Concentrating in Human Biology, Behavior, and Evolution





Click here for an advising appointment with Dr. Yegian

HBBE Student Club



Ellie



Jiajia

Co-Presidents, '25-'26

Human Biology, Behavior, and Evolution (HBBE) is a life sciences concentration that unites all aspects of human biology and ecology to understand humans as an organism and as a species.

The pathway for each HBBE student is unique. We aim to provide our students the foundation to explore their own interests in human biology using the HBBE framework of evolutionary theory. Three guiding principles of the HBBE concentration are:

- **exploration**
- **integration**
- **flexibility**

HBBE serves as a nexus for all questions related to humans, and can be combined with social sciences in a secondary or joint concentration.

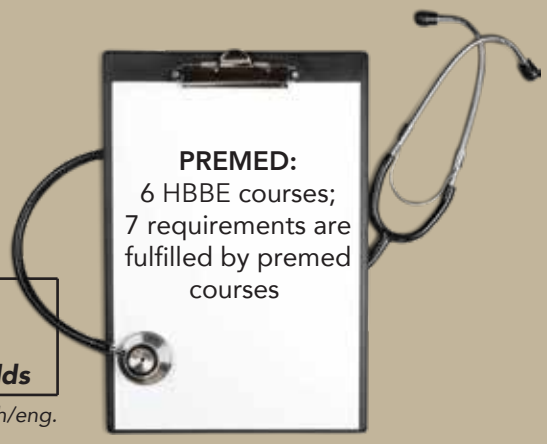
Course Requirements

1 2 3 ***Foundational***
LS1a, LS1b, Soph. Tut.

4 5 6 ***Introductory***
HEB 10 - HEB 89
LS2, GE 1027, GE 1056

7 8 9 ***Interm./Adv.***
HEB 100 - HEB 199

10 11 12 13 ***Related Fields***
any science/math/eng.



Typical Research Timeline

SO *Explore your interests via classes; volunteer or start a project in a lab to try new things*

JR *Decide which research area you are most interested in; take a research seminar to help decide.*

SR *Complete an honors thesis project under the guidance of a research advisor.*

RESEARCH IN HBBE

Human Biology, Behavior, & Evolution

Clinical Labs

Work with clinicians from Harvard Medical School or other institutions to study questions related to medicine or public health.

Faculty Labs

Work with faculty in the HEB department or other departments/schools to study any aspect of human biology, behavior, or evolution.

HBBE students use evolutionary theory to relate their research to humans as an organism and species.

Theory/Review

Develop and test new ideas by integrating data and knowledge from the literature.

Field Work

Conduct research in local human communities, wild primate ecosystems, paleontological dig sites, and more.

HBBE Kenya Summer Field School CLICK HERE

Click to learn more about HBBE faculty research:


Prof. Capellini

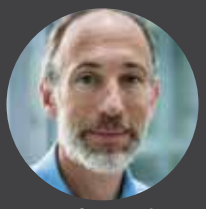

Prof. Carmody


Prof. Hecht


Prof. Henrich


Prof. Kuzawa


Prof. Lieberman


Prof. Reich


Prof. Song


Prof. Surbeck


Prof. Uno


Prof. Warriner


Dr. Yegian

HBBE students often partner with research advisors outside of Harvard College:

Mass General Brigham

Boston Children's

Massachusetts Institute of Technology

Tufts University

Dana-Farber Cancer Institute

BROAD INSTITUTE

EXAMPLE HBBE THESES

These Hips Don't Lie : A Comparative Study on Evolutionary Pelvic Development In Utero in Mus musculus and Homo sapiens
Serena Fernandopulle, '24

Novel DNA metabarcoding pipeline to define diet and investigate its relationship with gut microbiome composition in wild chimpanzees (Pan troglodytes)
Molly Chiang, '23

A Tale of Two Mismatches: A Systematic Review and Survey Investigating Physical Activity as a Potential Treatment for Stress and Depression in Harvard College Students
Max Schermer, '24

Who we are together: Interaction, Social Norms and Intergroup Relations in a Post-Apartheid South Africa
Nikita Lledo, '22

A Primatized Mouse Model: A Platform for Assessing Human, Chimpanzee, and Gorilla Gut Microbiomes
Caroline Diggins, '20

A Bioinspired Approach to Fertility Preservation : Evolved Adaptations in an East African Rodent Could Protect Pediatric Cancer Patients from Infertility
Kathryn Stevens, '25

An Investigation into Metabolic Compensation and the Relationship between Active Energy Expenditure and Resting Metabolic Rate
Elizabeth Pachus, '23

Human Biology, Behavior, and Evolution
Requirements Worksheet

Name	Class Year

		Course		Term/Year	Options:
Foundation Courses 4 Courses	1	Life Sciences 1a or LPSa or LS 50a			Required
	2	Life Sciences 1b or LS 50b			Required
	3	HEB 97 – Sophomore Tutorial			Required; Sophomore spring
	4	Research Seminar			HEB 100 - HEB 129 or HEB 91r
Intro Courses & Electives 5 courses Three of the five courses must fulfill distribution requirements via specific courses in each of the areas listed.	1	**Evolution**			HEB 45, HEB 58, GenEd 1027
	2	**Anatomy/ Physiology**			LS2, HEB 50, HEB 55
	3	**Behavior**			HEB 30, HEB 39, GenEd 1056
	4	**2 HEB Electives**			Any course from the HEB 100+
	5				
Related Fields: 4 courses These courses allow you to further explore your interests within the sciences.	1				**Choose from:** HEB Archaeology Biomedical Engineering Chemistry and Physical Biology Chemistry (including Physical Sciences 1) Human Developmental and Regenerative Biology (SCRB) Molecular and Cellular Biology Neurobiology Organismic and Evolutionary Biology Math Physics (including Physical Sciences 2 and 3) Statistics/BioStats Computer Science Mind, Brain, and Behavior **Approved** Psychology courses **Approved** History of Science courses **Approved** Global Health and Health Policy **Approved** Science of the Living Systems or Science of the Physical Universe courses (Limit: one course)
	2				
	3				
	4				
Optional Honors requirements See Honors Guide on LS website for more info.	1				**Thesis Honors**: HEB 99a & 99b, both semesters of Senior year **Non-Thesis Honors**: Two approved upper-level courses
	2				

