2024 - 2025 Major Map

Neuroscience, BS

School/College: The College of Liberal Arts and Sciences
LABMENBS

Term 1 0 - 14 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	• 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.
LIA 101: Student Success in The College of Liberal Arts and Sciences	1		
NEU 101: Introduction to Neuroscience	3	C	
BIO 181: General Biology I (SCIT OR SQ)	4	C	
Mathematics (MATH)	3	C	
Term hours subtotal:	14		

Term 2 14 - 30 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	• MAT 251 or MAT 270 may require prerequisites which should be taken in Term 1. • Secure a part-time job or volunteer experience.
BIO 182: General Biology II (SCIT OR SG)	4	C	
MAT 251: Calculus for Life Sciences (MATH OR MA) OR MAT 265: Calculus for Engineers I (MATH OR MA) OR MAT 270: Calculus with Analytic Geometry I (MATH OR MA)	3-4	C	
Humanities, Arts and Design (HUAD)	3		
Elective	3		
Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	16-17		

Term 3 30 - 46 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
CHM 113: General Chemistry I (SCIT OR SQ)	4	C	• Explore an internship. • Pursue research opportunities.
NEU 290: Data Science for Neuroscience Majors (QTRS OR CS) OR STP 231: Statistics for Life Science (QTRS OR CS)	3	C	
Humanities, Arts and Design (HUAD)	3		
Social and Behavioral Sciences (SOBE)	3		
Sustainability (SUST)	3		
Complete Mathematics (MATH) requirement.			
Complete First-Year Composition requirement.			
Term hours subtotal:	16		

Term 4 46 - 62 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
CHM 116: General Chemistry II (SCIT OR SQ)	4	C	• Draft a resume
Science and Society Elective	3	C	

Global Communities, Societies and Individuals (GCSI)	3	
Complete 2 courses: Elective	6	
Term hours subtotal:	16	

Term 5 62 - 77 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BIO 360: Animal Physiology	3	C	• The College of Liberal Arts and Sciences' Residency Requirement: Before graduation, at least 12 credit hours of upper-division (300 and 400 level) major coursework must be completed through courses offered by The College of Liberal Arts and Sciences. • Gather professional references
★ NEU 310: Fundamentals of Cognitive Neuroscience	3	C	
Upper Division Science and Society Elective	3	C	
Complete 2 courses: Upper Division Elective	6		
Term hours subtotal:	15		

Term 6 77 - 92 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BIO 476: Cellular and Molecular Neuroscience	3	C	• A total of 18 hours is required from the major electives. A maximum of 6 total hours from NEU 394 (Genes, Data, and the Brain), NEU 394 (Neuroscience Undergraduate Teaching Assistant), NEU 484, NEU 492, NEU 493, and NEU 499 can be used to satisfy major requirements. • Use Handshake to research employment opportunities
★ *Complete 2 courses:* Upper Division Major Electives	6	C	
Upper Division Elective OR NEU 484: Internship	3		
Governance and Civic Engagement (CIVI)	3		
Term hours subtotal:	15		

Term 7 92 - 107 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ BIO 477: Systems and Behavioral Neuroscience OR NEU 477: Systems and Behavioral Neuroscience	3	C	• Apply for graduate school.
★ *Complete 2 courses:* Upper Division Major Electives	6	C	
Upper Division Elective	3		
Elective	3		
Term hours subtotal:	15		

Term 8 107 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ *Complete 2 courses:* Upper Division Major Electives	6	C	• Apply for full-time career opportunities .
American Institutions (AMIT)	3		
Elective	4		
Term hours subtotal:	13		

- • 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.

Hide Course List(s)/Track Group(s)

Behavioral Neuroscience
NEU 307: Your Brain on Drugs
NEU 394: Neuroscience of Learning and Motivation
NEU 433: Behavioral Neuroendocrinology
NEU 460: Brain and Emotion
NEU 494: Neural Basis of Learning and Memory
NEU 494: Neuroeconomics
NEU 494: Neuropharmacology of Psychiatric Medications
NEU 494: The Social Brain

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: Genetics and Genomics of Behavior
BIO 494: Neurobiology of Attachment
BIO 498: Neural Development
NEU 494: Biotechnology Viruses as Tools or BIO 494: Biotechnology Viruses as Tools

Cognitive Neuroscience
NEU 323: Neuroscience of Perception
NEU 394: Language and the Brain
NEU 394: Neuroimaging Methods
NEU 494: Cognitive Neuroscience of Memory
NEU 494: Neuroscience of Social Cognition
NEU 494: Themes in Cognitive Neuroscience
NEU 494: Visual Cognitive Neuroscience
SHS 367: Language Science (SOBE OR SB)
SHS 485: Acquired Speech and Language Disorders
SHS 494: Health Neuroscience

Experiential Coursework
NEU 394: Neuroscience Undergraduate Teaching Assistant
NEU 484: Internship
NEU 492: Honors Directed Study
NEU 493: Honors Thesis
NEU 499: Individualized Instruction

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
NEU 426: Neuroanatomy
SHS 310: Anatomical and Physiological Bases of Speech
SHS 311: Hearing Science

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- University Undergraduate Graduation Requirements

Notes:

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.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.