Gender

4-5 units, Spr (Wolf, A)

ANTHSCI12. 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. (HEF I) GER:DB-SocSci

5 units, Win (Wolf, A)

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: DB-NatSci

3-5 units, not given this year (DeGusta, D)

ANTHSCI 14. Introduction to Anthropological Genetics—(Same as HUMBIO 14.) How genetic methods address anthropological questions. Examples include the evolutionary relationships between humans and the apes, the place of the Neanderthals in human evolution, the peopling of the New World, ancient DNA, the genetics of ethnicity, forensic genetics, genomics, behaviorial genetics, and hereditary diseases. (HEF I, II) GER: DB-NatSci

3-5 units, Spr (DeGusta, D)

ANTHSCI 15. Sex and Gender — Commonality and diversity of gender roles in crosscultural perspective. Cultural, ecological, and evolutionary explanations for such diversity. Theory of the evolution of sex and gender, changing views about men's and women's roles in human evolution, conditions under which gender roles vary in contemporary societies, and issues surrounding gender equality, power, and politics. (HEF I) GER: DB-SocSci, EC-Gender

3 units, Aut (Bird, R)

**ANTHSCI16.** Anthropology of Childhood — The biology of childhood; juveniles in the fossil record. Historical, linguistic, and sociocultural studies of children including education, play, family, ego development, work, and maltreatment. (HEF I,IV) GER:DB-SocSci

5 units, not given this year (Barrett, K)

ANTHSCI 18. Ecotourism in Anthropological Perspective—Ecotourism as a market-based conservation strategy providing solutions for environmental and social problems, and as a force of change in ecosystems and communities. How ecotourism seeks to substitute new economic opportunities for damaging land use patterns. Advantages and challenges in ecotourism initiatives; how anthropology informs ecotourism enterprises. Case studies from Latin America, Australia, Africa, the U.S., and Polynesia. (HEF IV)

5 units, not given this year

# **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) GER:DB-SocSci, EC-AmerCul

3-5 units, Win (Truncer, J)

ANTHSCI 24. Cultural History of Japan — (Graduate students register for 228; same as CASA 128.) Since WWII. Transformation of religion, kinship, gender, education, work, leisure, ideology, and national identity as interconnected institutions. Tokugawa and prewar Japan as antecedents to postwar developments. (HEF I, II) GER:DB-SocSci

3-5 units, Spr (Befu, H)

ANTHSCI 25. Human Ecology of the Amazon—(Same as HUMBIO 25.) 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: DB-SocSci. EC-GlobalCom

5 units, not given this year

ANTHSCI 27. The Aztecs and Their Ancestors: 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) GER:DB-SocSci, EC-GlobalCom

3-5 units, Win (Robertson, I)

ANTHSCI 28. Australia and New Guinea Ethnology—The prehistory and ethnology of New Guinea and Australia. Regional climate, environment, and pre-European history. Ethnography of the contact period focusing on theoretical problems central to the development of anthropological theory. Contemporary sociopolitical issues. Films. (HEF I,II) GER:DB-SocSci

4 units, not given this year (Bird, D; Bird R)

ANTHSCI 29A,B,C. First-Year Nahuatl—The language of the Aztecs, once used as a lingua franca throughout Mesoamerica. Focus is on vocabulary building and reading colonial literary and historical documents, including Central Mexican codices. Modern spoken dialects, the place of Nahuatl in the Uto-Aztecan language phylum, and the relationship between the language and Aztec culture. (HEF IV)

4 units, not given this year (Fox, J)

# CULTURE, SOCIAL RELATIONS, AND LANGUAGE

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

#### **CULTURE AND SOCIAL RELATIONS**

ANTHSCI 102. Women, Fertility, and Work—(Graduate students register for 202.) 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: DA-A) GER:DB-SocSci, EC-Gender

5 units, not given this year (Barrett, K)

