

ANTHROPOLOGICAL SCIENCES

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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 applied anthropology, curing systems in western and non-western societies, ethics, gender, genetic and cultural evolution, historical linguistics and linguistic anthropology, human environments and adaptations, human origins, hunters and gatherers, 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 four-field, 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 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 solid grounding in evolutionary thinking and analysis.

The department offers three graduate degrees: Master of Science, Master of Arts, and Doctor of Philosophy. The graduate curriculum encourages students to pursue 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 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. 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 Galapagos. Undergraduate and graduate students are encouraged to work with various 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, 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) Training Grants, to help with the costs of summer field schools and training programs (applications in Spring Quarter); (2) Mentored Research Grants, to enable students to gain research experience by working on faculty research projects (application in Spring Quarter); and (3) Independent Research Grants, to facilitate summer research projects leading to Honors in Anthropological Sciences (application in Winter Quarter). In addition, students have the opportunity to participate in ongoing historical archaeology conducted on campus.

Note—The degree programs in the Department of Anthropological Sciences became available in the Autumn Quarter of 1999-2000. Current students who enrolled in 1998-99 or in any previous year have the option of finishing their degrees under the guidelines and requirements of the former Department of Anthropology (see, for example, *Stanford Bulletin* 1998-99), or they may opt for the new guidelines and requirements outlined here. The choice of these options should be made in writing, with the faculty adviser's approval, and filed with the Student Services Coordinator in the Anthropological Sciences office.

UNDERGRADUATE PROGRAMS

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

BACHELOR OF ARTS

The A.B. 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: Language, Culture, and Social Relations; Archaeology and Evolutionary Studies; Population and Environment; and Medical Anthropology and Genetics. The A.B. in Anthropological Sciences provides solid preparation for careers in anthropology, business, economic development, education, foreign service, health professions, international relations, law, or public policy.

With the addition of courses from the natural, physical, and mathematical sciences, the A.B. 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. The department is developing a Bachelor of Science degree; and provides guidance for undergraduate students who want to ensure a strong background in the natural and quantitative sciences as they earn an undergraduate Anthropological Sciences degree (see the Student Services Coordinator for details).

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

1. 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, including the Department of Cultural and Social Anthropology. 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 ANSI 2A and 2B (Human Biology 2A and 2B), or three other "Introductory Courses" as listed below.
3. Complete at least one course in each of the four traditional subfields of anthropology: archeological, biological anthropology, linguistic, and sociocultural.
4. A letter grade of 'B' or better in the theory course, History of Theory in Anthropological Sciences (ANSI 190). This course fulfills the University's Writing in the Major Requirement (WIM) and should be taken no later than the junior year.
5. Declare a concentration track and complete *at least* 25 units in that track.
6. Complete at least one course from each of the five Human Evolution Framework (HEF) areas below, including lab and field methods. Note that some courses satisfy multiple areas of the HEF.
7. 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.
8. Complete at least one course in statistics (ANSI 192, Biological Sciences 141, Psychology 60, Statistics 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 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

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 at least one peer adviser. When they have a good working plan on paper (forms are available from the Student Affairs 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 will review 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 Opportunities (URO) grants, affiliated area studies programs (for example, Latin American Studies), and the department's own Pritzker Summer Scholars Program described above. Information and applications for the latter are available from the Academic and Student Services Coordinator in the department office.

Advising Program—The department puts high priority on undergraduate advising. Each student works with one or more peer advisers, as well as a faculty adviser, to design and carry out their Anthropological Sciences major or minor. The advising program is built on a faculty mentoring approach, and 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. Peer advisers are often the first step in seeking advice; they keep 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 Academic and 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 a grade point average (GPA) of 'B-' or better. With the adviser's approval, up to 10 of the required 30 units may be taken in Cultural and Social Anthropology or 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 ANSI 2A and 2B (Human Biology 2A and 2B) or three courses from introductory offerings.
4. Completion of at least one course at the 100 level or higher. Note: Human Biology majors who minor in ANSI cannot double count Human Biology 2A and 2B, and must then take 30 units of ANSI course work other than 2A and 2B.

HONORS

The Honors Program in Anthropological Sciences provides students the opportunity to conduct original research under the guidance of a faculty adviser. Candidates of sophomore and junior standing should submit an application to the student program coordinator no later than the end of the fourth week of the Spring Quarter. It must include a brief statement of a proposed honors project, a complete course of study within Anthropological Sciences, a transcript, and written approval of a faculty sponsor. The Student Affairs Committee reviews applications and notifies accepted students.

Candidates whose application to the honors program has been approved by the Student Affairs Committee must complete all of the requirements for their major and submit an honors thesis no later than three 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.

Students interested in honors are especially encouraged to apply for summer research funding through the department, through the office of Undergraduate Research Opportunities (URO), and through the various area studies centers on campus (for example, African and African American Studies, Latin American Studies, and so on). In most cases, honors students apply for such funding no later than Spring Quarter of their junior year.

COTERMINAL DEGREES

The Department of Anthropological Sciences accepts applications from Stanford undergraduate students to work toward coterminal A.M. or M.S. degrees. Undergraduate students with a grade point average (GPA) of 3.0 or higher may apply between their seventh and eleventh quarters by submitting with their application a statement of purpose, at least one writing sample (preferably a research paper), and three letters of reference. The GRE is not required. Requirements for coterminal degrees are described under "Graduate Programs" 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 Science, Master of Arts, 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 A.M. 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 A.M. 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 A.M. 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, including the Department of Cultural and Social Anthropology. 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 a grade point average (GPA) of 'B' or better.
3. At least four graduate-level courses, other than "Special Courses," in Anthropological Sciences, all for a letter grade. The remaining units may be made up of courses selected in consultation with the student's faculty adviser.
4. Enroll in the departmental Core Seminar (ANSI 290) each quarter while in residence. First year students are expected to enroll in the Core Seminar for a minimum of 3 units per term.
5. Complete Data Analysis in the Anthropological Sciences (ANSI 292) for a letter grade. Units earned in this course count toward the 45-unit A.M. requirement.
6. Students must submit a professional-quality field or library research paper to be read and approved by at least two department faculty members.

