












2022 - 2023 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	<ul style="list-style-type: none"> 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 (SQ)	4	C	
Mathematics (MA)	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	<ul style="list-style-type: none"> 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 (SG)	4	C	
MAT 251: Calculus for Life Sciences (MA) OR MAT 265: Calculus for Engineers I (MA) OR MAT 270: Calculus with Analytic Geometry I (MA)	3-4	C	
PSY 101: Introduction to Psychology (SB)	3	C	
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	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 (SQ)	4	C	<ul style="list-style-type: none"> Explore an internship. Pursue research opportunities.
NEU 290: Data Science for Neuroscience Majors	3	C	
Humanities, Arts and Design (HU) AND Historical Awareness (H)	3		
Literacy and Critical Inquiry (L)	3		
Social-Behavioral Sciences (SB) AND Global Awareness (G)	3		
 Complete Mathematics (MA) 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 (SQ)	4	C	
Science and Society Elective	3	C	

Computer/Statistics/Quantitative Applications (CS)	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	<ul style="list-style-type: none"> 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.
★ NEU 310: Fundamentals of Cognitive Neuroscience	3	C	
Upper Division Science and Society Elective	3	C	
Complete 2 courses:	6		
Elective			
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	<ul style="list-style-type: none"> Use Handshake to research employment opportunities Draft a resume Gather professional references
★ Complete 2 courses:	6	C	
Upper Division Major Electives			
Upper Division Literacy and Critical Inquiry (L)	3		
Upper Division Elective	3		
★ Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).			
Term hours subtotal:	15		

Term 7 92 - 107 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ NEU 325: Biopsychology OR BIO 477: Systems and Behavioral Neuroscience	3	C	<ul style="list-style-type: none"> Apply for graduate school.
★ Complete 2 courses:	6	C	
Upper Division Major Electives			
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:	6	C	<ul style="list-style-type: none"> Apply for full-time career opportunities.
Upper Division Major Electives			
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)	3		
Elective	4-6		
Term hours subtotal:	13-15		

- 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	Cellular and Molecular Neuroscience	Cognitive Neuroscience
NEU 307: Your Brain on Drugs	BIO 327: Evolution of Human Behavior	NEU 394: Neuroimaging Methods
NEU 394: Neuroscience of Learning and Motivation	BIO 331: Animal Behavior	NEU 394: Neuroscience of Perception
NEU 494: Anatomy of the Nervous System	BIO 435: Research Techniques in Animal Behavior	NEU 494: Cognitive Neuroscience of Memory
NEU 494: Brain and Emotion	BIO 436: Sociobiology and Behavioral Ecology	NEU 494: Neuroscience of Social Cognition
NEU 494: Developmental and Behavioral Neuroendocrinology	BIO 465: Neurophysiology	NEU 494: Visual Cognitive Neuroscience
NEU 494: Neural Basis of Learning and Memory	BIO 494: Biotechnology Viruses as Tools	SHS 367: Language Science (SB)
NEU 494: Neuroeconomics	BIO 494: Genetics and Genomics of Behavior	SHS 485: Acquired Speech and Language Disorders
NEU 494: Neuropharmacology of Psychiatric Medications	BIO 494: Neurobiology of Attachment	SHS 494: Health Neuroscience
NEU 498: Neural Development		
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 next to courses on the major map were valid for the 2022 - 2023 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.