# 2022 - 2023 Major Map

## Neuroscience, BS

**School/College:** The College of Liberal Arts and Sciences  
**Location:** Tempe  
**LABMENBS**

## Term 1 - 14 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENG 101 or ENG 102: First-Year Composition OR</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>ENG 105: Advanced First-Year Composition OR</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>ENG 107 or ENG 108: First-Year Composition</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>LIA 101: Student Success in The College of Liberal Arts and Sciences</strong></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEU 101: Introduction to Neuroscience</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>BIO 181: General Biology I (SQ)</strong></td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

**Minimum Grade:** 3  
**Critical course signified by:**  
**Term hours subtotal:** 14

## Term 2 - 30 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENG 101 or ENG 102: First-Year Composition OR</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>ENG 105: Advanced First-Year Composition OR</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>ENG 107 or ENG 108: First-Year Composition</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>BIO 182: General Biology II (SG)</strong></td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>MAT 251: Calculus for Life Sciences (MA) OR MAT 265: Calculus for Engineers I (MA) OR MAT 270: Calculus with Analytic Geometry I (MA)</strong></td>
<td>3-4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>PSY 101: Introduction to Psychology (SB)</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Minimum Grade:** 3  
**Critical course signified by:**  
**Term hours subtotal:** 16-17

## Term 3 - 30 - 46 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHM 113: General Chemistry I (SQ)</strong></td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>NEU 290: Data Science for Neuroscience Majors</strong></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td><strong>Humanities, Arts and Design (HU) AND Historical Awareness (H)</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Literacy and Critical Inquiry (L)</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social-Behavioral Sciences (SB) AND Global Awareness (G)</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Minimum Grade:** 3  
**Critical course signified by:**  
**Complete Mathematics (MA) requirement.**  
**Term hours subtotal:** 16

## Term 4 - 46 - 62 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
</table>

**Minimum Grade:** 3  
**Critical course signified by:**  
**Complete First-Year Composition requirement.**  
**Term hours subtotal:** 16

- Students who test into MAT 251 or MAT 270 should enroll in that course in Term 1.  
- ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.  
- Select your Career Interest Communities and play me3@ASU.  
- Join a student club or professional organization.

- MAT 251 or MAT 270 may require prerequisites which should be taken in Term 1.  
- Secure a part-time job or volunteer experience.

- Explore an internship.  
- Pursue research opportunities.
A total of 18 credit hours is required from the major electives. All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at https://thecollege.asu.edu/resources/science-society. At least one of the two courses must be upper-division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.
### Behavioral Neuroscience
- NEU 307: Your Brain on Drugs
- NEU 394: Neuroscience of Learning and Motivation
- NEU 494: Anatomy of the Nervous System
- NEU 494: Brain and Emotion
- NEU 494: Developmental and Behavioral Neuroendocrinology
- NEU 494: Neural Basis of Learning and Memory
- NEU 494: Neuroeconomics
- NEU 494: Neuropsychology of Psychiatric Medications

### Cellular and Molecular Neuroscience
- BIO 327: Evolution of Human Behavior
- BIO 331: Animal Behavior
- BIO 435: Research Techniques in Animal Behavior
- BIO 436: Sociobiology and Behavioral Ecology
- BIO 465: Neurophysiology
- BIO 494: Biotechnology Viruses as Tools
- BIO 494: Genetics and Genomics of Behavior
- BIO 494: Neurobiology of Attachment
- BIO 498: Neural Development

### Cognitive Neuroscience
- NEU 394: Neuroimaging Methods
- NEU 394: Neuroscience of Perception
- NEU 494: Cognitive Neuroscience of Memory
- NEU 494: Neuroscience of Social Cognition
- NEU 494: Visual Cognitive Neuroscience
- NEU 494: Neuroeconomics of Psychiatric Medications
- SHS 367: Language Science (SB)
- SHS 485: Acquired Speech and Language Disorders
- SHS 494: Health Neuroscience

### Systems and Computational Neuroscience
- BIO 355: Introduction to Computational Molecular Biology (CS)
- BIO 439: Computing for Research
- BIO 494: Data Analysis in Neuroscience
- BME 316: Biomechanics for Biomedical Engineers
- BME 350: Signals and Systems for Bioengineers
- BME 360: Control in Biological Systems
- BME 416: Advanced Biomechanics
- BME 465: Magnetic Resonance Imaging
- KIN 424: Neural Aspects of Movement and Rehabilitation
- MAT 451: Mathematical Modeling (CS)
- MAT 494: Mathematical Neuroscience
- SHS 310: Anatomical and Physiological Bases of Speech
- SHS 311: Hearing Science

### Notes:
- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: https://cisa.asu.edu/DSP
- Mathematics Placement Assessment score determines placement in first mathematics course.
• Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

Total Hours: 120  
Upper Division Hours: 45 minimum  
Major GPA: 2.00 minimum  
Cumulative GPA: 2.00 minimum  
Total hrs at ASU: 30 minimum  
Hrs Resident Credit for Academic Recognition: 56 minimum  
Total Community College Hrs: 64 maximum  
Total College Residency Hrs: 12 minimum

General University Requirements Legend

General Studies Core Requirements:
• Literacy and Critical Inquiry (L)
• Mathematical Studies (MA)
• Computer/Statistics/Quantitative Applications (CS)
• Humanities, Arts and Design (HU)
• Social-Behavioral Sciences (SB)
• Natural Science - Quantitative (SQ)
• Natural Science - General (SG)

General Studies Awareness Requirements:
• Cultural Diversity in the U.S. (C)
• Global Awareness (G)
• Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2022 - 2023 academic year.