



This course plan is a recommended sequence for the NSCI major, not a guarantee of availability.

Course	Units	Upper Division Units	Min. Grade	Prerequisites	Notes
1st Semester (16 Units)					
ENGL 101 - First Year Composition	3			101.0 - 101.9 Foundations Writing Evaluation score	
MATH 125 - Calculus I or MATH 122A/B	3		C	PPL 92+ or SAT I MSS 730+ or ACT MATH 32+ or MATH 125 AP credit or UA Math 121B (UA Online) with C or higher.	
UNIV 101 - Introduction to General Education	1				Entry course.
NROS 195B - Freshman Neuroscience Colloquium	1				Freshman colloquium course for Neuroscience students.
MCB 181R <i>and</i> MCB 181L - Introductory Biology I	4			40+ Math Placement Exam score or MATH 112/120R/122B/125	
CHEM 151 - Chemical Thinking I	4			60+ Math Placement Exam score or MATH 112	Honors section available - CHEM 161 & CHEM 163 . Credit is only allowed for one lecture & lab combination.
2nd Semester (17 Units)					
ENGL 102 - First Year Composition	3			ENGL 101	
CHEM 152 - Chemical Thinking II	4			CHEM 151 or CHEM 161 & CHEM 163 (<i>honors section</i>)	Honors section available - CHEM 162 & CHEM 164 . Credit is only allowed for one lecture & lab combination.
MATH 263 - Introduction to Statistics & Biostatistics (recommended for pre-med students) or BIOS 376	3			PPL 60+ or MCLG 88+ or SAT I MSS 640+ or ACT MATH 26+ or one recent course from MATH 108, 112, 113, 116, 119A, 122B, or 125.	
MATH 129 - Calculus II (recommended)	3			MATH 122B or MATH 125	
Second Language Course (1st Semester Proficiency)	4			Second Language Placement Exam score	See advisor for course placement after Second Language Placement Exam has been taken. Second-semester proficiency is needed to fulfill NSCS major requirements.
3rd Semester (14 Units)					
CHEM 241A - Lectures in Organic Chemistry	3			CHEM 152 or CHEM 162 (<i>honors section</i>)	Honors section available - CHEM 242A . Credit is only allowed for one lecture.
CHEM 243A - Organic Chemistry Laboratory I	1			CHEM 152 or CHEM 162 & CHEM 164 (<i>honors section</i>)	Honors section available - CHEM 244A . Credit is only allowed for one lecture.
Second Language Course (2nd Semester Proficiency)	4		C	Second Language Placement Exam score	See advisor for course placement after Second Language Placement Exam has been taken. Second-semester proficiency is needed to fulfill NSCS major requirements.
General Education Course 1*	3				See Note*
NROS 305 - Genetics & Genomics in Neuroscience	3	3	C		
4th Semester (16 Units)					
PHYS 102 <i>and</i> PHYS 181 - Introductory Physics I or PHYS 141 - Introductory Mechanics	4			60+ Math Placement Exam score or MATH 112/120R/122B/125	Only complete one option.
General Education Course 2*	3				See Note*
General Education Course 3*	3				See Note*
BIOC 384 - Foundations in Biochemistry	3	3		MCB 181R and (CHEM 142 or 152) and (CHEM 241A, 242A, or 262A)	
NROS 210A - Contemporary Approaches to Neuroscience	1		C		
5th Semester (16-17 Units)					
NROS 307 - Cellular Neurophysiology	3-4 (<i>honors section available</i>)	3 to 4	C	MCB 181R, PHYS 103 recommended.	Honors section is available for enrollment to students in the W.A. Franke Honors College
NROS 308 - Methods in Neuroscience (optional)	1	1	C		
PHYS 103 <i>and</i> PHYS 182 - Introductory Physics II or PHYS 241 - Introductory Electricity & Magnetism	4			PHYS 102 & PHYS 181 or PHYS 141	Only complete one option.
NROS 399/499 - Independent Study/Research	3	3			Lab/Research/Internship (3 units), part of 18 unit Emphasis requirement.
Elective Course^	3				See Note^
General Education Course 4*	3				See Note*
6th Semester (15-16 Units)					