#### **LANGUAGE**

ANTHSCI 110. Introduction to Language Change—(Same as LINGUIST 160.) 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. (HEF II; DA-A) GER:DB-SocSci

4-5 units, not given this year (Fox, J)

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. Reconstruction, proto-vocabularies, and culture. Archaeological decipherment and the origins and evolution of writing. Archaeological and genetic evidence for human migrations. (HEF II,III; DA-A) GER: DB-SocSci, EC-GlobalCom

3 units, Aut (Ruhlen, M; Fournier, R)

ANTHSCI 112. Human Diversity: A Linguistic Perspective—(Same as HUMBIO 187.) The diversity and distribution of human language and its implications for the origin and evolution of the human species. The origin of existing languages and the people who speak them. Where did current world languages come from and how can this diversity be used to study human prehistory? Evidence from related fields such as archaeology and human genetics. Topics: the origin of the Indo-European languages, the peopling of the Americas, and evidence that all human languages share a common origin. (HEF II; DA-A) GER:DB-SocSci, EC-GlobalCom

3 units, Spr (Ruhlen, M)

#### **AREA STUDIES: ASIA**

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; DA-A) GER:DB-SocSci

3-5 units, Spr (Befu, H)

# ARCHAEOLOGY AND EVOLUTIONARY **STUDIES**

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

#### **EVOLUTIONARY STUDIES**

ANTHSCI 130C. Current Issues in Paleoanthropology—(Graduate students register for 230C.) Current issues in fossil, archaeological, and genetic evidence for human evolution. Topics chosen by participants. May be repeated for credit.

1 unit, Aut, Win, Spr (DeGusta, D; Klein, R)

ANTHSCI 131A. Primate Evolution—(Graduate students register for 231A.) 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, monkeys, and apes. The functional anatomy of primates in relation to habitat and social ecology. (HEF I, II; DA-B) GER: DB-NatSci

5 units, not given this year

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: DB-NatSci

5 units, not given this year

ANTHSCI 133A. Human Osteology—(Graduate students register for 233A; same as HUMBIO 180.) The human skeleton. Focus is on identification of fragmentary human skeletal remains. Analytical methods include forensic techniques, archaeological analysis, paleopathology, and age/sex estimation. Students work independently in the laboratory with the skeletal collection. (HEF I,V; DA-B) GER: DB-NatSci

5 units, Win (DeGusta, D)

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

5 units, Spr (DeGusta, D)

# **ARCHAEOLOGY**

ANTHSCI 141. Hunter-Gatherers in Archaeological Perspective—(Graduate students register for 241.) Hunter-gatherer diversity as documented by ethnography and archaeology; how these areas of study provide different but complementary forms of information. Ethnographic case studies of hunter-gatherer groups from Africa, Australia, and N. America; comparisons with examples from the archaeological record. The use of ethnographic analogy in archaeology; current trends in huntergatherer archaeological research. (HEF I, II; DA-B) GER:DB-SocSci, EC-GlobalCom

4-5 units, Aut (Truncer, J)

#### ANTHSCI 142. Incas and their Ancestors: Peruvian Archaeol-

ogy—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; DA-B) GER:DB-SocSci, EC-GlobalCom

3-5 units, Spr(Rick, J)

**ANTHSCI 143. Ethnoarchaeology**—(Graduate students register for 243.) 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:DB-SocSci

3-5 units, Aut (Bird, D)

ANTHSCI 144. Urbanism in the Prehispanic New World—(Graduate students register for 244.) Preindustrial urbanism as exemplified by prehispanic New World societies. Case studies: the central and southern highlands of Mesoamerica, and the Maya region. Comparative material from highland S. America. (HEF II; DA-B)

3-5 units, Spr (Robertson, I)

ANTHSCI 144B. Archaeology of South Asia — S. Asian proto- and prehistory emphasizing the development of agriculture and social complexity. Rise and fall of the Indus or Harappan civilization; why cultural change occurred the way it did. (HEF II; DA-B) GER:DB-SocSci

