# Neuroscience Co-Major

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100 or the Department of Psychology, 100 Psychology building, 513-529-2400; this co-major is offered cooperatively.

The inter-departmental Neuroscience Co-major offers students the opportunity to pursue an in-depth exploration of the biology of individual nerve cells; the organization of nerve cells into a functional nervous system; and the role of the nervous system in behavior and cognition. The co-major is multidisciplinary, including coursework in biology, psychology, chemistry and statistics. It provides a basic framework for students planning advanced work at the graduate level. Students in the co-major must also be enrolled in, and complete, a primary major; the co-major cannot be taken as a stand-alone major. Upon graduation, students are awarded the degree of their primary major; there is no specific degree designation for the co-major.

## Program Requirements

(40-43 semester hours)

| Code | Title | Credit Hours |
|---|---|---|
| **Biological Science and Psychology** | | |
| BIO/MBI 116 | Biological Concepts: Structure, Function, Cellular, and Molecular Biology | 4 |
| BIO/PSY 159 | Seminar in Neuroscience | 1 |
| BIO 203 | Introduction to Cell Biology | 3 |
| or MBI 365 | Molecular and Cell Biology | |
| BIO 305 | Human Physiology | 4 |
| PSY 251 | Introduction to Biopsychology | 3 |
| **Chemistry** | | |
| CHM 141 & CHM 144 | College Chemistry and College Chemistry Laboratory | 5 |
| CHM 142 & CHM 145 | College Chemistry and College Chemistry Laboratory | 5 |
| **Statistics** | | |
| Select one course: | | 3-4 |
| STA 363 | Introduction to Statistical Modeling | |
| PSY 294 | Writing and Research Methods in Psychology | |
| **Neuroscience Hours** | | **12-14** |
| Select at least two courses from each area: | | |
| Advanced Biology | | |
| BIO 361 | Patterns in Development | |
| BIO 452 | Neuromodulation:Cells to Circuits | |
| BIO 454 | Endocrinology | |
| BIO 457 | Neuroanatomy | |
| BIO 464 | Laboratory in Cell and Molecular Biology | |
| BIO 465 | Animal Behavior | |
| BIO 466 | Bioinformatics Computing Skills | |
| BIO 469 | Neurophysiology | |
| BIO 471 | Molecular Physiology | |
| Advanced Psychology | | |
| PSY 351 | Advanced Biopsychology | |
| PSY 356 | Psychopharmacology | |
| PSY 451 | Cognitive Neuroscience | |
| PSY 452 | Structured Research Experience in Behavioral Neuroscience II | |
| PSY 456 | Advanced Biological Bases of Behavior | |
| PSY 458 | Capstone Seminar in Neuroscience | |
| **Total Credit Hours** | | **40-43** |

Strongly recommended but not required courses

| Code | Title | Credit Hours |
|---|---|---|
| CHM 241 & CHM 244 | Organic Chemistry and Organic Chemistry Laboratory | 5 |
| CHM 242 & CHM 245 | Organic Chemistry and Organic Chemistry Laboratory | 5 |
| PHY 161 | Physics for the Life Sciences with Laboratory I | 4 |
| PHY 162 | Physics for the Life Sciences with Laboratory II | 4 |
| PHY 181 & PHY 183 | General Physics I and General Physics Laboratory I | 5 |
| PHY 182 & PHY 184 | General Physics II and General Physics Laboratory II | 5 |

An independent research project with BIO 320 or PSY 477