

Drake University
Neuroscience Major Requirements

The neuroscience major is designed to represent the psychological and biological foundations of this growing interdisciplinary field. Undergraduates preparing for careers in neuroscience or related fields must have a strong scientific foundation in the natural sciences. The neuroscience program is housed in the Department of Psychology and Neuroscience and maintains strong interdisciplinary connections. The neuroscience program offers a Bachelor of Science (B.S.) degree. This requires at least 64 hours of coursework to complete. This coursework is divided into General Requirements, including Quantitative Analysis and Behavioral Labs; Neuroscience Core Requirements; Related Elective Coursework; and the Capstone.

General Requirements (complete all)	Hours	Grade
NSCI 001 - Introduction to Neuroscience	3	
NSCI 010 - Research Methods in Neuroscience	3	
PSY 011 - Statistics	4	
BIO 012 - General Pre-Professional Biology I	4	
BIO 013 - General Pre-professional biology II	4	
CHEM 1/3 - General Chemistry I	4	
CHEM 2/4 - General Chemistry II	4	
CHEM 97/98 - Organic Chemistry I	4	
CHEM 108/110 - Organic Chemistry II	4	
BIO 176 - Neurophysiology	4	

Quantitative Analysis (choose 1)	Hours	Grade
PHY 011 - General Physics I	4	
MATH 050 - Calculus I	4	
PSY 111 - Advanced Statistics	3	
CS 065 - Intro to Computer Science	3	

Behavioral Labs (choose 1)		
PSY 123 -Biological Bases of Behavior	4	
PSY 125 - Cognitive Psychology	4	
PSY 126 - Comparative Psychology	4	
PSY 120/121 - Conditioning and Learning	4	
PSY 133 - Psychological Assessment	4	

Notes for General Requirements: BIO 140 or both STAT 071 and 072 may substitute for PSY 11. Students must pass NSCI 001, NSCI 010, and PSY 011 (or its substitutes) with a "C" or better (not a C-) to major in Neuroscience and to enroll in any upper level courses for which these are prerequisites.

Neuroscience Core Requirements

Basic Biology (choose 1)	Hours	Grade
BIO 129 - Mammalian Physiology	5	
BIO 165 - Cell Biology	4	
CHEM 130/131 - Biochemistry	4	
BIO 105 - Introduction to Genetics	3	

Systems Neuroscience (choose 1)	Hours	Grade
PHIL 130 - Mind, Brains, and Computers	3	
NSCI 150- Functional Neuroanatomy	3	
NSCI 152 - Neurobiology of Learning and Memory	3	

Behavioral Neuroscience (choose 1)	Hours	Grade
PHARM 119 - Neuropharmacology	3	
NSCI 126 -Neurochemistry	3	
NSCI 127- Behavior Genetics	3	

Notes for Core Requirements: Core requirements may be transferred by petition.

Related Elective Courses (choose 2, at least one upper division)	Hours	Grade
PSY 028 - Drugs & Behavior	3	
PSY 060 - Principles of Behavior	3	
PSY 076 - Abnormal Psychology	3	
NSCI 90/91 - Independent Study	1-3	
PSY 095 - Special Topics in Neuroscience	1-3	
PSY 122 - Sensation & Perception	3	
PSY 148 - Psychology of Developmental Disabilities	3	
PSY 128 - Hormones & Behavior	3	
PSY 176 - Advanced Psychopathology	3	
BIO 114 - Evolution	3	
PHIL 140 - Neuroscience and the Law	3	
BIO 127 - Histology	4	
BIO 101 - Comparative Anatomy of Vertebrates	4	
CS 167 - Machine Learning	3	
BIO 116 (CS 116)- Bioinformatics	3	
PHY 132 - Medical biophysics	3	
NSCI 151 - History of Neuroscience	3	
NSCI 190/191 - Independent Study	1-3	
NSCI 195 - Special Topics in Neuroscience	3	
NSCI 198 - Research Seminar	3	

Notes for Related Elective Courses Section: NSCI 190/191 does not fulfill the upper division requirement.

Capstone (Choose 1)	Hours	Grade
NSCI 151 - History of Neuroscience	3	
NSCI 190/191 - Independent Study	3	
NSCI 192 - Internship	3	
NSCI 195 - Special Topics in Neuroscience	3	
NSCI 198 - Research Seminar	3	

Notes for Capstone: Approval from both the course instructor and academic advisor is required prior to registration for the Capstone. Students should work closely with their faculty advisor to find an appropriate capstone experience to fulfill the requirements of the Drake Curriculum. To be counted as a capstone, the experience must be the equivalent of 3 credit hours. Capstone experiences will be designated with a "C" appended to the course number (e.g., NSCI 191C) at the time of registration or during the semester of enrollment. Specific NSCI 195s may be designated by the department as fulfilling a section of a requirement category or as a capstone.

Total Hours: _____	Cumulative Neuroscience GPA: _____
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