

Department of Ecology, Evolution and Environmental Biology Major and Concentration in the Evolutionary Biology of the Human Species

For more information about this major/concentration, contact Prof. Jill Shapiro, 854-5819, jss19@columbia.edu.
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The major in Evolutionary Biology of the Human Species [EBHS] provides students with a foundation in the interrelated spheres of behavior, ecology, variation, morphology, evolution, patterns of growth and adaptation. Using the framework of evolution and with attention to the interplay between biology and culture, research in these areas is applied to our own species and to our closest relatives to understand who we are and where we came from. This integrated biological study of the humans and non-human primates is also known as biological anthropology. As an interdisciplinary major students are encouraged to draw on courses in related fields including biology, anthropology, geology and psychology as part of their studies.

Program Requirements for Undergraduate Major in the Evolutionary Biology of the Human Species:

36 points distributed as described below. Students must take a minimum of 20 points from EEEB biological anthropology courses (listed on other side). Other points may be taken either within or outside of EEEB with advisor approval.

I. Required Courses

Introductory Level

EEEEB UN1010 Human Origins & Evolution
EEEEB UN1011 Behavioral Biology of Living Primates

Conservation Requirement

Recommended: EEEB UN3204 Primate Conservation or UN3087 Con. Bio. Depending on a student's program/interests, other courses may serve, among them Zoo Conservation, Ecology, Behavior and Conservation of Mammals, Conservation Genetics or some study abroad programs.

***For requirements other than UN1010 & UN1011 substitutions will be considered on an individual basis.**

Theoretical Foundation from Archaeology (1 course)

ANTH UN1007 Origins of Human Society
ANTH UN2028 Think Like an Archaeologist
ANTH UN2031 Corpse Life
ANTH UN3823 Archaeology Engaged: Past in the Public Eye
[Nearly all archaeology courses apply, except Rise of Civilization]

II. Breadth Requirement (minimum of 1 course from each section)

A. Genetics/Human Variation

Genetics (BIOL 3031/3032 or BIOL BC2100), Biological Basis of Human Variation (EEEEB GU3970), Human Adaptation (EEEEB GU4340), Race: The Tangled History of a Biological Concept (EEEEB GU4700) Evolution in the Age of Genomics (BIOL UN3560)

B. Primate Behavioral Biology and Ecology

Current Controversies in Primate Behavior and Ecology (EEEEB UN3940), Ecology, Behavior and Conservation of Mammals (EEEEB GU4201), Primate Sexuality (EEEEB GU4350), Animal Communication: A Primate Lens (EEEEB GU4015), Animal Behavior (BIOL BC2280), Animal Behavior (PSYC 2420), Behavioral Neuroscience (PSYC UN2450 or BC1119), Evolution of Cognition (PSYC UN2250), Cephalopod Cognition (PSYC BC3179), Concepts, Questions, & Controversies in Evolutionary Psych. (PSYC BC3367/S2490), Comparative Cognition (PSYC BC3372), Canine Cognition (PSYC BC3390), Brain Evolution: Becoming Human (PSYC UN3470), Evolution of Intelligence (PSYC UN3450), Ecology (BIOL BC 2272), Behavioral Ecology (EEEEB GU4134)

C. Human Evolution/Morphology

Explorations in Primate Anatomy (EEEEB UN3208), Intro Human Osteology (EEEEB UN3215), Dynamics of Human Evolution (EEEEB UN3204), The Neandertals (EEEEB UN3910), Evol. of Human Growth and Development (EEEEB UN3220), Group Ind. Study (skull/postcranial bones) (EEEEB UN3997.001/UN3998.002), Evolution (BIOL BC2278), Intro. Evol. Biol. (BIOL UN3208), Physiology (BIOL UN3006), Vertebrate Biology (BIOL BC2262)

III. Seminar Requirement (minimum 1 seminar; may overlap breadth req.)

Current Controversies in Primate Behavior, Dynamics of Human Evolution, The Neandertals, Biological Basis of Human Variation, Controversial Topics, EBHS Senior Thesis Seminar. Several other seminars, both within and outside of E3B may also serve.

Biological Anthropology Courses Offered within EEEB

The 20 point requirement within biological anthropology for the major must be selected from the following:

Paleoanthropology and Morphology

- EEEE UN1010 Human Origins & Evolution
- EEEE UN3204 Dynamics of Human Evolution (seminar)
- EEEE UN3208 Explorations in Primate Anatomy
- EEEE UN3215 Intro Human Osteology
- EEEE UN3220 Evolution of Human Growth and Development
- EEEE UN3910 The Neandertals (seminar)
- EEEE GU4147 Human Skeletal Biology I (skull)+
- EEEE GU4148 Human Skeletal Biology II (postcranial bones)+

Primate Behavioral Ecology and Evolution

- EEEE UN1011 Behavioral Biology of Living Primates
- EEEE UN3940 Current Controversies in Primate Behavior & Ecology (seminar)
- EEEE GU4015 Animal Communication: A Primate Lens++
- EEEE GU4350 Primate Sexuality
- EEEBGU4370 Parenting Like a Primate

Human Variation

- EEEE UN3970 Biological Basis of Human Variation (seminar)
- EEEE GU4700 Race: Tangled History of a Biological Concept
- EEEE GU4340 Human Adaptation

Primate Conservation

- EEEE UN3240 Challenges & Strategies in Primate Conservation

Senior Thesis

- EEEE UN3993-3994 Senior Thesis (seminar)
[Year-long course in which students develop a research project and write a senior thesis. Open to concentrators. A thesis is not required for the major]

+ On hiatus-Likely to be taught as group independent study 2026-2027

++When taught next in 2027-2028, likely to change to Animal Communication with reduced focus on primates

Concentration

The CC class of 2028 is the last that can graduate with only a concentration. It requires 20 points including the two introductory courses, conservation requirement, and three courses for the breadth requirement. Students must take a minimum of 15 points from EEEB biological anthropology courses. Other points can be taken either within or outside of EEEB with approval of the advisor.

NOTE: Students may count a maximum of 6 points of any combination of introductory biology (exclusive of E3B)/chemistry/physics/calculus for the major. Concentrators may count a maximum of 3 points from these courses.

Minor in E3B (starting Fall 2024)

Five courses, one “gateway course” (Origins of Human Evolution/ Behavioral Biology of Living Primates/ EB1 or EB2) and any 4 other courses within the department. Can be viewed broadly or with a focus, e.g., human evolution, primate behavior, conservation, zoology, etc.

Courses from Related Spheres

Please speak with the major advisor about the extended list of courses from related spheres including Archeology, Anthropology, Biology, Ecology, Evolution and Environmental Biology, Earth and Environmental Science, Psychology, and Statistics that may be acceptable for the major/concentration.

Students Planning to Attend Graduate School

It is **strongly suggested** that students intending to pursuing graduate study in this field broaden their foundation by taking introductory biology, genetics, statistics, and cultural anthropology. The major advisor will make additional recommendations dependent on the student’s area of focus.

Summary of Requirements

Total points required for graduation 124
Total points required for major 36
Total points required for concentration 20
Total courses for minor 5 (15 pt. minimum)