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 of Stanford for entry into the terminal M.S. program. Students applying to the M.S. program must have a B.S. degree.

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 computer science, chemistry, earth or natural science, engineering, math, physics, or statistics. 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 a GPA in master's work of 'B' or better.

3. The Scientific Process in Anthropology (ANSI 291), and Data Analysis in the Anthropological Sciences (ANSI 292), both for a letter grade. Units earned in these courses count toward the 45-unit M.S. requirement.
4. Students must take at least four graduate-level courses, other than "Special Courses," in Anthropological Sciences, all for a letter grade. The remaining units may be made up of courses selected in consultation with the student's faculty adviser.
5. Enroll in the departmental Core Seminar (ANSI 290) each quarter while in residence.
6. Students must submit a professional-quality field or library research paper to be read and approved by at least two department faculty members.

DOCTOR OF PHILOSOPHY

Prospective graduate students should request application materials from Graduate Admissions in the Registrar's Office. The deadline for applications is January 1. 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, while maintaining a grade point average (GPA) 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, including the Department of Cultural and Social Anthropology. Outside courses must form a coherent program of study and be approved by the student's adviser.
2. Enroll in the departmental Core Seminar (ANSI 290) each quarter while in residence (except for students in the second year of the program, working as TAs or RAs with a 9-unit course limit). Units for ANSI 290 count toward the unit requirements for the Ph.D. Students in the first year of the Ph.D program are expected to take ANSI 290 for a letter grade.
3. Complete ANSI 201A or 201B, History of Anthropological Theory, for a letter grade.
4. Complete ANSI 291, Research Methods in Anthropology, and 292, Data Analysis in the Anthropological Sciences, both for a letter grade. On petition to the Student Affairs Committee, one or both of these requirements can be fulfilled by equivalent undergraduate or master's course work.
5. Submit an acceptable, substantial, professional-quality, research paper in the Spring Quarter of the first year.
6. Serve as a teaching assistant for three undergraduate courses. 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.)
7. For those whose native language is English, pass an examination in a language other than English that will either serve as a field or research language. For those whose native language is not English, satisfactory command of English must be demonstrated by successful completion of the course and research requirements of the first two years of graduate study.
8. Recruit the special examination committee and schedule examinations by the end of the second year.
9. Petition for and advance to candidacy by the end of the second year.

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. Pass a special examination (written and oral). This examination fulfills the requirement of the University orals examination and may be scheduled at any time during the third year that is directly following admission to candidacy.

2. Submit the Doctoral Dissertation Reading Committee form before approval of TGR status or before scheduling a University oral examination that is in defense of a dissertation. The reading committee is to be recruited no later than the end of the third year.
3. Take at least one quarter of Proposal Writing (ANSI 294) and prepare a dissertation proposal to be approved by the dissertation reading committee before the end of the Spring Quarter of the third year. If necessary, obtain Human Subjects clearance.
4. Take at least one quarter of Dissertation Writing (ANSI 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 website (<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 will consent 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 department's Student Program Coordinator.
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, with a grade average 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 are to be taken in conjunction with the department's Core Seminar (ANSI 290*) and 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 either ANSI 190, 201A, or 201B, and must enroll in the department's Core Seminar (ANSI 290) 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, and these 15 or fewer only with the approval of the adviser.
5. It is expected that the student's adviser will 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 department's student program coordinator.

* The required Core Seminar (ANSI 290) is given for credit only.

COURSES

(WIM) indicates that the course meets the Writing in the Major requirements.

Undergraduate Anthropological Sciences courses 130 and above are organized by concentration tracks, 1 to 4 (see above). (HEF) designations indicate the given 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:

- 01-99 Introductory Courses
- 01-19 General Introductory Courses
- 20-29 SIS Courses (freshmen preference)
- 30-39 SIS Seminars and Dialogues (sophomore preference)
- 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 Archeology and Evolutionary Studies
- 130-139 Evolutionary Studies
- 140-149 Archeology
- 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. ANSI 2A and 2B (Human Biology 2A and 2B) provide a good introduction to the major; alternatively, a student may take three other Introductory Courses numbered from 3 to 40.

2A. Genetics, Evolution, and Ecology—(Enroll in Human Biology 2A.)

5 units, Aut (Boggs)

2B. Culture, Evolution, and Society—(Enroll in Human Biology 2B.)

5 units, Aut (Klein)

3. Introduction to Prehistoric Archaeology—Aims, methods, and data in the study of human society's development from early hunters through late pre-historic 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. GER:3b, 4a (DR:2 or 9)

3-5 units, Aut (Rick)

4. Language and Culture—Language variants (dialects, registers, jargons, writing, and non-verbal systems) and their use. Language classification and human prehistory. Linguistic determinism, relativism, encodability, and the cultural origins of vocabulary and grammar. The structure of discourse, including conversation, narrative, and poetics. Language, gender, and power. Style, strategy, and ideology in language use. Emphasis is on the comparative reading of monographic studies of language and culture in particular societies.

4-5 units (Fox) not given 2000-01

5. The Biology and Evolution of Language—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.

4-5 units (Fox) not given 2000-01

6. Human Origins—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. GER:2a (DR:5)

5 units, Win (Klein)

7. Marriage and Kinship—Surveys the variation in human kinship systems, asking whether or not they can be understood as evolutionary products, and considers the contribution to be made by a Marxist perspective. Eurasia and Africa are contrasted with Europe and E. Asia. GER:3b,4c (DR:9+)

5 units, Win (Wolf)

8. Introduction to Anthropological Genetics—Anthropological genetics and the extent, origins, and impact of variation among human genomes. A virtual tour through the human genome. Processes that lead to modification of the genome. Genomes in human populations. The effects of culture and disease on genetic variation. Assessing variation among human genomes; reconstructing human history from current and ancient variation. The extent of correspondence between genomic variation and other measures of human diversity. The impact of knowledge of human genetic diversity. The future of human genetic diversity. GER:2a (DR:5)

5 units, Win (Mountain)

9. Human Environments and Adaptations—The relationship between diverse human populations and their environments. Theories for how environments influence human behavior and culture, and for how human populations shape their environments. Emphasis is on present-day environmental problems and the human dimensions. How the social and cultural processes can cause environmental problems (e.g., deforestation, soil erosion, habitat degradation), and help to solve them.

