BEHAVIORAL NEUROSCIENCES MINOR

Program Overview
Behavioral neuroscience is a field of endeavor that uses interdisciplinary approaches to study and understand the interaction of brain processes and complex behaviors, human and animal. It is an integration of traditional disciplines as diverse as biology, chemistry, computer science, philosophy, and psychology. The behavioral neuroscience minor is intended to be a first step for undergraduate students contemplating professional, academic, and/or research careers in neuroscience or related fields.

Mission
- Advancing understanding of nervous systems and the part they play in determining behavior.
- Providing students with multidisciplinary training and perspectives needed to approach issues of interest in the broad area of the biological support of behavior.

Learning Goals and Objectives
The learning objectives of the Behavioral Neuroscience program include fostering in students:

- An understanding of theories, concepts, and research findings within the field of behavioral neuroscience.
- The usage of appropriate methodologies to develop knowledge and to examine questions within the field of behavioral neuroscience.
- The ability to apply a knowledge base to phenomena within the field of behavioral neuroscience.
- An awareness and an adoption of values and ethical standards shared by professionals within the field of behavioral neuroscience.

Students complete the Behavioral Neuroscience minor with six courses: Two ‘core’ courses and four electives. For the elective courses, no more than two of the four may be selected from the same academic department.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>PSY 205</td>
<td>Neuroscience Foundations¹</td>
</tr>
<tr>
<td>or BIO 412</td>
<td>Neurobiology</td>
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<tr>
<td>PSY 206</td>
<td>Behavioral Neuroscience</td>
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Elective Courses
Select four of the following: ²

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<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>BIO 101</td>
<td>Bio I: Cells</td>
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<tr>
<td>BIO 401</td>
<td>Animal Behavior</td>
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<td>BIO 402</td>
<td>Advanced Cell Biology</td>
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<tr>
<td>BIO 405</td>
<td>Biomechanics</td>
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<td>BIO 411</td>
<td>Molecular Genetics</td>
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<tr>
<td>BIO 412</td>
<td>Neurobiology</td>
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<tr>
<td>BIO 417</td>
<td>Systemic Physiology</td>
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<tr>
<td>BIO 430</td>
<td>Neurological Disorders</td>
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Chemistry
- CHM 210 Organic Chemistry I
- CHM 215 Organic Chemistry II
- CHM 340 Biochemistry
- CHM 430 Mechanisms in Organic Chem
- CHM 480 Inorganic Chemistry

Computer Science
- CSC 121 Computer Science II
- CSC 201 Data Structures
- CSC 202 Computer Architecture
- CSC 261 Principles of Programming Lang
- CSC 342 Computer Vision
- CSC 362 Artificial Intelligence

Education/Special Education
- SPE 160 Intro to Special Education
- SPE 310

Interdisciplinary Health Services
- IHS 110
- IHS 253
- IHS 458

Philosophy
- PHL 322 Philosophy of Science
- PHL 473 Philosophy of Mind

Physics
- PHY 101 General Physics I
- PHY 105 University Physics I
- PHY 110 Understanding Natural World
- PHY 253 Survey of Nanotechnology
- PHY 419 Biophysics
- PHY 421 Physics of Fluids

Psychology
- PSY 201 Biological Bases of Behavior
- PSY 207 Cognitive Neuroscience
- PSY 220 Sensation and Perception
- PSY 221 Animal Learning and Memory
- PSY 222 Neuropsychology
- PSY 223 Health Psychology
- PSY 224 Drugs, the Brain, & Behavior
- PSY 225 Comparative Animal Behavior
- PSY 226 Psychology of Emotion
- PSY 410 Neuroscience Practicum

Independent Research

Independent Research ³

¹ PSY 205 or BIO 412 serve as a prerequisite for PSY 206 and PSY 207
To ensure the interdisciplinary nature of the program, students wishing to complete the minor must select elective courses offered by at least one participating department other than their own major. Courses currently offered by the Departments of Biology, Chemistry, Computer Science, Education/Special Education, Interdisciplinary Health Services, Philosophy, Physics, and Psychology that might support the proposed minor are listed.

With permission of the Behavioral Neuroscience Director, students can count one semester of appropriate research toward the minor (as an elective).

Because of the interdisciplinarity of the Behavioral Neuroscience Minor, students interested in the BNS minor are encouraged to declare the minor as early as possible to receive support with navigating scheduling conflicts and to be able to take full advantage of professional development opportunities presented to minors.

Students may petition the Behavioral Neuroscience Advisory Board to receive credit for courses not listed above. The determination of the appropriateness of courses for inclusion in the minor will be made by the director of the program, in consultation with an advisory board. Courses may be taken for Behavioral Neuroscience credit only if the student's work in the class meets one or more of the following criteria:

- Coursework includes a substantive treatment of brain/behavior relationships.
- Coursework includes a substantive treatment of methodology, techniques, and approaches relevant to neuroscience.
- Coursework in other ways contributes to an understanding of the relationship between nervous systems and behavior or other issues typically addressed by neuroscientists.