

BEHAVIORAL NEUROSCIENCE, BS

Program Director: Althea Kaminske, Ph.D.

The Department of Psychology offers a program leading to the Bachelor of Science with a major in Behavioral Neuroscience. The Behavioral Neuroscience program provides students with a biological understanding of psychological phenomena. Coursework emphasizes an understanding of the nervous system at a cellular level, how the brain integrates information, as well as an understanding of a range of methodologies, animal models systems, experimental designs, and statistical tools used in 21st century behavioral neuroscience. The capstone course integrates the biological and psychological coursework by discussing and analyzing current topics in behavioral neuroscience.

This major will be of interest to students with a strong background in science who are interested in questions surrounding the brain and behavior. This major helps prepare students for graduate studies in healthcare professions, or masters or Ph.D. programs in research fields like neuroscience, neurobiology, biopsychology, or biology.

Code	Title	Credits
Major Requirements		52-53
BIO-105 & BIOL-105	BIOLOGICAL SCIENCE I and BIOLOGICAL SCI. I LAB	
BIO-106 & BIOL-106	BIOLOGICAL SCIENCE II and BIOLOGICAL SCI. II LAB	
PSYC-101	INTRO TO PSYCHOLOGY	
PSYC-102	AN INTRO TO BIOPSYCHOLOGY	
PSYC-201	PSYC RESEARCH: METHODS & STATISTICS I	
PSYC-202	PSYC RESEARCH: METHODS & STATS II	
BIO-350	NEUROBIOLOGY	
PSYC-343	PHYSIOLOGICAL PSYCHOLOGY	
BNS-401	BEHAVIORAL NEUROSCIENCE SEMINAR	
One Cellular Mechanisms elective		
One Evolutionary Developmental Biology elective		
One Behavior and Mental Processes elective		
Three additional major electives ¹		
Quantitative reasoning course ²		
Foreign Language³		3
General Education Requirements (https://catalog.sbu.edu/undergraduate/degree-requirements/)		37
General Electives		28-29
Total Credits		120-122

¹ Chosen from among courses in the Cellular Mechanisms, Evolutionary Developmental Biology, and Behavior and Mental Processes elective areas. To ensure breadth of experience, no more than two of these three electives may be taken in any one area.

² This requirement can be fulfilled by MATH-151 or any higher-numbered MATH course.

³ The foreign language must be at the level of 202 or higher. Students not prepared to begin at this level will need to take additional courses in language.

The electives in the Behavioral Neuroscience major are grouped in the following three areas. Students must take at least one and no more than three total courses in each elective area.

Code	Title	Credits
Cellular Mechanisms		
BIO-291	GENETICS	3
BIO-292	CELL BIOLOGY	3
BIO-472	IMMUNOLOGY	3
BIO-494	GENOMICS	3
Evolutionary Developmental Biology		
PSYC-315	ANIMAL BEHAVIOR	3
BIO-362	ANIMAL DEVELOPMENT	3
BIO-390	EVOLUTION	3
Behavior and Mental Processes		
PSYC-215	MALADAPTIVE BEHAVIOR	3
PSYC-316	HUMAN SEXUALITY	3
PSYC-330	HEALTH PSYCHOLOGY	3
PSYC-421	SENSATION & PERCEPTION	3
PSYC-422	COGNITION	3
PSYC-423	HUMAN MEMORY	3

With approval of the director of the Behavioral Neuroscience program, students may fulfill one elective in the major with a mentored research project for which they receive PSYC-48X or BIO-318 BIO-319 BIO-418 or BIO-419 credit totaling at least three credit hours. The focus of this research project must be relevant to the field of Behavioral Neuroscience.

New courses relevant to Behavioral Neuroscience may be offered from time to time, often as Special Topics courses in Psychology or Biology. Such courses may fulfill Behavioral Neuroscience elective requirements with the approval of the Director of the Behavioral Neuroscience Program and relevant academic administrators.

Students working towards a major in Behavioral Neuroscience are strongly encouraged to take at least one semester of general chemistry with laboratory (CHEM-101 CHML-101 and/or CHEM-102 CHML-102.)

First Year			
Fall	Credits	Spring	Credits
PSYC-101		3 PSYC-102	3
BIO-105	4	BIO-106	4
ENG-101	3	ENG-102	3
SBU-101	2	SBU-102	1
Foreign Language 201	3	Foreign Language 202	3
		15	14

Second Year			
Fall	Credits	Spring	Credits
PSYC-201		3 PSYC-202	3
Behavioral Neuroscience Elective	3	Behavioral Neuroscience Elective	3
Quantitative Reasoning ²	3-4	BIO-350	3
THFS-101	3	General Education Requirement ¹	6
Select one of the following:	3		
PSYC-343			
Behavioral Neuroscience Elective			
		15-16	15

Third Year			
Fall	Credits	Spring	Credits
General Education Requirement ¹	6	General Education Requirements ¹	6
General Electives	6	General Electives	6

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Select one of the following:	3	Select one of the following:	3
PSYC-343		BIO-350	
Behavioral Neuroscience Elective		Behavioral Neuroscience Elective	
	15		15

Fourth Year

Fall	Credits	Spring	Credits
BNS-401		3 Behavioral Neuroscience Elective	3
General Education Requirements ¹	6	6 General Electives	12
General Electives	6		
	15		15

Total Credits 119-120

¹ When a General Education requirement also fulfills a major requirement, General Elective credits are needed to reach the required 120 credits.

² This requirement can be fulfilled by MATH-151 or any higher-numbered MATH course.