3-5 units (Staff) not given 2000-01

10. Plagues and Peoples—Introduction to the principles of medical anthropology through an examination of major human infectious diseases. Focus is on the cultural constructions of health, cultural contexts of disease, and the social implications of medical intervention.

5 units (Staff) not given 2000-01

STANFORD INTRODUCTORY SEMINARS (SIS)

The SIS program within the Department of Anthropological Sciences provides opportunities for first- (N) and second-year (Q) students to work closely with faculty. Units for these courses count towards the Anthropological Sciences major requirements.

20N. Stanford Introductory Seminar: Modern Human Origins—Preference to freshmen. Analysis of the data and theories bearing on the origins of anatomically modern humans between 1,000,000 and 50,000 years ago. Emphasis is on the two major contending theories: that modern humans originated more or less simultaneously from non-modern humans in many regions of Africa and Eurasia; or that modern humans originated exclusively in Africa and spread from there. How paleontologists test these theories against the empirical data of genetics and the fossil record.

3 units, Spr (Klein)

23N. Stanford Introductory Seminar: Maya Mythology Multimedia Project—Preference to freshmen. Lectures, discussions, and hands-on work in the development of a world-wide-web project on the mythology of the ancient and modern Maya, emphasizing the relationships between the Quiche mythological text, *Popol Vuh*, and ancient Maya art and archaeology, hieroglyphic texts, colonial documents, modern ethnography, modern Maya narrative language, and mythological theory. GER:3b (DR:9)

3 units, Win (Fox)

31Q. Stanford Introductory Seminar: Earthquakes and Archaeology in the Eastern Mediterranean—Lectures and Field Trip—(Enroll in Geophysics 50Q.)

3 units, Win (Nur)

CULTURE, SOCIAL RELATIONS, AND LANGUAGE

In addition to the courses listed directly below, ANSI courses 165 and 170, listed in other concentration tracks, also count towards the Track 1 concentration.

CULTURE AND SOCIAL RELATIONS

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: gatherer/hunter, horticultural (Melanesian), southern Chinese, and Anglo-American societies. HEF I, IV GER:4c (DR:†)

5 units (Gates) not given 2000-01

103. Theory and Method in Cultural Evolution—(Graduate students register for 203.) The concept of culture as used in anthropology, and the ways in which culture is socially conveyed and manipulated. The capacity for “descent with modification” in cultural systems. Critical examination of transmission forces, direct and indirect bias, epigenetic theory, cultural selection, gene-culture coevolution, and ethnogenesis. HEF III, IV

5 units (Durham) not given 2000-01

104. The Anthropology of Childhood—Children do not think, talk, or act as adults do. Anthropology studies population differences in thought, language, and behavior. The overlooked convergence of these two observations, examining how cultural differences in child rearing and the conceptualization of childhood across time and space affect child development.

5 units, Aut (Hirschfeld)

105. Race, Gender, and Biology—Critically evaluates the biological arguments for the explanation of race and gender inequality in human societies. The history of the issues, examining the arguments of proponents (to the effect that race and sex role differences are rooted in our biology) and the arguments of their critics. Recent arguments, including those of sociobiology and its critics, because of their influence on contemporary social thought. HEF I

5 units (Durham) not given 2000-01

106. Human Origins in Science and Myth—A comparison of peoples’ accounts of their own and others origins, with inferences made from comparative biological, linguistic, and cultural data. Functional, psychological, historical, folkloristic, and literary interpretations of myths and other narratives of origin. The scientific account as narrative. The intellectual accomplishments of supposedly primitive and advanced cultures, asking whether their cognitive models of time, space, and the cosmos justify such differentiation. (HEF IV)

5 units (Fox) not given 2000-01

107. Culture and Cognition—(Graduate students register for 207; same as Psychology 278.) Theories of culture make strong claims about how people represent the world to themselves and others, particularly claims about perception, memory, and reasoning. The basic anthropological presumptions about cultural knowledge (e.g., that members of different cultures deploy incommensurate world views) in light of recent advances in cognitive science, and how well characterizations of thinking and reasoning hold up in a cross-cultural perspective. Enrollment limited to 20.

5 units, Aut (Hirschfeld)

108. The Cultural Politics of Race and Ethnicity—Research on race and ethnicity by cultural anthropologists, historians, and historical sociologists is often independent of (and at times in counterpoint to) research

on prejudice, stereotyping, and bias in psychology. The development of both lines of research, appraising them with respect to each other and toward a reconciliation of these approaches to a common theme. Enrollment limited to 10.

5 units, Win (Hirschfeld)

LANGUAGE

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. (HEF II, III) GER:3b (DR:9)

4-5 units, Win (Fox)

111. Language and Prehistory—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)

5 units (Fox) not given 2000-01

112. Human Diversity: A Linguistic Perspective—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 the languages that we currently see in the world come from and how can this diversity be used to study human prehistory? Evidence from related fields (archaeology and human genetics). Topics: the origin of the Indo-European languages, the peopling of the Americas, and the evidence that all human languages share a common origin.

3 units, Spr (Ruhlen)

115. Maya Hieroglyphic Writing—(Graduate students register for 215.) Lecture/workshop on the decipherment of the hieroglyphic writing of the Classic Maya. Principles of archeological 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 archeology and linguistics of the Maya.

