Human Evolutionary Biology (HEB)

Evolutionary theory is a pillar of modern science and provides a powerful framework for investigating why humans are the way we are. Human evolutionary biologists seek to understand how evolutionary forces have shaped our anatomy, physiology, behavior, and culture. Research in human evolutionary biology influences many professions and social issues including medicine, politics, business, and gender and race relations.

Some of our key questions include:

- What psychological, anatomical and physiological traits are uniquely human and why did they evolve?
- Why did our species evolve such large brains?
- Why do humans walk upright?
- Why and how do humans cooperate on such large-scales compared to other primates?
- How has cultural evolution shaped our species' biological evolution?
- How does our gut microbiota influence patterns of disease?
- How can we better address current health problems by learning about our species' evolutionary history?
- How does the lifestyle of modern humans (e.g., diet, activity levels) impact our evolutionary trajectory?

Research: This is an exciting time to tackle questions of how evolution made us human. Research in HEB provides you the opportunity to learn and contribute. HEB faculty lead projects spanning a spectrum of interests and methods, including fieldwork studying diverse societies or African apes, laboratory-based work on endocrinology, genetics, comparative neuroscience, anatomy, the microbiota and nutrition, and computationally intensive projects on genomics and cultural evolution. Our faculty work closely with undergraduates on research projects of all kinds, for senior theses, and in seminar classes.

Examples of HEB research include:

- human and primate nutrition
- comparative neuroscience
- reproductive and behavioral endocrinology
- cultural evolution
- evolutionary genetics and phylogenetics
- human anatomy and biomechanics
- primatology
- paleoanthropology
- human behavioral ecology

Options: HEB provides a general foundation in human and organismic biology as part of the Life Sciences cluster of concentrations. We offer students three degree options: the basic non-honors degree, thesis honors, and non-thesis honors. Additionally, students interested in addressing questions about human and non-human primate cognition from the perspective of human evolutionary biology may pursue a Mind/Brain/Behavior (honors thesis) track. All students take the LS 1a / LPS A, LS 1b sequence (or LS 50ab), a sophomore tutorial, and a junior research seminar.

Contact Information and Advising:

Co-Head Tutor and Co-Director of Undergraduate Studies	Associate Concentration Advisor	Co-Head Tutor
Dr. Carole Hooven hooven@fas.harvard.edu Peabody Museum 52F (617) 496-3809	**Dr. Bridget Alex** balex@fas.harvard.edu Peabody Museum 53B (617) 495-5703	**Professor Richard Wrangham** wrangham@fas.harvard.edu Peabody Museum 50B (617) 495-5948

Course Sequence Recommendations for Students Considering the Human Evolutionary Biology Concentration

Required Courses:

Fall Semester Freshman	Spring Semester Freshman	Spring Semester Sophomore	Junior Year
Life Sciences 1a or LPS A, or LS 50a	Life Sciences 1b, or LS 50b	Sophomore Tutorial	Research Seminar

Students should aim to complete either the LS 1a/LPS A and LS 1b sequence, or LS 50ab, during their Freshman year. Concentrators are required to complete the Sophomore Tutorial in HEB, usually taken during Sophomore Spring. Usually in the Junior year, students take a Junior Research Seminar that aligns with their interests (see website for course listings).

Along with the required courses above, students must take a minimum of nine additional courses. Five of these must be HEB courses, 3 of which must fulfill distribution requirements for Evolution, Anatomy/Physiology, and Behavior. The remaining 4 courses are approved courses in either HEB or related fields, such as Math/Statistics, Physical Sciences, Chemistry, Archaeology, Psychology, Organismic & Evolutionary Biology, Molecular & Cellular Biology, etc. See the HEB website (below) for more detailed information on qualifying courses.

Freshmen should take the online Biology and Chemistry placement exams for placement recommendations.

See the HEB section of the Life Sciences website for more information: **http://lifesciences.fas.harvard.edu/heb**

Portal courses in HEB: A number of introductory courses in HEB are appropriate for freshmen, and will help to focus your interests:

- Freshman Seminars taught by any HEB faculty member

FALL 2018:

- Life Sciences 2: Evolutionary Human Physiology and Anatomy
- HEB 1280: Human Nature
- HEB 1328: Evolutionary Medicine

SPRING 2019:

- HEB 1330: Primate Social Behavior
- HEB 1420: Human Evolutionary Anatomy
- HEB 1386: Human Evolution and Human Health

Directions to the HEB advisors' offices (Peabody Museum):

- If entering from 24 Oxford St, take elevator to the 5th floor, turn left (passing through Archaeology) and left again through the open door that leads down a long hallway to the HEB lounge.
- If entering from 11 Divinity Ave, take elevator or stairs to the 5th floor and turn left into the HEB lounge.
- Dr. Carole Hooven's office is Peabody Museum 52-F, and Dr. Bridget Alex's office is 53-B, both located off of the lounge area.

