Neuroscience, BS

Requirements

The Bachelor of Science with a major in neuroscience requires a minimum of 120 s.h., including at least 64 s.h. of work for the major. Coursework includes neuroscience, chemistry, biochemistry, mathematics, and physics courses. Students must maintain a grade-point average of at least 2.00 in all courses for the major and in all UI courses for the major. They must also complete the College of Liberal Arts and Sciences GE CLAS Core.

Students who major in neuroscience may not earn a major in biology or psychology, but may earn a minor in biology or psychology as long as no more than 3 s.h. are double counted.

In planning coursework, students should be guided by the College of Liberal Arts and Sciences maximum hours rule: students earning a BS may apply a maximum of 56 s.h. earned in one department to the minimum 120 s.h. required for graduation, whether or not the coursework is accepted toward requirements for the major; students who earn more than 56 s.h. from one department may use the additional semester hours to satisfy requirements for the major (if the department accepts them), and the grades they earn become part of their grade-point average, but they cannot apply the additional semester hours to the minimum 120 s.h. required for graduation.

The BS with a major in neuroscience requires the following coursework.

Requirements	Hours
Cognate Requirements	20
Introductory Courses	8
Core Courses	17
Laboratory Course	4
Neuroscience Electives	15

Cognate Requirements

Course #	Title	Hours
This sequence:		
CHEM:1110 & CHEM:1120	Principles of Chemistry I and Principles of Chemistry II	8
One of these sequences:		
PHYS:1511 & PHYS:1512	College Physics I and College Physics II (preferred)	8
PHYS:1611 & PHYS:1612	Introductory Physics I and Introductory Physics II	8
One of these:		
MATH:1460	Calculus for the Biological Sciences (preferred)	4
MATH:1550	Engineering Calculus I	4
MATH:1850	Calculus I	4

Introductory Courses

Course #	Title	Hours
Both of these:		
BIOL:1411	Foundations of Biology	4
PSY:2701	Introduction to Behavioral Neuroscience	4

Core Courses

Course #	Title	Hours
All of these:		
BIOL:3253	Neurobiology I	4
BIOL:3254	Neurobiology II	4
PSY:2811 & PSY:2812	Research Methods and Data Analysis in Psychology I and Research Methods and Data Analysis in Psychology II	6
PSY:2975	Introduction to Cognitive Neuroscience	3

Laboratory Course

Course #	Title	Hours
One of these:		
BIOL:3245	Animal Behavior Laboratory	4
BIOL:3655	Neurogenetics Laboratory	4
BIOL:3656	Neurobiology Laboratory	4
PSY:4025	Laboratory in Cognitive Neuroscience	4
PSY:4035	Laboratory in Computational Neuroscience	4

Neuroscience Electives

Course #	Title	Hours
A minimum of five courses (15 s.h.) from these:		
BIOL:1412	Diversity of Form and Function	4
BIOL:2254	Endocrinology	3
BIOL:2512	Fundamental Genetics	4
BIOL:2723	Cell Biology	3
BIOL:3244	Animal Behavior	3
BIOL:3343	Animal Physiology	3
BIOL:4123	Cell Biology of the Nervous System	3
BIOL:4333	Genes and Development	3
CHEM:2210	Organic Chemistry I	3
PCOL:3101	Pharmacology I: A Drug's Fantastic Journey	3
PSY:3035	Science of Emotion	3
PSY:3040	Psychology of Learning	3
PSY:3055	Interdisciplinary Science of Sound and Hearing	3
PSY:3060	Sensation and Perception	3
PSY:3075	The Damaged Brain	3
PSY:3250	Neuroscience of Learning and Memory	3
PSY:3265	Cognitive and Clinical Neuroscience of Executive Functions	3
PSY:3275	The Science of Sleep	3
PSY:3360	The Psychosis Spectrum	3
PSY:3575	Social Cognition in Autism	3

PSY:4090	Psychology Seminar (when topic is social cognitive neuroscience or learning and decision making)	3
May include one of these:		
BIOL:3999/ PSY:3999	Independent Research in Neuroscience	3
BIOL:4995/ PSY:4995	Honors Research in Neuroscience	3
May include one of these:		
PCOL:3102	Pharmacology II: Mechanisms of Drug Action	3
PSY:3230	Psychopharmacology	3
May include one of these:		
BMB:3110	Biochemistry	3
BMB:3120	Biochemistry and Molecular Biology I	3