5 units, Spr (Fox)

119. Linguistic Field Methods—Practical training in the collection and analysis of linguistic data from native speakers. Research goals, ethics, working in the community, technical equipment, and analytical strategies. Emphasis is on the use of computers in the collection, analysis, and preparation of materials useful to the subject community. Prerequisite: introductory linguistics. (HEF V)

5 units (Fox) not given 2000-01

AREA STUDIES: THE AMERICAS

120. Native American Cultures of North America—Introduction to the diverse cultures of indigenous peoples in N. America before the European conquest. Lectures, readings, and films on the precontact situation, postcontact changes (including government policies), influences of Indian culture on American society and culture, and the contemporary situation of native peoples. An antidote to TV and Western movie stereotypes. (HEF IV) GER:4b (DR:3)

5 units (Barnett) not given 2000-01

121. Native Peoples and Cultures of the Southwest—The development of the rich, varied cultures of the American southwest from earliest prehistory to postmodern times. Emphasis is on the interaction of cultures and their responses to changes in social and natural environ-

ments. Recommended: background in Native American cultures, literature, and archaeology. (HEF IV)

5 units (*Barnett, Rick*) not given 2000-01

122. The Maya—Introduction to the archaeology and culture of the ancient and modern Maya. Archaeological and historical data and classification of periods and variation in Maya culture. The natural world of the Maya: environmental, food, agriculture, technology, and medicine. The life cycle and daily life, power and social structure, language and writing, mythology, time, astronomy, religion, and art. The Spanish conquest and the colonial Maya. The Maya in the modern world system. (HEF II, IV)

5 units (*Fox*) not given 2000-01

123. Environmental Issues in the Americas—Focus is on the local impacts of major environmental problems in the Americas. Case studies: deforestation of tropical rainforest in the Amazon; co-management of marine fauna in the Arctic; forestry management in Mexico and N. America; and pollution, toxic waste, and environmental justice in the U.S. (HEF III)

5 units (*Staff*) not given 2000-01

124. Perspectives on Sustainable Development in Latin America—(Same as Latin American Studies 195.) Cross-disciplinary examination of perspectives for “sustainable development” in rural areas of Latin America. Interactions between poverty, development, environmental degradation, and approaches to growth and stability in agroecology, agroforestry, small farm development, and conservation biology. Limited enrollment. HEF III

5 units, *Win* (*Rosset*)

AREA STUDIES: ASIA

125A. 20th-Century Chinese Societies—Nationalist China, the Peoples' Republic of China, Taiwan, and the loosely-knit networks of the overseas Chinese are examined through the anthropological methods used in exploring complex societies. Emphasis is on political-economic, demographic, social organizational, gender/kinship, ideological, and transformative aspects of Chinese populations after the 1949 revolution. (HEF IV) GER:3b,4a (DR:2 or 9)

5 units, *Spr* (*Gates, Wolf*)

125B. Late Imperial China—Chinese civilization in the late imperial era (960-1911) in its spatial, temporal, structural, institutional, and ideational complexity. Thematic foci: 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 popular religion. (HEF IV) GER:4a (DR:2)

5 units, *Aut* (*Gates, Wolf*)

126. Formosa: An Introduction to Taiwanese History, Culture, and Society—Introduces the history, cultures, and society of Taiwan behind and beyond the headlines: the Dutch Period, the Japanese colonial era, the present day. The social scientific, especially anthropological, scholarship done on Taiwan in the past few decades. Topics: migration, trade, colonization, Han Chinese and the Taiwanese aborigines, social movements, nationalism, political culture, family and kinship.

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

165. South Asia: Environment, Development, and Security—See Environment/Ecology.

ARCHEOLOGY AND EVOLUTIONARY STUDIES

In addition to the courses listed directly below, ANSI courses 111, 112, 122A, 180, and 181, listed in other concentration tracks, also count towards the Track 2 concentration.

EVOLUTIONARY STUDIES

130. Modern Human Origins—Analysis of the data and theories bearing on the origins of anatomically modern humans between 100,000 and 50,000 years ago. Emphasis is on the two major competing theories: that modern humans originated more or less simultaneously from non-modern humans in many regions of Africa and Eurasia; or that modern humans originated exclusively in Africa and spread from there, largely replacing non-modern humans elsewhere. (HEF I, II)

5 units (*Klein*) not given 2000-01

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, New World Monkeys, Old World Monkeys, lesser apes, and great apes. The functional anatomy of primates in relation to habitat and social ecology. (HEF II)

5 units, *Spr* (*Jablonski*)

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)

5 units, *Win* (*Maggioncalda*)

131C. Evolution of Primate Intelligence—(Graduate students register for 231C.) Upper-level seminar on the evolution of cognitive abilities in primates. Analysis of selective forces increasing intelligence: from ecological factors impacting early prosimian primates to social and cultural factors affecting hominid evolution. Critical evaluation of hypotheses about relationships between brain morphology and intelligence in humans, nonhuman primates, and hominid ancestors. Prerequisite: 131B or consent of instructor. (HEF V)

5 units, *Spr* (*Maggioncalda*)

132. Hormones and Behavior—Seminar on primate socioendocrinology. The endocrine correlates of behavior and the behavioral correlates of changes in hormone levels. In-depth analysis of pheromones and other socioendocrine signals and their role in suppression of growth, development, and/or reproduction. The relationship between social rank and endocrine physiology. The evolutionary significance of interactions between social behavior and hormones. Prerequisites: 2A, 2B, 102, or Biological Sciences 150. (HEF I)

5 units (*Maggioncalda*) not given 2000-01

133A. Beginning Osteology—(Graduate students register for 233A; same as Human Biology 180.) Introduction to the study of the human skeletal system. The biology of the bone: growth and development, structure, and function. Identification of the different bones in the human skeletal system. Methods for assessing age, sex, and the biological affinity of bones from archaeological and paleontological contexts. (HEF I, V) GER:2A (DR:5)

5 units, *Aut* (*Maggioncalda*)

133B. Advanced Osteology—(Graduate students register for 233B.) Analysis of human bone remains from archaeological and paleontological sites. In-depth analysis of fragmentary skeletal remains from an archaeological site prior to their reburial. Morphometric measurements and observations of various skeletal elements, and assessment of age, sex, and pathological condition of individual specimens. Cultural influences on skeletal variability, and the assessment of prehistoric population dynamics. (HEF II, V)

5 units, *Win* (*Staff*)

134. Human Behavioral Biology—(Enroll in Biological Sciences 150/250.)

6 units (*Sapolsky*) alternate years, given 2001-02

135. Human Nature in Evolutionary Perspective—Examines selected examples of human behavior (incest avoidance, aggression, attachment, color symbolism, interpretation of facial expressions, etc.), considering the extent to which they are products of our evolutionary heritage. Prerequisites: 2A, 2B, upper-division standing. (HEF I)