3 units, not given this year (Truncer, J)

ANTHSCI 144C. Archaeology of Central Mexico—(Graduate students register for 204.) Prehistory of highland Central Mexico from the appearance of agricultural settlements to the arrival of Europeans. The development of the ancient state of Teotihuacan. Regional focus is the basin of Mexico and adjoining regions. Relations between central Mexico and other parts of Mesoamerica including the Maya area, the Gulf lowlands, and Oaxaca. (HEF II; DA-B)

3-5 units, not given this year (Robertson, I)

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; DA-B) GER:DB-SocSci

3-5 units, not given this year (Truncer, J)

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; DA-B) GER: DB-SocSci

5 units, Win (Rathje, W)

ANTHSCI 148. Archaeological Methods—(Graduate students register for 248; same as ARCHLGY 102.) Methods and 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:DB-SocSci

3-5 units, not given this year

ANTHSCI 149. Archaeological Field Methods — Hands-on 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; DA-B) GER:DB-SocSci

5 units, not given this year (Rick, J)

ANTHSCI 149B. Models and Imaging in Archaeological Computing—(Graduate students register for 208.) Hands-on seminar. Digital photography, mapping, and modeling methodology relevant to archaeology. Emphasis is on sharing skills between participants and instructor. (HEF V; DA-B) GER:DB-EngrAppSci

3-5 units, not given this year (Rick, J)

# POPULATION AND ENVIRONMENT

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

#### POPULATION/DEMOGRAPHY

ANTHSCI 151. Anthropology and Demography—(Graduate students register for 251.) Topics include W. Europe and China as examples of extreme demographic regimes. (HEF V; DA-A) GER:DB-SocSci 5 units, not given this year (Wolf, A)

ANTHSCI 155. Demography and Life History Theory - (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:DB-SocSci

5 units, Win (Jones, J)

#### **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:DB-SocSci

5 units, not given this year

ANTHSCI 162. Indigenous Peoples and Environmental Problems—(Graduate students register for 262.) The social and cultural consequences of contemporary environmental problems. The impact of market economies, development efforts, and conservation projects on indigenous peoples, emphasizing Latin America. The role of indigenous grass roots organizations in combating environmental destruction and degradation of homeland areas. (HEF I, IV; DA-A) GER:DB-Hum, EC-GlobalCom

3-5 units, Aut (Durham, W)

ANTHSCI 162B. Indigenous Peoples and Social Inclusion in Latin America—(Graduate students register for 262B.) Existing and new indigenous social organizations; their past and present values, community structures, traditional roles, and dynamics of change under new leadership, from the colonial period as a form of resistance to the present day. (HEF IV)

3-5 units, Win (Karp, E)

ANTHSCI 163. Human Behavioral Ecology—(Graduate students register for 263; same as HUMBIO 117.) Theory, method, and application in anthropology. How theory in animal behavioral ecology 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; DA-A) GER:DB-SocSci

3-5 units, not given this year (Bird, R)

ANTHSCI 163C. Saving Western Wide Open Spaces: Conservation Crises and Strategies in the North American West - (Graduate students register for 263C.) Conservation crises and related ideological divides that threaten the creation, management, and preservation of open space in the western U.S. Guest speakers, case studies, field trips. The ecological and social consequences of conservation tools and their impact on decision making.