NROS 310 - Molecular & Cellular Biology of Neurons	3-4 (<i>honors section available</i>)	3 to 4	C	MCB 181R/L, CHEM 151, 152, 241A, and BIOC 384 recommended.	Honors section is available for enrollment to students in the W.A. Franke Honors College
NROS 311 - Neuroinformatics and Scientific Coding	3	3	C		
NROS 318 - Systems Neuroscience	3	3	C		
General Education Course 5*	3				See Note*
General Education Course 6*	3				See Note*

7th Semester (13 Units)					
UNIV 301 - General Education Capstone	1	1		UNIV 101, General Education Foundations Writing and Math Courses, and five core General Education Courses: Exploring Perspectives & Building Connections	Exit course.
Emphasis Course 1**	3	3	C		See Note**
Emphasis Course 2**	3	3	C		See Note**
Emphasis: Writing Elective (NROS)	3	3	C		See Note**
Elective Course^	3				See Note^
8th Semester (12 Units)					
Emphasis Course 3**	3	3	C		See Note**
Elective Emphasis Course other than selected Emphasis	3	3	C		
NROS 399/499 - Independent Study	3	3			Lab/Research/Internship (3 units), part of 18 unit Emphasis requirement.
Elective Course (<i>Upper Division</i>) ^	3	3			See Note^
Minimum Total Units	Min. Upper Division Units	Min. Units in Residence	Min. NSCS Major Units	Min. GPA Needed	Additional Degree Completion Notes
120	42	30	35	2.00	

Notes
 *Any General Education - Exploring Perspectives (1 course in each category: Artist, Humanist, and Social Scientist) and Building Connections (3 courses needed) course.
 ** 18 units needed in one of the emphasis topics listed below. 9 units of emphasis coursework, 3 units of research, 3 units of NROS electives, and 3 units of writing emphasis coursework.
 ^Elective course needed to reach 120 unit minimum for graduation and 42 required upper division units.

Lab/Research/Internship/CURE Courses	Writing Emphasis Courses
NROS 314 – Neuroscience Research Experience CURE NROS 397 – Brain Communication Networks VIP-CURE NROS 392/492 – Directed Research NROS 392H/492H – Honors Directed Research	NROS 399/499 – Independent Study NROS 399H/499H – Honors Independent Study NROS 493 – Internship
NROS 455 – Bioethics NROS 460 – Science Writing Strategies, Skills & Ethics NROS 498 – Senior Capstone NROS 498H – Honors Thesis ECOL 379 – Evidence Based Medicine	

Emphasis Course Listings	
Neuroscience and Human Health NROS 330 – Principles of Neuroanatomy: Cells to Systems NROS 425 – Neural Circuits in Health and Disease NROS 435 – Complex Behavioral, Cognitive and Emotional Disorders NROS 445 – Neuropharmacology & Addiction NROS 430 – Neurogenetics NROS 440 – How to Build a Brain: Mechanisms of Neural Development NROS 450 – Neurons and Glia in Health and Disease ECOL 379 – Evidence Based Medicine	Neuroscience, Communication and Public Health ENGR 495A – Science, Health & Engineering Policy and Diplomacy GLO 465 – Science Misinformation, Disinformation, Media & the Public JOUR 305 – Full STEM Ahead: Science and the News JOUR 465/565 – Issues Covering Science and the Environment LAW 415 – Healthcare Ethics LAW 452 – Health Law LAW 476A – Drug Discovery, Development, and Innovation to Reach the Marketplace PHP 419 – Alzheimer’s Disease, Other Dementias, and the role of Public Health PPHM 448 – Addiction and Substance Use Policy
Integrated Neuroscience: Molecular, Cellular, Systems Neuroscience NROS 330 – Principles of Neuroanatomy: Cells to Systems NROS 381 – Animal Brains, Signals, Sex, and Social Behaviors NROS 412 – Molecular Mechanisms of Learning and Memory NROS 415 – Electrophysiology NROS 420 – The Neuroscience of Survival NROS 430 – Neurogenetics NROS 440 – How to Build a Brain: Mechanisms of Neural Development NROS 450 – Neurons and Glia in Health and Disease NROS 425 – Neural Circuits in Health and Disease	Thematic May choose from all emphasis courses. The thematic emphasis is meant for students who have a very clear and compelling interest in a particular topic area in neuroscience. As is the case for the other emphases, the overall learning objective is to develop real depth in a particular area that students then can use in reaching their particular career goals. The possibility of adding a course that is not currently on the course lists for the existing emphasis can be considered if it would expand or modify the emphasis enough to make it a better fit for