5 units (*Wolf*) not given 2000-01

136. The Human Hand: Evolution, Ontogeny, and Influence—(Enroll in Human Biology 101.)

3 units (*Porzig*) not given 2000-01

137. Darwin, Evolution, and Galapagos—(Same as Human Biology 161.) Seminar on Darwinian theory as applied to the evolution of flora and fauna on the Galapagos Islands. Darwin's observations in Galapagos, and their role in the formulation of his theory of evolution; recent research in Galapagos and its implications for our understanding of evolution today. The impact of human activity in Galapagos and emerging conservation issues. Lectures, discussions, and optional field trip to Galapagos (at extra expense, limited capacity). Enrollment limited to 20. (HEF III)

5 units (*Durham*) not given 2000-01

138. Evolutionary Psychology—(Graduate students register for 238, same as Psychology 268.) The natural history of higher-order cognition, using evolutionary theory to evaluate current debates about cognitive architecture. Focus is on analyses relevant to anthropology, emphasizing the relationship between cultural variation and cognitive universals. Enrollment limited to 20.

5 units, Win (*Hirschfeld*)

139A. An Undergraduate Course in Anatomy—(Enroll in Surgery 101.)

7 units, Win (*Dolph, Glasgow*)

139B. An Undergraduate Course in Anatomy—(Enroll in Surgery 101A.)

5 units, Spr (*Dolph*)

ARCHEOLOGY

140. Stone Tools in Prehistory—(Graduate students register for 240.) Archaeologists rely on an understanding of stone tools to trace much of what we know about prehistoric societies. How to make, illustrate, and analyze stone tools, revealing the method and theory intrinsic to these artifacts. Prerequisites: 3 or 6 or other instructor-approved, previous archaeology course work. (HEF II)

5 units (*Rick*) not given in 2000-01

141. Hunter-Gatherers in Archaeological Perspective—(Graduate students register for 241.) The organization and subsistence of band-level hunter-gatherers as approached through archaeological investigations. Modern hunter-gatherers provide the background for prehistoric groups. The archaeological record of Africa, Europe, and the New World provides examples of how archaeological data reconstructs the cultural systems of extinct hunter-gatherers. (HEF II) GER:3b (DR:9)

5 units, Win (*Rick*)

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 and beautiful ceramics and textiles. Cultural evolution, and why and how major transformations occurred. (HEF II, III) GER:4a (DR:2)

5 units (*Rick*) not given 2000-01

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) GER:3b (DR:9)

5 units, Spr (*Rick*)

POPULATION AND ENVIRONMENT

In addition to the courses listed directly below, ANSI courses 123, 124, 133B, and 141, listed in other concentration tracks, also count towards the Track 3 concentration.

POPULATION/DEMOGRAPHY

150. Population and Society—The relationship between social structure (marriage, kinship, and political organization) and population dynamics (fertility, mortality, and migration) in a range of societies. The differences between hunter/gatherers and agriculturalists, and between peoples of Europe and Asia. (HEF II, IV)

5 units (*Wolf*) not given 2000-01

151. Demography in Anthropology—The study of vital rates in human populations and their social and cultural contexts. Population dynamics in small, non-state societies as contrasted with population dynamics in large industrial states. Emphasis is on the cause of high rates of fertility, mortality, and migration. Introduces demographic methods. (HEF II, V)

5 units (*Staff*) not given 2000-01

153. The Population Question: From Malthus to Rio—The relationship between the vital rates of human populations (fertility, mortality, and migration) and the social and ecological problems of poverty, hunger, and environmental degradation. To what extent is population growth (and attendant vital rates) the cause of these social ills? To what extent is population growth their consequence? What are the main interactions among social, cultural, ecological, and demographic variables? (HEF II)

3-5 units (*Durham*) not given 2000-01

154. The Limits to Growth—The past, present, and future of human population growth. Critically evaluates estimates of global and regional carrying capacity and their assumptions, including estimates based upon food, water, energy, and security considerations. Issues raised by inequity, over-consumption, and the role of culture in the history of human populations. The major choices humanity faces in the decades ahead. (HEF II)

3-5 units (*Staff*) not given 2000-01

156. Colloquium on Population Studies—(Enroll in Biological Sciences 146.)

1 unit, Win (*Feldman*)

158. Theories in Demography—The main theories that shape demography as an intellectual discipline today. Demographic transition: from theory to policy. Influential fertility transition theories. Perspectives from anthropology, "culture," and political economy. Post-transitional fertility. Malthus and Boserup. Homeostasis and the interplay of individual vs. group interests. Cultural evolution and genetics. Evolutionary theory. Carrying capacity and optimum population size. Population and environment. Epidemiological transition and health transition. Famine. Migration. Urbanization and development. Prerequisite: 2A or 2B.

4 units (*Staff*) not given 2000-01

ENVIRONMENT/ECOLOGY

160. Development and Environment—The cultural and environmental impacts of development projects, focusing on the local level impact of government initiatives to encourage economic development. The role of NGOs in negotiating development priorities and environmental protections. (HEF II)

5 units (*Staff*) not given 2000-01

161A. Conservation and Development Issues in the Amazon—The prospects for achieving the dual goals of biodiversity conservation and community development in Amazonia. Case studies of recent efforts at biodiversity conservation, including national parks, biosphere reserves, pharmaceutical prospecting, ecotourism, extractive reserves, and agroforestry projects. The costs and benefits of conservation. To whom do these costs and benefits accrue? Critically evaluates Integrated Conservation-Development Projects (ICDPs) in the Amazon today. Optional field trip over Spring Break (at added expense, limited capacity) to selected ICDPs in the Peruvian Amazon. (HEF II) GER:3b (DR:9)

5 units, Win (Stronza, Durham)

161B. Human Ecology of the Amazon—Introduces the various ecosystems of the Amazon and their human inhabitants. The biotic and antibiotic factors shaping human adaptation to the region. Ethnographic literature is used to explore subsistence patterns and the resource use of Native Amazonians. Current changes in these economies and life-ways due to acculturation and market forces, and the implications for conservation. (HEF IV)

