

Proposed Interdisciplinary Neuroscience Minor

The interdisciplinary neuroscience minor involves the study of brain theory and research, psychological theory and research, philosophy of mind and consciousness, and mathematical modeling of brain and cognitive processes to understand the role that the brain plays in mental and behavioral phenomena.

The interdisciplinary neuroscience minor is composed of courses in biological sciences, communication disorders & sciences, mathematics and computer sciences, psychology, and philosophy. Courses may be double counted for the respective major and the minor. Existing prerequisites for courses must be satisfied.

Requirements

The minor includes 3 required courses (9 hours), another course from the first group of electives (2-3 hours), and 9 hours from the last group of electives, for a total of 20-21 hours for the minor.

| Course | Title | Hours |
|---|---|--------------|
| Required Courses (9 Hours) | | |
| PHI 3540 | Philosophy of Mind | 3-0-3 |
| PSY 3310 | Biological Psychology | 3-0-3 |
| PSY 3820 | Cognitive Neuroscience* | 3-0-3 |
| One course from the following group of electives (2-3 Hours) | | |
| BIO 4834 | Neurobiology | 3-0-3 |
| CDS 3500 | Neurological/Embryological Aspects of Comm | 3-0-3 |
| MAT 3800 | Seminar: Neural Networks or Artificial Intelligence | 2-0-2 |
| PSY 3830 | Cognitive Processes | 3-0-3 |
| Nine hours from the following group of electives; No more than 2 courses from one discipline | | |
| BIO 3100 | Molecular and Cell Biology | 3-0-3 |
| BIO 3200 | Genetics | 3-2-4 |
| BIO 4832 | Animal Behavior | 3-3-4 |
| BIO 4834 | Neurobiology | 3-0-3 |
| BIO 5406 | Endocrinology | 3-3-4 |
| CDS 2500 | Anatomy/Physiology of Speech | 3-0-3 |
| CDS 3500 | Neurological/Embryological Aspects of Comm | 3-0-3 |
| CDS 5400 | Special Topics: Executive Functions | 2-0-2 |
| MAT 3800 | Seminar: Neural Networks or Artificial Intelligence | 2-0-2 |
| MAT 4885 | Theory of Computation | 3-0-3 |
| PHI 3700G | Language and Human Nature | 3-0-3 |
| PHI 3780 | Philosophy of Science | 3-0-3 |
| PHI 3900 | Symbolic Logic | 3-0-3 |
| PSY 3680 | Sensation and Perception | 3-0-3 |
| PSY 3830 | Cognitive Processes | 3-0-3 |

TOTAL: 20-21 HOURS

* New course

Rationale

Neuroscience is a rapidly growing area that focuses on the functioning of the brain to explain the mind and behavior. Much of the knowledge and theory about neural processes have come from many different disciplines. This minor exposes students to different perspectives from the core disciplines that study the brain and its processes. Students interested in career opportunities and graduate study in neuroscience will benefit directly, as will other students interested in gaining greater understanding of the subject.

Effective Date: Fall 2010

Date Approved by Psychology: 4-18-08

Date Approved by Biology: 4-20-09

Date Approved by CDS: 11-05-08

Date Approved by Math: 3-5-09

Date Approved by Philosophy: 2-19-09

Date Approved by COS: 9-4-09

Date Approved by CAH: 4-29-09

Date Approved by CAA: 10-02-09