3-5 units, not given this year

ANTHSCI 164. Ecological Anthropology — (Graduate students register for 264; same as HUMBIO 118.) 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:DB-SocSci

3-5 units, Win (Bird, R)

ANTHSCI 167. Social Policy for Sustainable Resource Use— (Graduate students register for 267; same as EARTHSYS 167/267.) 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 IV, V; DA-A) GER: DB-SocSci

5 units, not given this year (Irvine, D)

ANTHSCI 167C. Managing the Commons: Evolving Theories for Sustainable Resource Use—(Graduate students register for 267C; same as EARTHSYS 167C/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 commons such as atmosphere or the information commons. Links among theory, methods, and policy. Prerequisite: 190 or consent of instructor. (HEF II, III, IV; DA-A) GER:DB-SocSci

5 units, Aut (Irvine, D)

ANTHSCI 169. Conservation and Evolutionary Ecology—(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:DB-SocSci

3-5 units, not given this year (Bird, D)

#### MEDICAL ANTHROPOLOGY AND GENETICS

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

#### MEDICAL ANTHROPOLOGY

ANTHSCI 170. Medical Anthropology—(Same as HUMBIO 178.) The crosscultural study of the health beliefs and healing systems around the world. How social processes shape human health. (HEF I, IV; DA-C) GER:DB-SocSci, EC-GlobalCom

3 units, not given this year (Barrett, R)

ANTHSCI 171. Aging: From Biology to Social Policy—(Same as HUMBIO 149.) What people can expect when they join the ranks of the elderly. Issues include social security, medical care, lifespan, and the cultural, social, and economic consequences of a large elderly population in the U.S. and other countries. Films, service learning component. (HEF I; DA-C) GER:DB-SocSci

5 units, Spr (Barnett, C)

ANTHSCI 173A. The Evolution of Human Diet — (Graduate students register for 273A; same as HUMBIO 181.) 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:DB-SocSci

5 units, not given this year (Jones, J)

ANTHSCI 175. The Anthropology of Death and Dying—(Graduate students register for 275; same as HUMBIO 146.) 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)

5 units, not given this year (Barrett, R)

ANTHSCI 176A. Anthropological Perspective on Child Maltreatment—(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; DA-C) GER:DB-SocSci, EC-Gender

5 units, Aut (Barrett, K)

ANTHSCI 178. Contagion and Conflict—Historical and anthropological relationships between human disease and human conflict. Disease epidemics including Paleolithic conflicts, medieval crusades, world wars, and genocides of the last century. Alliances among military institutions, sanitary reform movements, and health agencies. Biowarfare including smallpox blankets, cold war weaponry, and bioterrorism. Application to current events; policy implications. (HEF IV; DA-C) GER:DB-SocSci

3-5 units, not given this year (Barrett, R)

**ANTHSCI 179. Environmental Change and Emerging Infectious Diseases**—(Graduate students register for 279; same as HUMBIO 114.) The changing epidemiological environment. 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: DB-SocSci

3-5 units, not given this year (Durham, W; Jones J)

#### 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) GER:DB-SocSci

5 units, not given this year (Mountain, J)

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, not given this year (Mountain, J)

#### SPECIAL COURSES

ANTHSCI 190. Social Theory in the Anthropological Sciences— Required of 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. Questions about the role of theory in anthropology and how it can be applied to human issues. (HEF IV) GER: DB SocSci, WIM

5 units, Aut (Barrett, R)

ANTHSCI 191A. Communicating Science: Proposals, Talks, Articles—(Graduate students register for 291A.) The principles and practice of effective communication in science. Grant proposals, conference presentations, and scientific journal articles. Focus is on writing and speaking skills in professional contexts. (HEF V) GER:DB-SocSci

4-5 units, Win (DeGusta, D)

ANTHSCI 191B. Conduct and Misconduct in Science—(Graduate students register for 291B.) The structure of modern science through a study of ethics and misconduct in research. Case studies of alleged scientific misconduct; what constitutes ethical research practices; the meaning of authorship; the limits of grantsmanship; the place of science in society; and roles of advisers, students, and postdocs. Theoretical and practical aspects of these issues. Emphasis is on anthropology and biology. (HEFV) GER:DB-SocSci

3-5 units, not given this year (DeGusta, D)

ANTHSCI 191C. Anthropological Sciences Capstone Core Seminar—See 291 for description. Required of undergraduate majors who are not in the honors program. Must be taken in the senior year, or by petition in the junior year.