5 units (Lu) not given 2000-01

162. Indigenous Peoples and Environmental Problems—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)

3-5 units (Durham) not given 2000-01

163. Community-Based Conservation—Community-based participatory models for conservation that represent alternatives to conventional top-down approaches. Case studies: pollution control in the U.S., wildlife conservation in Africa, and protection of tropical rainforests in Latin America. The strengths and weaknesses of alternative approaches to conservation, and the potential for community-based models to make a difference. (HEF II)

5 units (Staff) not given 2000-01

164. Ecological Anthropology—(Same as Human Biology 134.) The relationships between human social systems and their environments. How do environments influence the nature and form of human social systems found within them? How do human social systems influence the properties and dynamics of their environments? How can we best conceptualize and understand human social systems, environment, and the links between them? Case studies of human societies in the Arctic, Amazon, E. Africa, the Alps, and Papua New Guinea. (HEF III)

5 units (Durham) not given 2000-01

165. South Asia: Environment, Development, and Security—Parallel movements and activities in environmental protection, economic development, and security in India and Pakistan since 1947, focusing on this decade. Environmental issues: air, water, and land pollution, population growth, equity issues and the Narmada dam controversy. Development issues: new programs for economic and energy growth and their environmental consequences.

5 units, Spr (Rosencrantz)

166A. Indigenous Forest Management—(Enroll in Human Biology 172.) (HEF IV)

5 units, Aut (Irvine)

166B. Fishing for Solutions: Issues in Marine Conservation—(Graduate students register for 266B.) The stories behind communities and their fisheries relate to a resource we cannot see. The history of exploitation of cod, salmon, tuna, and grouper are instructive of the wider challenges facing marine resource management. The complex of cultural, biological, and economic facets that shape a fishery.

3-5 units, Win (Novy)

167. Anthropology of Tourism and Ecotourism—(Enroll in Human Biology 188.)

5 units, Aut (Stronza)

168A. Ecology and Equity—Comparative, cross-cultural perspective on the global environmental debate. The origins, articulations, and resolutions of environmental conflicts, drawing on cases and movements from a variety of societies. Strategies and limits of deep ecology, ecofeminism, alternative technology, Gandhism, and other approaches. (HEF II)

5 units, not given 2000-01

168B. Environmental Justice—The social movement uniting environmentalism and social justice into one framework. People of color, and people who are socially, economically, and politically disenfranchised often bear the burden of environmental problems. Examples from the U.S., S. America, and Africa are used to examine hazardous waste landfills, petroleum exploitation, and exposure to pesticides and toxic chemicals in the workplace. The history of environmental justice movement, evidence for its claims, and its challenges and contributions.

5 units, Aut (Lu)

MEDICAL ANTHROPOLOGY AND GENETICS

In addition to the courses listed directly below, ANSI courses 133B and 151, listed in other concentration tracks, also count towards the Track 4 concentration.

MEDICAL ANTHROPOLOGY

170. Medical Anthropology—(Graduate students register for 270.) For students with interests in health care. Introduction to curing systems in Western and in non-Western cultures; problems of adapting modern medicine to diverse cultures; explication of the social and cultural correlates of physical and mental health and disease (social epidemiology). (HEF IV) GER:3b (DR:9)

5 units, Aut (Barnett)

171. Aging: From Biology to Social Policy—What can we expect when we join the ranks of the elderly? What are the biological processes that contribute to aging and are they the same across all populations and cultures? What are the cultural, social, and economic consequences of a large portion of the elderly? What implications do they have for social policy? Readings, lectures, and films. Students are assisted in research and working with the elderly. (HEF I) GER:3b (DR:9)

5 units, Spr (Barnett)

172. Evolutionary Medicine—(Graduate students register for 272.) Seminar on 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)

5 units, Aut (Cronin)

173. Disease, Health, and Culture Change—Humans buffer themselves against the consequences of ill health through their capacities for storing and transmitting knowledge, and for dividing the labor of subsistence in flexible ways. Class, ethnic, and sex/gender differences are examined to access the significance of disease and health as factors in cultural evolution. Prerequisites: 2A, 2B; or consent of the instructor. (HEF III)

5 units (Gates) not given 2000-01

174. Bioethics and Anthropology—(Graduate students register for 274.) 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. Examines research ethics for anthropologists studying health and illness.

Focus is on the cultural production of moral dilemmas in biomedicine and healing practices in diverse cultures.

5 units, Spr (Koenig)

ANTHROPOLOGICAL GENETICS

180. Human Evolutionary Genetics—(Graduate students register for 280.) The evolution of modern humans as inferred from available genetic data. Quantitative methods are used to analyze mitochondrial DNA and allele frequencies. Inference of human migrations and expansion. Genetic support for models of the evolution of modern humans. Comparison of genetic data with archaeological and linguistic data. Emphasis is on critical reading of the literature. Prerequisite: 2A, 2B; or equivalents. Recommended: introductory statistics. (HEF II, III)

4-5 units (Mountain) not given 2000-01

181. Genes and Culture through Time and Space—Exploration, through the use of computer modeling, of the parallels and interactions between human history, genes, and culture. When do we observe similarities between genetic and cultural patterns? What are the uses of models? Does greater complexity always improve a model? What are the advantages and disadvantages of simulation? Is it easier to predict genetic or cultural patterns? When do they influence one another? Students generate hypotheses, run simulations necessary to test these hypotheses, and analyze the output of the simulations. Prerequisites: 2A, 2B; or consent of instructor. (HEF III, V)

5 units (Mountain) not given 2000-01

189. Research Methods in Anthropological Genetics—(Graduate students register for 289.) Practical training and experience in the molecular biology and data analysis techniques currently applied in anthropological genetics. Collection of samples, DNA extractions, polymerase chain reaction (PCR), gel electrophoresis, DNA sequencing. Basic techniques in the analysis of population genetic data. Prerequisites: 2A, 2B; or consent of instructor. (HEF V)

5 units, Spr (Mountain)

SPECIAL COURSES

190. History of Theory in the Anthropological Sciences—(Graduate students register for 290A.) Required of all majors. Seminar on foundational texts in anthropology, from Darwin and Marx to Geertz and Sahlins. Emphasis is on the materialist and evolutionary theories of culture. Presentations by members of the faculty. (WIM)

5 units, Aut (Gates)

192. Data Analysis in the Anthropological Sciences—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)

5 units (Klein) not given 2000-01

193. Prefield Research Seminar—Prepares 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)

5 units, Spr (Staff)

194. Postfield Research 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. (HEF V)

5 units, Aut (Staff)

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, any quarter (Staff)

196. Honors/Masters Writing Workshop—For students in the process of writing honor's or masters' papers. Techniques for interpreting data, organizing bibliographic material, writing, editing, and revising. Preparation of papers for conferences and publications in anthropology.

