

COGNITIVE AND BEHAVIORAL NEUROSCIENCE MAJOR (B.S.)

Students pursuing the BS in Cognitive and Behavioral Neuroscience develop an in-depth understanding of the biological bases of cognition, perception, emotion, and behavior. Required coursework in psychology, biology, mathematics, and chemistry provides the foundation for this understanding. Advanced elective coursework allows students to tailor the major to their individual interests and post-graduation goals. Students take 4 elective courses either spread across the disciplines of psychology, biology, computer science and philosophy, or they may choose to concentrate their electives in either psychology, biology, or computer science, creating a self-devised concentration. The major provides excellent preparation for graduate study in neuroscience, psychology, cognitive science, medicine, and the health professions, as well as careers in research, biotechnology, behavioral medicine, and the pharmaceutical industry, among others.

Cognitive and Behavioral Neuroscience Majors must earn a final grade of a C- or higher in Introduction to Psychology, Elementary Psychological Statistics or Statistics for Science Majors, Research Methods in Psychology, and Seminar in Cognitive and Behavioral Neuroscience in order to graduate. Students earning a final grade of a D+ or lower must retake the class before progressing.

Link to College Core requirement (<http://catalogue.shu.edu/undergraduate/college-arts-sciences/core-curriculum/>).

Code	Title	Hours
Core Courses		
<i>Level 1 Chemistry Courses</i>		
Select one:		4-5
CHEM 1123 & CHEM 1125	General Chemistry I and General Chemistry Lab I	
CHEM 1107	Principles of Chemistry I (with lab)	
<i>Level 2 Chemistry Courses</i>		
		4
CHEM 1124 & CHEM 1126	General Chemistry II and General Chemistry II Lab	
CHEM 1108	Principles of Chemistry II (with lab)	
<i>Math Courses</i>		
Select one:		4
MATH 1401	Calculus I	
MATH 1501	Calculus I - Math - Phys Sci	
<i>Statistics Courses</i>		
Select one:		4
MATH 2111	Statistics for Science Majors	
PSYC 2311	Elementary Psychological Statistics	
<i>Biology Courses</i>		
BIOL 1211 & BIOL 1212	General Biology- Organisms and General Biology-Organisms Lab	4
BIOL 1222 & BIOL 1223	General Biology-Cell and General Biology-Cell Lab	4
BIOL 2221 & BIOL 2222	Genetics and Genetics Lab	4
<i>Psychology Courses</i>		
PSYC 1101	Introduction to Psychology	3

PSYC 3311	Research Methods	4
PSYC 3217	Biological Psychology	3
PSYC 3214	Cognitive Psychology	3
PSYC 3219	Cognitive Neuroscience	3
PSYC 3221		3
PSYC 5114		3
<i>Elective Courses</i>		
Select four:		12-16
PSYC 2212	Developmental Psychology	
PSYC 3213	Sensation and Perception	
PSYC 2211	Personality Concepts	
PSYC 2216	Social Psychology	
PSYC 2214	Mental Health	
PSYC 3216	Motivation and Emotion	
BIOL 2238 & BIOL 2239	Cell Biology and Cell Biology Lab	
BIOL 3210	Human Genetics	
BIOL 3231	Molecular Biology	
BIOL 3321	Vertebrate Physiology	
BIOL 3323	Neuroendocrinology	
PHIL 2090	Philosophy of Mind	
CSAS 1113	Computing for Science Majors	
CSAS 1114	Intro to Program Design I or ISCI 1117 Computing for Informatics	
DASC 3010	Data Mining	
MATH 1411	Calculus II	
	or MATH 1511 Calculus II - Math - Phys Sci	

Total Hours 62-67

Course	Title	Hours
First Year		
First Semester		
CORE 1001	University Life	1
CORE 1101	Journey of Transformation	3
ENGL 1201	Core English I	3
CHEM 1123 & CHEM 1125	General Chemistry I and General Chemistry Lab I	4
MATH 1401	Calculus I	4
		Hours 15
Second Semester		
ENGL 1202	Core English II	3
1 Philosophy course for A&S Philosophy and Religion requirement		3
1 course meeting A&S History/Aesthetics/Lit requirement		3
PSYC 1101	Introduction to Psychology	3
CHEM 1124 & CHEM 1126	General Chemistry II and General Chemistry II Lab	4
		Hours 16
Second Year		
First Semester		
CORE 2101	Christianity and Cult in Dial.	3
BIOL 1211 & BIOL 1212	General Biology- Organisms and General Biology-Organisms Lab	4
1001 Elementary I Language course (Arabic, Italian, Spanish, etc.)		3
MATH 2111	Statistics for Science Majors	4
		Hours 14
Second Semester		
PSYC 3311	Research Methods	4

2 Cognitive and Behavioral Neuroscience Major (B.S.)

1002 Elementary II Language course (Arabic, Italian, Spanish, etc.)	3
Religion course for A&S Philosophy and Religion requirement	3
BIOL 1222 General Biology-Cell	4
& BIOL 1223 and General Biology-Cell Lab	
PSYC 3219 Cognitive Neuroscience	3
Hours	17
Third Year	
First Semester	
1 course meeting A&S History/Aesthetics/Lit requirement	3
PSYC 3217 Biological Psychology	3
1 course meeting A&S Diversity requirement	4
BIOL 2221 Genetics	4
& BIOL 2222 and Genetics Lab	
Hours	14
Second Semester	
1 class meeting A&S Social Science requirement	3
PSYC 3214 Cognitive Psychology	3
PSYC 3221	3
CORE 3XXX: Engaging the World	3
1 elective course for Cognitive & Behavioral Neuroscience major	3-4
Hours	15-16
Fourth Year	
First Semester	
PSYC 5114	3
1 elective course for Cognitive & Behavioral Neuroscience major	3-4
1 elective course for Cognitive & Behavioral Neuroscience major	3-4
1 elective course for Cognitive & Behavioral Neuroscience major	3-4
1 general elective or course towards a minor	3
Hours	15-18
Second Semester	
1 general elective or course towards a minor	3
1 general elective or course towards a minor	3
1 general elective or course towards a minor	3
1 general elective or course towards a minor	3
1 general elective or course towards a minor	3
Hours	15
Total Hours	121-125