1-3 units, Aut (Bird, R)

ANTHSCI 192. Data Analysis in the Anthropological Sciences — (Graduate students register for 292.) Univariate, multivariate, and graphical methods used for analyzing quantitative data in anthropological research. Archaeological and paleobiological examples. Recommended: algebra. (HEF V) GER:DB-Math

5 units, Spr (Klein, R)

ANTHSCI 193. Prefield Research Seminar—Required of Anthropological Sciences honors students. Preparation for field or laboratory research. Students develop a testable hypothesis and realistic data collection procedures, and review data collection techniques including participant observation, interviews, surveys, and sampling procedures. Emphasis is on theory-guided empirical work. (HEF V) GER:DB-SocSci

5 units, Spr (Bird, D)

ANTHSCI 193U. Field Research Methods and Proposal Writing-For undergraduates of any major. Social science methods for field research. Formulation of research questions and testable hypotheses; data collection techniques including participant observation, interviewing, surveys, and sampling procedures; and ethical issues. Proposal writing and human subjects protocol preparation. Anthsci majors may not substitute this course for 193. (HEF V)

3 units, Win (Barrett, K)

ANTHSCI 194. Post Field Seminar — Undergraduates analyze and write about material gathered during summer fieldwork. Emphasis is on writing and revising in analysis and composition. Student critiques of each other's work. Limited enrollment. (HEF V) GER:DB-SocSci

5 units, Aut (Robertson, I; Slovak, N)

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—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**—Opportunity for students to pursue their specialization in an institutional setting such as a laboratory, clinic, research institute, or government agency. May be repeated for credit.

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

ANTHSCI 199. Directed Individual Study—Prerequisite: consent of instructor.

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, W)

**ANTHSCI 202.** Women, Fertility, and Work—(Graduate section; see 102.) 5 units, not given this year (Barrett, K)

ANTHSCI 203. Topics in the Anthropology of China and Taiwan—Graduate seminar. Topics vary; contact department office. (DA-A) 3-5 units, not given this year (Brown, M)

**ANTHSCI 204. Archaeology of Central Mexico**—(Graduate section; see 144C.)

3-5 units, not given this year (Robertson, I)

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

5 units, Win (Klein, R)

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

3-5 units, not given this year (Rick J)

**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, Aut (Wolf, A)

**ANTHSCI 211. Language and Prehistory**—(Graduate section; see 111.) *3 units, Aut (Ruhlen, M; Fournier, R)* 

ANTHSCI 212. Linguistic Anthropology — Seminar. The ethnography of communication; language repertoires including registers, dialects, styles, and their functions; language classification, phylogeny, ethnicity, and ideology; vocabulary, grammar, and codability in culture and cognition; discourse, conversation, narrative, and poetics; writing and literacy; multilingualism and extinction. Emphasis is on authorial argumentation and theoretical preoccupations, linguistic fieldwork, and the richness of language repertoires around the world. Sources include monographs and articles on relationships among language, culture, and society. Student presentations. (HEF IV; DA-A)

5 units, not given this year (Fox, J)

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

4-5 units, not given this year (Fox, J)

**ANTHSCI 228. Cultural History of Japan**—(Graduate section; see 24; same as CASA 128.)

3-5 units, not given this year

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

3-5 units, Spr (Befu, H)

**ANTHSCI 230C. Current Issues in Paleoanthropology**—(Graduate section; see 130C.)

1 unit, Aut, Win, Spr (DeGusta, D; Klein, R)

**ANTHSCI 231A. Primate Evolution**—(Graduate section; see 131A.) 5 units, not given this year

**ANTHSCI 231B. Primate Societies**—(Graduate section; see 131B.) 5 units, not given this year

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

5 units, Win (DeGusta, D)

