

Proposed Minor in Integrative Human Biology

1. Action

The Departments of Biology and Anthropology are proposing an inter-college minor in Integrative Human Biology (IHB). The minor will provide a broad and rigorous introduction to the biological and behavioral sciences as they apply to *Homo sapiens*. The mission will be to train students to view, study and investigate humans from evolutionary and ecological perspectives throughout their professional lifetimes.

The IHB minor will consist of existing courses in the departments of Anthropology and Biology, and will give students a broad background in human genetics and evolution, form and function, behavior, and ecology. Both anthropology and biology are disciplines grounded in evolutionary theory, and the IHB minor will share this theoretical focus.

The minor will consist of seven courses, at least four of which must be at the upper-division level (3000 or above). Four of the seven are core courses (one from each of the areas listed below) and three are electives. The electives must be taken from at least two of the four areas (A-D below), and at least two must be outside the student's major. Courses listed as core courses can also be taken as electives.

Because of the way core course groupings are distributed across anthropology and biology, students majoring in these disciplines will be required to take at least three (and more typically four) courses outside their major.

The courses are as follows:

A. Hominin Evolution and Genetics

Core course:

Anthro 1020 Human Origins: Evolution and Diversity, or
Anthro 4232 Human Biology

Electives:

Anthro 1050 The Evolution of Human Nature
Anthro 2020 Human Evolution
Anthro 4261 Paleoanthropology
Anthro/Biol 5221 Human Evolutionary Genetics
Anthro 5331 Pleistocene Archaeology
Anthro 6281 Primates
Biol 2210 Human Genetics
Biol 3410 Ecology and Evolution
Biol/Anthro 5471 Fundamental Methods of Evolutionary Ecology
Biol 6420 Genetics and Genome Organization

B. Human Form and Function

Core course:

Biol 2325 Human Anatomy, or
Biol 2420 Human Physiology, or
Biol 5360 Human Form, Function and Evolution

Electives:

Anthro 4133 Maternal and Child Health
Anthro 4271 Human Osteology
Anthro 4272 Forensic Anthropology
Anthro 4291 Evolution of Human Health
Biol 3310 Comparative Vertebrate Morphology
Biol 3320 Comparative Physiology
Biol 3330 Behavioral Neurobiology
Biol 5315 Advanced Human Anatomy
Biol 5330 Neural Mechanisms of Behavior

C. Evolution of Human Behavior and Culture

Core course:

Anthro 4461 Behavioral Ecology and Anthropology, or
Anthro 4481 Evolutionary Psychology

Electives:

Anthro 2018 Human Universals
Anthro 4131 Evolution of Societies and Cultures
Anthro 4138 Anthropology of Violence and Nonviolence
Anthro 4183 Sex and Gender: Biosocial Perspectives
Anthro 4184 Hunter-Gatherer Ethnology
Biol 3430 Behavioral Ecology
Biol 5320 The Biology of Aggression

D. Human Ecology and Environment

Any of the following courses will satisfy the core course requirement in this area.

Anthro 4186 Human Ecology
Biol 1020 Ecology and Global Change
Biol 3410 Ecology and Evolution
Biol 3460 Global Environmental Issues
Biol 5440 Urban Ecology
Biol 5490 Ecosystem Ecology

2 Need

Understanding who we are as animals requires the integration of knowledge from diverse fields ranging from genetics to physiology to behavior to ecology. This is a task beyond the reach of traditional scientific disciplines, yet is important for professionals in the 21st-century health sciences and many other fields that engage directly with aspects of human adaptation and welfare.

The minor will provide excellent preparation for entrance into health related professional careers and will also provide a strong foundation for careers in environmental policy, law, and science and biomedical research. It will also give citizens the scientific grounding needed to make informed judgments about public policy issues affecting human health and welfare. As such, the program is an important component of a liberal arts education as well as useful career preparation.

Human Biology is a recognized inter-departmental field of study. The Human Biology Association and its flagship journal the American Journal of Human Biology have an interdisciplinary and evolutionary focus similar to that of the proposed minor. (Human Biology, another journal in the field, is also multi-disciplinary but with a greater focus on human genetics.)

Because of the growing importance of understanding the biology of humans, undergraduate degree programs in Human Biology are becoming increasingly common in Universities worldwide. Those most similar to ours include the Human Biology programs at Stanford, University of Toronto, SUNY Albany, and Indiana University at Bloomington.

3 Institutional Impact

Integrative Human Biology will be an inter-college program. It will be housed in the College of Science but advising will be handled by the Anthropology Department, in the College of Social and Behavioral Science.

The minor will probably increase enrollment in some existing courses, especially those listed as core course options. Any enrollment increase will be easily handled by existing faculty course assignments. Implications for other state institutions should be negligible, although we hope that the minor will be attractive to transfer students.

4 Finances

We do not anticipate needing additional funding to administer the minor. The program of study is built around existing courses and faculty. The only institutional requirement will be for advising, and we expect to handle that with existing staff. We are reassigning some of the Anthropology advisor's existing duties to another staff member in order to allow her to take on the additional advising, and the Biology department will assist if required.

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