2-6 units, any quarter (Staff)

197. Internship in Anthropological Sciences—Provides undergraduates with the opportunity to pursue their area of specialization in an institutional setting (e.g., a laboratory, a clinic, a research institute, or a government agency, etc.).

4-5 units, any quarter (Staff)

198. Museum Methods—Individually directed work on anthropology collections. Introduction to the computerized storage and retrieval system, cataloging, exhibit techniques. Can be taken for one or two quarters by arrangement with instructors. (HEF V)

1-4 units, any quarter (Rick)

199. Directed Individual Study—(Graduate students register for 299.) Opportunity for advanced students to explore special areas of interest.

1-10 units, any quarter (Staff)

GRADUATE

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

201A. History of Anthropological Theory, 18th and 19th Centuries—Comparative analysis of the major 18th- and 19th-century social theorists (Boas, Darwin, Freud, Marx, Morgan, Tylor, Weber) and a historical examination of their contributions to the rise of anthropology.

5 units (Wolf) not given 2000-01

201B. History of Anthropological Theory, 20th Century—Continuation of 201A, focusing on institutionalization of the discipline and the emergence of the four field boundaries. Comparison of the development of anthropology in N. America, Germany, England, and France.

5 units (Wolf) not given 2000-01

202. Political Economy and Gender Theory—Evolutionary theory as it relates to the emergence of varied political economies. Readings: Marx, Sahlins, Geertz, and Bloch. Recommended: working knowledge of Darwinian theory.

5 units (Gates) not given 2000-01

203. Theory and Method in Cultural Evolution—Graduate section; see 103.

5 units (Durham) not given 2000-01

204. Culture and Politics in South Asia—Seminar on the ethnographies of S. Asia, a region unparalleled in its ecological and cultural diversity, in its range and intensity of social conflict, and in its cultural expressions. Themes: nationalism, religious violence, class conflict, and the fate of indigenous peoples. A close look at S. Asia ethnographies and exemplary models, to guide future student research.

5 units (Staff) not given 2000-01

205. Applied Anthropology—Anthropologists apply their knowledge and skills to a variety of problems: developing and evaluating medical care delivery systems and educational programs at home and abroad; assisting in the transfer of technological innovations and predicting and measuring their impact; serving as planners, administrators, and advisers for developing programs. The substance of such programs, the utility of anthropological theory and research approaches in solving contemporary problems, and the ethics of professional practice.

5 units (Barnett) not given 2000-01

207. Culture and Cognition—(Same as Psychology 179.) Graduate section; see 107.

5 units, Aut (Hirschfeld)

208. Models and Imaging in Anthropological Computing—Develops skills in working with digital imagery relevant to anthropology, using ANSI microcomputers. Hands-on seminar in which some specific background information and methodology is made available, and a sharing of skills goes on between participants and instructor.

3 units, Spr (Rick)

209. Research Methods in Cultural Anthropology—Introduction to basic cultural field methods: interviewing; observation; taking and using field notes; linguistic elicitation; mapping; film, video, digital, and tape recording; archival documents and historical materials; questionnaires, surveys, and statistics. The ethics of field research (prefield, field, and postfield); the relationship of methods to research problems and data analysis; and procedures for maintaining physical and mental health in the field.

5 units (Barnett) not given 2000-01

212. Linguistic Anthropology—Seminar on language in its cultural contexts. Topics similar to those in ANSI 4, but reading emphasis is on journal articles rather than monographs.

5 units (Fox) not given 2000-01

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

5 units, Aut (Fox)

219. Linguistic Field Methods—Graduate section; see 119.

5 units, by arrangement (Fox)

220. China for Social Analysts—The analytic constructs for the holistic study of 19th- and 20th-century China. See instructor for reading list.

5 units (Gates) not given 2000-01

230. Genetics and Modern Human Origins—Graduate seminar focusing on when and where modern humans originated. Did the most recent common ancestors of modern humans exist 1 million or 50,000 years ago? Where did they live, and what other hominid groups existed? Does the available genetic data enable us to distinguish between the competing theories of the origin of modern humans? What kinds of data are necessary for testing these hypotheses? How much can genetic data tell us about our origins? What is the impact of conclusions regarding our origins? Emphasis is on critical reading and discussion of recent literature.

5 units (Mountain) not given 2000-01

232. Human Evolutionary Anatomy—Focus is on the basis for reconstructing the form, adaptation, and life style of prehistoric humans: the interpretation of their skeletal remains. Integrating features: musculature, body size, stance, brain size, organization, activity patterns, sexual dimorphism, and speech potentiality.

5 units (Staff) not given 2000-01

233A. Beginning Osteology—Graduate section; see 133A.

5 units, Aut (Maggioncalda)

233B. Advanced Osteology—Graduate section; see 133B.

5 units, Win (Staff)

235. Human Evolutionary Systematics—Recent developments and debates in the application of evolutionary systematics specifically to the

human fossil record; the utility of cladistic vs. phenetic methods, especially at the species and subspecies level; trait definition and conceptualization; and the utility of heterochronic and functional information in phylogenetic reconstruction.

4-5 units (Staff) not given 2000-01

236. Evolution and Aggression—Seminar on aggression in human and non-human primates. Topics: primate and early hominid origins of aggression, the place of aggression in the evolution of complex societies, and critiques of theories of aggression.

5 units (Maggioncalda) not given 2000-01

237. Climate and Human Evolution—Patterns of human morphological diversity and adaptive response to climate has played a pivotal role in human evolution. The role of technology and cultural buffering in climatic adaptation, especially in the later phases of human evolution and its impact on our understanding of modern human emergence.