Human Biology, Behavior and Evolution
Mind/Brain/Behavior Track
Requirements Worksheet

Name	Class Year

		Course	Term/Year	Options:
Foundation Courses 5 Courses	1	PSY 1 or Gen Ed 1056		Required
	2	Neuro 80		Required
	3	Life Sciences 1b or LS 50b		Required
	4	HEB 97 Sophomore Tutorial		Required; Sophomore Spring
	5	Research Seminar		HEB 100-129; see also the MBB 90-series of Junior Interdisciplinary Seminars
Subfield Courses & Electives 3 courses	1	Evolution		HEB 45, HEB 58, GenEd 1027
	2	HEB Elective		Any course from the HEB Course List
	3	HEB Elective		
MBB Courses 2 courses	1			MBB-approved courses (see Student Handbook)
	2			
Related Fields 3 courses These courses allow you to further explore your interests within the sciences.	1			Courses chosen from fields indicated on "HEB Related Fields Course"
	2			
	3			
Thesis 2 courses See Honors Guide on LS website for more info.	1	HEB 99a		Required Thesis Courses: HEB 99a & 99b, both semesters of Senior year
	2	HEB 99b		

HBBE COURSE LIST

Old Number	Catalogue Number	Title	Semester	Subfield
	LS1a	An Integrated Introduction to the Life Sciences	Fall	
	LS1b	An Integrated Introduction to the Life Sciences	Spring	
INTRODUCTARY LEVEL				
	OEB 50	Genetics and Genomics	Fall	Genetics
	LS2	Evolutionary Physiology and Anatomy	Fall	Physiology
	GENED 1027	Human Evolution and Human Health	Spring	Evolution
	GENED 1056	Human Nature	Fall	Behavior
HEB 1330	HEB 30	Primate Social Behavior	Fall	Behavior
HEB 1339	HEB 39	The Human Brain in the Animal Kingdom	Spring	Physiology
HEB 1245	HEB 45	Technology, Behavior, and Human Evolution	Fall	Evolution
	HEB 50	Human Metabolism	Spring	Physiology
HEB 1420	HEB 55	Evolutionary Human Anatomy	Spring	Physiology
	HEB 58	Evolutionary Medicine	Fall	Evolution
TUTORIALS				
HEB 91r	HEB 91r	Research and Readings	Fall	
HEB 91r	HEB 91r	Research and Readings	Spring	
HEB 97	HEB 97	Sophomore Tutorial	Spring	
HEB 99a	HEB 99a	Thesis Tutorial	Fall	
HEB 99b	HEB 99b	Thesis Tutorial	Spring	
INTERMEDIATE LEVEL (100-129 research courses)				
HEB 1210	HEB 110	Research in Biomechanics and Physiology	Spring	
HEB 1410	HEB 114	Gut Microbiome and Human Health	Fall	
HEB 1350	HEB 115	Investigating the Human Genome	Fall	
HEB 1336	HEB 116	A Pan Model of Human Evolution	Fall	
HEB 1317	HEB 117	The Evolution and Physiology of Sleep	Spring	
HEB 1480	HEB 118	Building the Human Body	Fall	
HEB 1367	HEB 122	African Climate	Fall	
HEB 1353	HEB 123	Dogs: Domestication, Behavior, and Evolution	Fall	
HEB 1270	HEB 124	Primate Playtime	Spring	
HEB 1432	HEB 126	Research in Cultural Evolution	Spring	
HEB 1310	HEB 130	Hormones and Behavior	Spring	
HEB 1324	HEB 132	Mammalian Business	Fall	
HEB 1328	HEB 135	Clinical Comparative Medicine	Fall	
HEB 1230	HEB 138	Humans and Climate	Spring	
HEB 1305	HEB 140	Evolution of Friendship	Fall	
HEB 1332	HEB 143	Primate Development	Spring	
HEB 1304	HEB 144	Evolution of the Human Face	Fall	
HEB 1384	HEB 145	Thinking Through Human Cognition	Spring	
HEB 1311	HEB 150	Walking and Running	Spring	
	HEB 152	Genetic Perspectives on Human Brain Evolution	Spring	
HEB 1370	HEB 153	Human Life History	Fall	
ANTHRO 1255	HEB 155	Human Diet	Fall	
HEB 1398	HEB 160	Human Genetic Variation	Spring	
HEB 1200	HEB 162	Neanderthals and other Extinct Humans	Spring	
ADVANCED LEVEL				
HEB 1326	HEB 180	Ancient DNA	Spring	
ANTHRO 1290	HEB 181	Culture and Evolution	Spring	
HEB 1378	HEB 183	Science Writing	Fall	
	HEB 189	Teeth: Health, History, Climate	Fall	
	HEB 190	Advanced Topics in Human Physiology	Spring	
	HEB 192	Advanced Topics in Human Behavior	Fall	
	HEB 193	Advanced Topics in Human Evolution	Fall	