

# Neuroscience, BS

## Requirements

The Bachelor of Science with a major in neuroscience requires a minimum of 120 s.h., including at least 64 s.h. of work for the major. Coursework includes neuroscience, chemistry, biochemistry, mathematics, and physics courses. Students must maintain a grade-point average of at least 2.00 in all courses for the major and in all UI courses for the major. They also must complete the College of Liberal Arts and Sciences GE CLAS Core.

Students who major in neuroscience may not earn a major in biology or psychology, but may earn a minor in biology or psychology as long as no more than 3 s.h. are double counted.

The BS with a major in neuroscience requires the following coursework.

| Requirements           | Hours |
|------------------------|-------|
| Cognate Requirements   | 20    |
| Introductory Courses   | 8     |
| Core Courses           | 17    |
| Laboratory Course      | 4     |
| Neuroscience Electives | 15    |

## Cognate Requirements

| Course #                 | Title  | Hours |
|--------------------------|--|-------|
| This sequence:           |  |       |
| CHEM:1110<br>& CHEM:1120 | Principles of Chemistry I<br>and Principles of Chemistry<br>II | 8     |
| One of these sequences:  |  |       |
| PHYS:1511<br>& PHYS:1512 | College Physics I<br>and College Physics II<br>(preferred)     | 8     |
| PHYS:1611<br>& PHYS:1612 | Introductory Physics I<br>and Introductory Physics II          | 8     |
| One of these:            |  |       |
| MATH:1460                | Calculus for the Biological<br>Sciences (preferred)            | 4     |
| MATH:1550                | Engineering Calculus I   | 4     |
| MATH:1850                | Calculus I   | 4     |

## Introductory Courses

| Course #       | Title                                      | Hours |
|----------------|--|-------|
| Both of these: |  |       |
| BIOL:1411      | Foundations of Biology                     | 4     |
| PSY:2701       | Introduction to Behavioral<br>Neuroscience | 4     |

## Core Courses

| Course #      | Title           | Hours |
|---------------|-----------------|-------|
| All of these: |                 |       |
| BIOL:3253     | Neurobiology I  | 4     |
| BIOL:3254     | Neurobiology II | 4     |

|                        |  |   |
|------------------------|--|---|
| PSY:2811<br>& PSY:2812 | Research Methods and Data<br>Analysis in Psychology I<br>and Research Methods and<br>Data Analysis in Psychology<br>II | 6 |
| PSY:2975               | Introduction to Cognitive<br>Neuroscience  | 3 |

## Laboratory Course

| Course #      | Title                                       | Hours |
|---------------|---|-------|
| One of these: |   |       |
| BIOL:3245     | Animal Behavior Laboratory                  | 4     |
| BIOL:3655     | Neurogenetics Laboratory                    | 4     |
| BIOL:3656     | Neurobiology Laboratory                     | 4     |
| PSY:4025      | Laboratory in Cognitive<br>Neuroscience     | 4     |
| PSY:4035      | Laboratory in Computational<br>Neuroscience | 4     |

## Neuroscience Electives

| Course #  | Title  | Hours |
|---|--|-------|
| A minimum of five courses (15 s.h.) from these: |  |       |
| BIOL:1412                                       | Diversity of Form and<br>Function  | 4     |
| BIOL:2254                                       | Endocrinology  | 3     |
| BIOL:2512                                       | Fundamental Genetics   | 4     |
| BIOL:2723                                       | Cell Biology   | 3     |
| BIOL:3244                                       | Animal Behavior  | 3     |
| BIOL:3343                                       | Animal Physiology  | 3     |
| BIOL:4333                                       | Genes and Development  | 3     |
| CHEM:2210                                       | Organic Chemistry I  | 3     |
| PCOL:3101                                       | Pharmacology I: A Drug's<br>Fantastic Journey  | 3     |
| PSY:3035  | Science of Emotion   | 3     |
| PSY:3040  | Psychology of Learning   | 3     |
| PSY:3055  | Interdisciplinary Science of<br>Sound and Hearing  | 3     |
| PSY:3060  | Sensation and Perception   | 3     |
| PSY:3075  | The Damaged Brain  | 3     |
| PSY:3250  | Neuroscience of Learning<br>and Memory   | 3     |
| PSY:3265  | Cognitive and Clinical<br>Neuroscience of Executive<br>Functions   | 3     |
| PSY:3270  | Neurobiology of Stress   | 3     |
| PSY:3275  | The Science of Sleep   | 3     |
| PSY:3360  | The Psychosis Spectrum   | 3     |
| PSY:3575  | Social Cognition in Autism   | 3     |
| PSY:4090  | Psychology Seminar (when<br>topic is social cognitive<br>neuroscience or learning<br>and decision making ) | 3     |
| May include one of these:                       |  |       |
| BIOL:3999/<br>PSY:3999                          | Independent Research in<br>Neuroscience  | 3     |
| BIOL:4995/<br>PSY:4995                          | Honors Research in<br>Neuroscience   | 3     |
| May include one of these:                       |  |       |
| PCOL:3102                                       | Pharmacology II:<br>Mechanisms of Drug Action  | 3     |

|                           |   |   |
|---------------------------|---|---|
| PSY:3230                  | Psychopharmacology                      | 3 |
| May include one of these: |   |   |
| BMB:3110                  | Biochemistry                            | 3 |
| BMB:3120                  | Biochemistry and Molecular<br>Biology I | 3 |