Neuroscience, B.S.

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 g.p.a. 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 B.S. with a major in neuroscience requires the following coursework.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognate Requirements</td>
<td>23-26</td>
</tr>
<tr>
<td></td>
<td>Introductory Courses</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Core Courses</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Laboratory Course</td>
<td>4-5</td>
</tr>
<tr>
<td></td>
<td>Neuroscience Electives</td>
<td>12-15</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td><strong>64-71</strong></td>
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### Cognate Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td></td>
<td>One of these options:</td>
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</tr>
<tr>
<td>BIOC:3110</td>
<td>Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIOC:3110 &amp; BIOC:3130</td>
<td>Biochemistry and Molecular Biology I-II (both of these)</td>
<td>6</td>
</tr>
<tr>
<td>CHEM:1110 &amp; CHEM:1120</td>
<td>Principles of Chemistry I-II</td>
<td>8</td>
</tr>
<tr>
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<td>One of these sequences:</td>
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<tr>
<td>PHYS:1511-1512</td>
<td>College Physics I-II (preferred)</td>
<td>8</td>
</tr>
<tr>
<td>PHYS:1611-1612</td>
<td>Introductory Physics I-II</td>
<td>8</td>
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<tr>
<td></td>
<td>One of these:</td>
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</tr>
<tr>
<td>MATH:1460</td>
<td>Calculus for the Biological Sciences (preferred)</td>
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<tr>
<td>MATH:1380</td>
<td>Calculus and Matrix Algebra for Business</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1550</td>
<td>Engineering Mathematics I: Single Variable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1850</td>
<td>Calculus I</td>
<td>4</td>
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</table>

### Introductory Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Both of these:</td>
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<tr>
<td>BIOL:1411</td>
<td>Foundations of Biology</td>
<td>4</td>
</tr>
<tr>
<td>PSY:2701</td>
<td>Introduction to Behavioral Neuroscience</td>
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### Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>All of these:</td>
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<tr>
<td>BIOL:3253</td>
<td>Neurobiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3254</td>
<td>Neurobiology II</td>
<td>4</td>
</tr>
<tr>
<td>PSY:2811-PSY:2812</td>
<td>Research Methods and Data Analysis in Psychology I-II</td>
<td>6</td>
</tr>
<tr>
<td>PSY:2975</td>
<td>Introduction to Cognitive Neuroscience</td>
<td>3</td>
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</tbody>
</table>

### Laboratory Course

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>One of these:</td>
<td></td>
</tr>
<tr>
<td>BIOL:3244</td>
<td>Animal Behavior (with lab)</td>
<td>5</td>
</tr>
<tr>
<td>BIOL:3655</td>
<td>Neurogenetics Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3656</td>
<td>Neurobiology Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>PSY:4025</td>
<td>Laboratory in Cognitive Neuroscience</td>
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</table>

### Neuroscience Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td>A minimum of four courses (12 s.h.) from these:</td>
<td></td>
</tr>
<tr>
<td>BIOL:1412</td>
<td>Diversity of Form and Function</td>
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<tr>
<td>BIOL:2254</td>
<td>Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL:2512</td>
<td>Fundamental Genetics</td>
<td>4</td>
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<tr>
<td>BIOL:2603</td>
<td>Mechanisms of Aging</td>
<td>3</td>
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<tr>
<td>BIOL:2723</td>
<td>Cell Biology</td>
<td>3</td>
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<tr>
<td>BIOL:4333</td>
<td>Genes and Development</td>
<td>3</td>
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<tr>
<td>BIOL:4353</td>
<td>Neurophysiology: Cells and Systems</td>
<td>3-4</td>
</tr>
<tr>
<td>PCOL:3101</td>
<td>Pharmacology I: A Drug’s Fantastic Journey</td>
<td>2-3</td>
</tr>
<tr>
<td>PHIL:3510</td>
<td>Neuroethics</td>
<td>3</td>
</tr>
<tr>
<td>PSY:3035</td>
<td>Science of Emotion</td>
<td>3</td>
</tr>
<tr>
<td>PSY:3040</td>
<td>Psychology of Learning</td>
<td>3</td>
</tr>
<tr>
<td>PSY:3060</td>
<td>Sensation and Perception</td>
<td>3</td>
</tr>
<tr>
<td>PSY:3250</td>
<td>Neuroscience of Learning and Memory</td>
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<tr>
<td>PSY:3265</td>
<td>Cognitive and Clinical Neuroscience of Executive Functions</td>
<td>3</td>
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<tr>
<td>PSY:3270</td>
<td>Neurobiology of Stress</td>
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<tr>
<td>PSY:3275</td>
<td>The Science of Sleep</td>
<td>3</td>
</tr>
<tr>
<td>PSY:3575</td>
<td>Social Cognition in Autism</td>
<td>3</td>
</tr>
<tr>
<td>May include one of these:</td>
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<tr>
<td>PCOL:3102</td>
<td>Pharmacology II: Mechanisms of Drug Action</td>
<td>3</td>
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<tr>
<td>PSY:3230</td>
<td>Psychopharmacology</td>
<td>3</td>
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