**ANTHSCI 233B. Advanced Human Osteology**—(Graduate section; see 133B.)

5 units, Spr (DeGusta, D)

**ANTHSCI 241. Hunter-Gatherers in Archaeological Perspective**— (Graduate section; see 141.)

4-5 units, Aut (Truncer, J)

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 archaeological record concerning the forces and mechanisms behind the rise and fall of complex societies, particularly in S. America. (HEF II; DA-B)

5 units, not given this year (Rick, J)

**ANTHSCI 243. Ethnoarchaeology**—(Graduate section; see 143.) 3-5 units, Aut (Bird, D)

**ANTHSCI 244. Urbanism in the Prehispanic New World**—(Graduate section; see 144.)

3-5 units, Spr (Robertson, I)

**ANTHSCI 245B. Evolution of Civilizations**—(Graduate section; see 145B.) *3-5 units, not given this year (Truncer, J)* 

**ANTHSCI 248.** Archaeological Methods — (Graduate section; see 148; same as ARCHLGY 102.)

3-5 units, not given this year

**ANTHSCI 251. Anthropology and Demography**—(Graduate section; see 151.)

5 units, not given this year (Wolf, A)

ANTHSCI 254. Applied Bayesian Analysis — (Same as POLISCI 354F.) Bayesian modeling in the social sciences emphasizing applications in political science, anthropological science, sociology, and education testing. Topics include: Bayesian computation via Markov chain Monte Carlo; Bayesian hierarchical modeling; Bayesian models for latent variables and latent states (measurement modeling); dynamic models; and Bayesian analysis of spatial models. Implementation of Bayesian approaches (priors, efficient sampling from posterior densities), data analysis, and model comparisons. Final project. Prerequisites: exposure to statistical modeling such as 200-level STATS or POLISCI 150/350B,C, or ANTHSCI 292.

3-5 units, Spr (Jones, J; Jackman, S)

**ANTHSCI 255. Demography and Life History Theory**—(Graduate section; see 155.)

5 units, Win (Jones, J)

ANTHSCI 262. Indigenous Peoples and Environmental Problems — (Graduate section; see 162.)

3-5 units, Aut (Durham, W)

ANTHSCI 262B. Indigenous Peoples and Social Inclusion in Latin America—(Graduate section; see 162B.)

3-5 units, Win (Karp, E)

ANTHSCI 262C. Cultural Diversity, Ethnicity, and Governance in Indigenous Latin America—Continuation of 262B. Posibilities for building representative institutions within a democratic regional and national context for the empowerment of indigenous peoples. Case studies of where this has happened. Long-term consequences, reaction from different sectors of society, business, media, and professionals. (DA-A)

3-5 units, Spr (Karp, E)

ANTHSCI 263. Human Behavioral Ecology—(Graduate section; see 163; same as HUMBIO 117.)

3-5 units, not given this year (Bird, R)

ANTHSCI 263C. Saving Western Wide Open Spaces: Conservation Crises and Strategies in the North American West—(Graduate section; see 163C.)

3-5 units, not given this year

**ANTHSCI 264.** Ecological Anthropology — (Graduate section; see 164; same as HUMBIO 118.)

3-5 units, Win (Bird, R)

ANTHSCI 265B. Central America: Environment, Sustainable Development, and Security—(Graduate section; see 165B; same as IPER 265.)

3-5 units, not given this year

ANTHSCI 267. Social Policy for Sustainable Resource Use—(Graduate section; see 167; same as EARTHSYS 167/267.)

5 units, not given this year (Irvine, N)

ANTHSCI 267C. Managing the Commons: Evolving Theories for Sustainable Resource Use—(Graduate section; see 167C; same as EARTHSYS 167C/267C.)

5 units, Spr (Irvine, D)

ANTHSCI 269. Conservation and Evolutionary Ecology — (Graduate section; see 169.)