5 units (Staff) not given 2000-01

238. Evolutionary Psychology—(Same as Psychology 168.) Graduate section; see 138.

5 units, Win (Hirschfeld)

239. Evolutionary Anthropology: Theory and Methods—The history of evolutionary theory from the 19th century to present, emphasizing anthropological applications. The theory and methods behind classical evolutionary anthropology, unilinear and multilinear evolution, functionalism and neoevolutionism, sociobiology, evolutionary psychology, and dual inheritance theory. Prerequisite: graduate standing or consent of the instructor.

5 units (Durham) not given 2000-01

240. Stone Tools in Prehistory—Graduate section; see 140.

5 units (Rick) not given 2000-01

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

5 units, Win (Rick)

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.

5 units (Rick) not given 2000-01

247. Animal Bones for the Archaeologist (Faunal Analysis)—Seminar focuses on the vertebrate skeleton and methods for reconstructing past environments and ecology from assemblages of fossil bones. Emphasis is on how bones from ancient archaeological sites are used to reconstruct their human environments and ecology. Enrollment limited.

5 units (Klein) not given 2000-01

248. Dating Methods in Archeology and Paleoanthropology—Seminar on the primary geochronological methods used to date archeological and human fossil sites and to calibrate major transitions in human evolution. The fundamental principles of radiometric, paleomagnetic, and thermoluminescence techniques; extensive use of real archaeological samples. Field trips to U.S. Geological Survey and Lawrence Livermore Laboratory. Prerequisite: knowledge of algebra. Recommended: basic chemistry.

5 units (Klein, Bischoff) not given 2000-01

250. Advanced Ecological Anthropology—Seminar on the role of ecological models in the analysis of culture and social systems. Early efforts linking environments and social systems: cultural ecology, neo-functionalism, systems ecology. Current research trends: 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.

5 units, Win (Durham)

251. Anthropological Solutions to Environmental Problems—The actual and potential role of anthropology in helping solve major environmental problems. Case studies: anthropologists and human rights in Central America; anthropologists and indigenous peoples in Brazilian rainforests; anthropologists and development interests in Indonesia, Australia, and sub-Saharan Africa. Emphasis is on the role of culture and social variables in the design of successful solutions to environmental problems.

5 units (Staff) not given 2000-01

252. Political Ecology—Seminar on the causes and consequences of environmental degradation in diverse social and ecological settings. Emphasis is on the role of political and economic forces in ecological change, including forces that promote differential access to resources within and between local populations. Case studies: tropical deforestation, rangeland degradation, soil erosion, drought, and famine.

5 units (Durham) not given 2000-01

266. Human Evolutionary Ecology—How theories and models from evolutionary ecology can elucidate patterns of human adaptation and behavior. Review of various models from optimal foraging theory; analysis of prey and patch choice, mobility, group size, and subsistence risk. Case studies on human populations living in arctic, tropical, and arid environments.

5 units, Spr (Lu)

266B. Fishing for Solutions: Issues in Marine Conservation—Graduate section; see 166B.

3-5 units Win (Novy)

267. Social Policy for Sustainable Resource Use

5 units (Irvine) not given 2000-01

269. Research Methods in Ecological Anthropology—The methods utilized in ecological and environmental anthropology. Topics survey techniques for agricultural and demographic data, mapping and field measurement, energy flow, time allocation, and transect and quadrant sampling.

5 units (Staff) not given 2000-01

270. Advanced Medical Anthropology—Students work on a predetermined research problem of their choice in medical anthropology and as it progresses, and present their work for supportive discussion and assistance. Prerequisite: 140 or consent of instructor.

5 units, Win (Barnett)

272. Evolutionary Medicine—Graduate section; see 172.

5 units, Spr (Cronin)

274. Bioethics and Anthropology—Graduate section; see 174.

5 units, Spr (Koenig)

280. Human Evolutionary Genetics—Graduate section; see 180.

4-5 units (Mountain) not given 2000-01

281. Genes and Human Behavior—Graduate seminar focusing on the extent to which genes have been linked to human behavior. The methods used for inferring a genetic basis of human behavior: primate studies, twin studies, medical research. Emphasis is on the critical evaluation of research.

5 units (Mountain) not given 2000-01

282. Colonization and Migration in Human Evolution—For graduate students and advanced undergraduates. Seminar bridging the biological and social science studies of migration, genetic microevolutionary

theory, and human evolution. Colonization and migration in human history and prehistory. How have social structure, mating patterns, and other factors influenced the extent and pattern of human migration? How have migration and colonization influenced patterns of human genetic variation? When have humans colonized new areas or invaded regions on a large scale? Can we infer such processes from patterns of modern or prehistoric human genetic variation? Focus is on a set of case studies; in the initial spread from Africa, the peopling of the Americas, and the spread of agriculture through Europe.

5 units, Aut (Mountain)

285. Advanced Issues in Health Law and Policy: Genetics and Law—(Enroll in Law 649.)

2 term units (Greely, Cox) not given 2000-01

289. Research Methods in Anthropological Genetics—Graduate section; see 189.

5 units, Spr (Mountain)

SPECIAL COURSES

290. Graduate Core Seminar—Required of all graduates students in residence. Year-long seminar on topics and issues in anthropological sciences. First quarter emphasis is on the current and future research efforts of departmental faculty. Topics for subsequent quarters include: aggression; race, gender, and inequality; anthropology and evolutionary theory; disease; and demography.

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

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

5 units, Win (Barnett)

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

5 units (Klein) not given 2000-01

293. First-Year Paper/A.M. Paper Writing Seminar—Provides students with assistance and guidance with first-year paper and masters' thesis.

2-3 units, Win, Spr (Mountain)

294. Proposal Writing Seminar—Required of all ANSIPh.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, any quarter (Staff)

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.

5 units, any quarter (Staff)

296. Graduate Internship—Provides graduates with the opportunity to pursue their area of specialization in an institutional setting (e.g., laboratory, clinic, research institute, government agency, etc.).

4-5 units, any quarter (Staff)

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

5 units, any quarter (Staff)

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, any quarter (Staff)

299. Directed Individual Study—(Graduate section; see 199.) Opportunity for advanced students to explore special areas of interest.

5 units, any quarter (Staff)