

# PhD in Neuroscience

## Degree Requirements

The Graduate School requires a minimum of 72 credit hours for completion of the Doctoral degree. The Interdisciplinary Neuroscience Program requires a certain number of these courses to be at the 8000 level or above (excluding research problems and thesis research).

### Required Core Courses

|             |                              |   |
|-------------|------------------------------|---|
| BIO_SC 8440 | Integrative Neuroscience I   | 3 |
| BIO_SC 8442 | Integrative Neuroscience II  | 3 |
| BIO_SC 8050 | Professional Survival Skills | 2 |

Scientific Ethics (1 course, approved by thesis committee):

Possibilities include but are not limited to:

|             |  |  |
|-------------|--|--|
| BIOCHM 8060 | Ethical Conduct of Research  |  |
| BIO_SC 8060 | Ethical Conduct of Research  |  |
| PSYCH 8910  | Responsible Conduct of Research  |  |
| MPP 8415    | Responsible Conduct of Research thru Engagement, Enactment and Empowerment NIH and other Federal Age |  |
| V_PBio 8641 | Introduction to Research Ethics  |  |
| GRAD 9001   | Topics in Graduate School  |  |

### Cellular/Molecular Courses: select one

|              |                               |     |
|--------------|-------------------------------|-----|
| BIOL_EN 7070 | Bioelectricity                | 3   |
| MPP 7424     | Medical Pharmacology          | 4   |
| MPP 9426     | Transmembrane Signaling       | 4   |
| MPP 9432     | Mammalian Membrane Physiology | 1-3 |

### System/Behavior Courses: select one

|             |                                  |   |
|-------------|----------------------------------|---|
| BIO_SC 7560 | Sensory Physiology and Behavior  | 3 |
| BIO_SC 7590 | Computational Neuroscience       | 4 |
| BIO_SC 7986 | Neurology of Motor Systems       | 3 |
| PSYCH 8210  | Functional Neuroscience          | 3 |
| PSYCH 9210  | Psychopharmacology               | 3 |
| V_BSCI 9467 | Neural Cardiorespiratory Control | 3 |
| or MPP 9437 | Neural Cardiorespiratory Control |   |

### Statistics course: select one

Possibilities include but are not limited to:

|            |  |   |
|------------|--|---|
| STAT 7020  | Statistical Methods in the Health Sciences | 3 |
| STAT 7070  | Statistical Methods for Research           | 3 |
| STAT 7410  | Biostatistics and Clinical Trials          | 3 |
| STAT 7540  | Experimental Design                        | 3 |
| PSYCH 3010 | Research Methods in Psychology I           | 3 |

### Seminars

|   |                                       |   |
|---|---------------------------------------|---|
| Neuroscience Seminar Course                 |                                       | 2 |
| Neuroscience Journal Club: examples include |                                       | 2 |
| BIO_SC 8187                                 | Seminar in Areas of Specialization    |   |
| NEUROSCI 8187                               | Neuroscience Journal Club             |   |
| PTH_AS 8500                                 | Seminar in Translational Neuroscience |   |

### Rotation and Thesis research

|               |   |     |
|---------------|---|-----|
| NEUROSCI 9090 | Thesis Research in Neuroscience (repeatable up to 28 hours) | 1-6 |
| NEUROSCI 8090 | Rotation Research in Neuroscience                           |     |

## Admission Criteria

Fall deadline: December 15

- Minimum TOEFL scores:

| Internet-based test (iBT) | Paper-based test (PBT) |
|---------------------------|------------------------|
| 100                       | 600                    |

- Minimum GRE scores:

| When did you take the GRE? | Verbal + Quantitative | Analytical |
|----------------------------|-----------------------|------------|
| Prior to August 1, 2011    | 1200                  |            |
| On or After August 1, 2011 | 308                   |            |

- Bachelor's degree or its equivalent

Neuroscience comprises a united field that integrates across many disciplines, and students from a variety of academic backgrounds are encouraged to apply to the Interdisciplinary Neuroscience Program (INP). U.S. residents and international applicants are strongly encouraged to apply.

## Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the INP Program:

- Departmental application
- 3 letters of recommendation
- GRE scores
- TOEFL (if applicable)