3-5 units, not given this year (Bird, D)

ANTHSCI 270. Advanced Topics in Medical Anthropology — Graduate seminar. Specialized topics in human health, illness, and healing from anthropological perspectives. Topics based upon faculty and graduate student research interests and current issues. Students present topical research and analyses from published sources; required journal-quality paper. The history, theories, and methods of research. Recommended: courses in medical anthropology. (HEF I, IV; DA-C)

3-5 units, not given this year (Barrett, R)

ANTHSCI 273A. The Evolution of Human Diet—(Graduate section; see 173A; same as HUMBIO 181.)

5 units, not given this year (Jones, J)

ANTHSCI 275. The Anthropology of Death and Dying—(Graduate section; see 175; same as HUMBIO 146.)

5 units, not given this year (Barrett, R)

ANTHSCI 276A. Anthropological Perspective on Child Maltreatment—(Graduate section; see 176A.)

5 units, Aut (Barrett, K)

**ANTHSCI 279. Environmental Change and Emerging Infectious Diseases**—(Graduate section; see 179; same as HUMBIO 114.)

3-5 units, not given this year (Durham W; Jones J)

ANTHSCI 287. The Genetic Structure of Populations—(Graduate section; see 187.)

5 units, not given this year (Mountain, J)

ANTHSCI 288. Research in Anthropological Genetics—(Graduate section; see 188.)

1-5 units, not given this year (Mountain, J)

## **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 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)

5 units, Aut (Barrett, R)

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, Win (Bird, R)

ANTHSCI 291. Graduate Core 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. May be repeated for credit.

1-5 units, Aut (Bird, R), Win (Jones, J), Spr (Klein, R)

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

4-5 units, Win (DeGusta, D)

ANTHSCI 291B. Conduct and Misconduct in Science—(Graduate section; see 191B.)

3-5 units, not given this year (DeGusta, D)

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

5 units, Spr (Klein, R)

ANTHSCI 294. Proposal Writing Seminar—Required of ANTHSCI 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. May be repeated for credit.

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 ANTHSCI Ph.D. students. Students work with advisers and committee members to write a draft of their dissertation.

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

ANTHSCI 299. Directed Individual Study - Prerequisite: consent of instructor.

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

# **COGNATE COURSES**

See degree requirements above or the department's student services office for applicability of these courses to a major or minor program.

# **BIOSCI 146. Population Studies**

1 unit, Win (Feldman, M)

CASA 150. Archaeological Methods

5 units, Spr (Hodder, I)

# COMPMED 107/207. Comparative Neuroanatomy

4 units, Aut (Buckmaster, P; Darian-Smith, C)

#### **EDUC 191X. Introduction to Survey Research**

3-4 units, Win (Adams, J)

# **HUMBIO 2A. Genetics, Evolution, and Ecology**

5 units, Aut (Boggs, C; Durham, W)

## **HUMBIO 2B. Culture, Evolution, and Society**

5 units, Aut (Klein, R; Wolf, A)

#### SURG 101. Regional Study of Human Structure

5 units, Win (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.

#### **KYOTO**

ANTHSCI 125X. An Enduring Kyoto—(Same as CASA 149.)

2 units, Aut (Befu, H)

#### **OXFORD**

# **ANTHSCI 101X. The British Healthcare System**

5 units, Spr (Barrett, R)

#### ANTHSCI 171X. British Ethnography and Ethnographies of Britain

5 units, Spr (Barrett, R)

#### **SANTIAGO**

 $\textbf{ANTHSCI 104X.} \ \textbf{Modernization} \ \textbf{and} \ \textbf{Culture in Latin America} - (Same \ \textbf{Constant America}) \ \textbf{Constant America} + \textbf{Constant America} +$ as SPANLIT 290Z.) GER:DB-Hum, EC-GlobalCom

5 units, Aut (Subercaseaux, B)

#### **ANTHSCI 111X. Language and Prehistory**

5 units, Aut(Fox, J)