Twin Cities Campus

Behavioral Biology Minor

Ecology, Evolution & Behavior

College of Biological Sciences

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2020
- Required credits in this minor: 15 to 19
- N/A

Behavioral biology is the scientific discipline that aims to understand all aspects of the biological bases of animal behavior. These aspects include the causal mechanisms underlying behaviors (i.e., genetic, hormonal, neuronal, neuromodulatory, and sensory mechanisms), changes in behaviors over the animal's lifetime (i.e., during development or through learning), the adaptive value of behaviors (i.e., their contribution to survival and reproduction), and the evolutionary history of behaviors (i.e., how they change over evolutionary timescales). Consequently, the range of disciplines informing the study of behavioral biology is exceedingly broad and includes cell and developmental biology, endocrinology, ecology, economics, evolution, genetics, neuroscience, physiology, and psychology. Basic research in behavioral biology informs a diverse array of applied sciences, from conservation biology, to robotics, animal science, biomedical science, and veterinary medicine. Consistent with this breadth, the behavioral biology minor is an interdisciplinary curriculum through which students learn foundational concepts of behavioral biology, and gain perspectives about basic and applied issues involving the biology of animal behavior. Students will have the flexibility to tailor coursework to meet their own professional and career goals. Through a combination of courses, laboratories, and research opportunities, students who complete the minor will gain knowledge and skills that will enrich their lives and provide a base for subsequent work or study in the many fields touched by behavioral biology.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Admission Requirements

Students must complete 1 courses before admission to the program.

A GPA above 2.0 is preferred for the following:

- 2.00 already admitted to the degree-granting college

Students who have a cumulative GPA of 2.0 or better and have completed the Behavioral Biology Core course (EEB 3411, or EEB 3412W, or EEB 3811) with a C- or better will be eligible to declare the minor.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Behavioral Biology Prerequisites

These courses are prerequisite coursework for the course options in the Behavioral Biology Core.

BIOL 1009 - General Biology [BIOL] (4.0 cr)
or BIOL 1009H - Honors: General Biology [BIOL] (4.0 cr)
BIOL 1951 - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
or BIOL 1951H - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
BIOL 1961 - Foundations of Biology Lab I for Biological Sciences Majors [BIOL] (2.0 cr)

The following courses provide broad overviews of behavioral biology. One of these courses must be taken to satisfy the core requirement of the minor. A grade of C- or better in the course is required for admission into the minor.

Take 1 or more course(s) from the following:

- EEB 3411 - Introduction to Animal Behavior (3.0 cr)
- EEB 3412W - Introduction to Animal Behavior, Writing Intensive [WI] (4.0 cr)
- EEB 3811W - Animal Behavior in the Field [WI] (4.0 cr)

Minor Requirements

Various seminar-style courses (e.g., honors seminars, freshman seminars, graduate seminars) are offered that are directly related to behavioral biology. Students may petition the Director of the Behavioral Biology minor to count up to two of these seminar credits toward completion of the minor. Unit-specific seminars and colloquia (e.g., the EEB Departmental Seminar or the Neuroscience Colloquium) will not be considered.

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Information current as of March 29, 2024

Behavioral Biology Elective Requirement

Students must complete 6 credits (minimum 2 courses) of behavioral biology-related courses from the following list of electives. Approval of additional or substitution elective courses will be made by the Director of the Undergraduate Minor in consultation with the advisory committee.

Take 2 or more course(s) totaling 6 or more credit(s) from the following:

- ANSC 2016 - Introduction to Applied Animal Behavior (3.0 cr)
- ANTH 5009 - Human Behavioral Biology (3.0 cr)
- ANTH 5112 - Reconstructing Hominin Behavior (3.0 cr)
- EEB 4330W - Animal Communication [WI] (3.0 cr)
- ENT 4021 - Honey Bees and Insect Societies (3.0 cr)
- FW 4401 - Fish Physiology and Behavior (3.0 cr)
- FW 5603W - Habitats and Regulation of Wildlife [WI] (3.0 cr)
- NSCI 3505W - Mind and Brain [WI] (4.0 cr)
- NSCI 3102W - Neurobiology II: Perception and Behavior [WI] (3.0 cr)
- PSY 3011 - Introduction to Learning and Behavior (3.0 cr)
- PSY 3061 - Introduction to Biological Psychology (3.0 cr)
- PSY 5064 - Brain and Emotion (3.0 cr)
- ANTH 3015W - Biology, Evolution, and Cultural Development of Language & Music [SOCS, WI] (3.0 cr)
  or ANTH 5015W - Biology, Evolution, and Cultural Development of Language & Music [SOCS, WI] (3.0 cr)
- ANTH 3002 - Sex, Evolution, and Behavior: Examining Human Evolutionary Biology (4.0 cr)
  or EEB 3002 - Sex, Evolution, and Behavior: Examining Human Evolutionary Biology (4.0 cr)
- ANTH 4329 - Primate Ecology and Social Behavior (3.0 cr)
  or EEB 4329 - Primate Ecology and Social Behavior (3.0 cr)

Research Experience in Behavorial Biology Requirement

Using established course designators for Directed Research and Directed Studies in CBS, CLA, or CFANS, students will gain experience conducting hands-on or literature-based research focusing on basic or applied aspects of behavioral biology. Approval is granted by the director of the undergraduate minor. Students completing projects in CFANS or CLA should have their work approved for the minor by the program's director of undergraduate studies, Dr. Mark Bee, then contact CBS Student Services.

Take 2 or more credit(s) from the following:

- BIOC 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- BIOC 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- BIOC 4993 - Directed Studies (1.0 - 7.0 cr)
- BIOC 4994 - Directed Research (1.0 - 7.0 cr)
- BIOL 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- BIOL 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- BIOL 4993 - Directed Studies (1.0 - 7.0 cr)
- BIOL 4994 - Directed Research (1.0 - 7.0 cr)
- EEB 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- EEB 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- EEB 4993 - Directed Studies (1.0 - 7.0 cr)
- EEB 4994 - Directed Research (1.0 - 6.0 cr)
- GCD 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- GCD 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- GCD 4993 - Directed Studies (1.0 - 7.0 cr)
- GCD 4994 - Directed Research (1.0 - 7.0 cr)
- MICB 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- MICB 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- MICB 4993 - Directed Studies (1.0 - 7.0 cr)
- MICB 4994 - Directed Research (1.0 - 7.0 cr)
- NSCI 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 6.0 cr)
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- NSCI 4994 - Directed Research (1.0 - 6.0 cr)
- PMB 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- PMB 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- PMB 4993 - Directed Studies (1.0 - 7.0 cr)
- PMB 4994 - Directed Research (1.0 - 7.0 cr)

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