

BEHAVIORAL NEUROSCIENCE MAJOR

Behavioral neuroscience sits at the intersection of psychology and biology and studies the biological mechanisms of how the brain senses and perceives the environment, stores and retrieves memories, generates emotions, controls behavior, and produces consciousness. The major in behavioral neuroscience is excellent preparation for advanced degrees and careers in the health professions; behavioral, cognitive or affective neuroscience; experimental psychology; clinical neuropsychology; pharmacology and related areas.

The interdisciplinary major in Behavioral Neuroscience has 5 main learning objectives:

- To provide foundational knowledge in Behavioral Neuroscience and related fields (e.g., Psychology, Biology, and Chemistry).**
This is accomplished with introductory course work in the Department of Psychological and Brain Sciences, and complementary foundational coursework in the Departments of Biology and Chemistry and Biochemistry.
- To build skills in statistical analysis and research methods required to conduct and understand behavioral neuroscience research.**
All students will complete courses in Statistics and Research Methods, as well as a number of lab courses, to develop these skills. In advanced courses, students will read and analyze primary research articles and engage in scientific writing. Students may also participate in faculty-led or independent research projects.
- To develop effective communication skills orally and in writing.**
Students will write lab and research reports in required courses across disciplines, and will refine oral and written communication in advanced courses, seminars, and/or research experiences.
- To produce ethically responsible students.**
Students will complete ethical training as part of Research Methods and Supervised Research covering topics essential to understand responsible research conduct and professionalism.
- To develop students' abilities to synthesize knowledge by thinking critically and independently.**
Students will use the foundational knowledge acquired in introductory courses to make connections across fields, as they critically analyze and present research in advanced courses, seminars, and/or research experiences.

Requirements

For a 63-credit major in Behavioral Neuroscience, students complete the following:

Code	Title	Credits
BIOL 1171 & 1171L	General Biology I and General Biology I Lab	4
BIOL 1172 & 1172L	General Biology II and General Biology II Lab	4
BIOL 2262 or BIOL 1107 or BIOL 3315	Human Physiology Human Anatomy and Physiology I Anatomy: Form and Function	4
CHEM 1171 & 1171L	General Chemistry I and General Chemistry I Lab	4

CHEM 1172 & 1172L	General Chemistry II and General Chemistry II Lab	4
CHEM 2271 & 2271L	Organic Chemistry I and Organic Chemistry I Lab	4
CHEM 2272 & 2272L	Organic Chemistry II and Organic Chemistry II Lab	4
PSYC 1010	General Psychology	3
PSYC 1610	Behavioral Neuroscience	3
PSYC 2810	Statistics for the Behavioral Sciences	4
PSYC 2820 or PSYC 2830	Research Methods in Psychology Research Methods in Behavioral Neuroscience	4
Select six elective courses in biology and psychology from the following: ¹		18
BIOL 1108	Human Anatomy and Physiology II	
BIOL 1173	General Biology III	
BIOL 2261	Genetics	
BIOL 3312	Fundamentals of Neurobiology	
BIOL 3314	Endocrinology	
BIOL 3324 or BIOL 3325	Biochemistry I Biochemistry II	
BIOL 3327	Cell Biology	
BIOL 3342	Developmental Biology	
BIOL 3354	Molecular Biology	
PSYC 2360	Human Neuropsychology	
PSYC 2510	Cognitive Psychology	
PSYC 2520	Learning and Applied Behavior Analysis	
PSYC 2620	Sensation and Perception	
PSYC 2740	Drugs, Brain and Behavior	
PSYC 2900	Special Topics (Shell) (with an emphasis in behavioral neuroscience)	
PSYC 3610	Cognitive Neuroscience	
PSYC 3720	Hormones and Behavior	
PSYC 3740	Pharmacology and Mental Disorders	
PSYC 3955	Supervised Research: Behavioral Neuroscience ²	
PSYC 3980	Psychology Teaching Practicum ³	
PSYC 4955	Research Thesis in Behavioral Neuroscience ²	
Select one Capstone Experience from the following:		3
PSYC 4610	Senior Seminar: Current Issues in Behavioral Neuroscience	
PSYC 4650	Neuroanatomy and Behavior	
PSYC 4710	Senior Seminar in Neuroscience of Human Memory	
PSYC 4900	Special Topics: Senior Seminar (with an emphasis in behavioral neuroscience)	

Total Credits **63**

¹ At least two elective courses must be in biology and at least two must be in psychology.

² May be taken twice; Behavioral neuroscience majors can take Supervised Research and the Research Thesis course up to two times each. They can be taken with the same research mentor or with different mentors. If the Research Thesis course is taken a second time, it should be for a separate project than the first. PSYC 2950 and

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PSYC 2955 (1 credit) do not count as psychology electives towards major requirements.

³ Only for certain sections; consult with the professor.