

Doctor of Philosophy in Psychology: Major in Cognitive Neuroscience

This program will train students to become experts in the study of the neuroscience of cognition and behavior. Students will explore the neurobiology of cognition with developmental, cognitive, and clinical neuroscience researchers in the areas of sensorimotor behavior and perception, language, memory, executive function, and substance abuse. The faculty in the program employ “under-the-skin” electrophysiological and functional imaging methodologies on humans, with a special emphasis on understanding typical and atypical development. The faculty also conduct research on birds and non-human primates. Students complete coursework in basic neuroscience, neuroanatomy, neuropsychology, and cognitive neuroscience, as well as a complement of courses in research methods, history and systems, and statistics to complete their training as psychologists.

The program has a central focus in training of scholars and professors of cognitive neuroscience, which is a rapidly growing research area in Psychology. Thus, the primary goal of the program is to equip students with the skills necessary to function as academic and/or research psychologists. The program has a strong emphasis on learning basic neuroanatomy and physiology, cognitive neuroscience research methodologies and analytic skills, and neural bases of psychology and psychopathology. Students benefit from the diversity of faculty’s areas of interest and expertise that converge to provide a well-rounded training program in cognitive neuroscience.

Hands-on research experience is an essential part of the training, and students become involved in research at an early point in their graduate training by participating in faculty research projects and by carrying out individual research under the guidance of one or several faculty members. Students will receive guidance in every aspect of conducting research, including developing ideas, designing and conducting studies, and dissemination, presenting papers at national conferences and publishing papers in scientific journals. In addition, we emphasize the students development in grant writing skills, a necessary component of a successful research career.

Admission Requirements*

To be admitted into the Cognitive Neuroscience doctoral program, a student must:

1. Hold a Bachelor’s degree in a relevant discipline from an accredited college or university.
2. Have a 3.0 average or higher during the last two years of the undergraduate program and submit Graduate Record Exam (GRE) scores.
3. Arrange to have three letters of recommendation evaluating the applicant’s potential for graduate work sent to the Psychology Graduate Program Director.
4. Send a brief essay stating reasons for interest in the program and career goals to the Psychology Graduate Secretary.
5. Receive approval from the Departmental Graduate Education Committee.
6. International graduate student applicants whose native language is not English are required to submit a score for the Test of English as a Foreign Language (TOEFL) or for the International English Language Testing System (IELTS). A total score of 92 on the iBT TOEFL (equivalent to 580 in the TOEFL) is required.

**These are minimum requirements. Admission is competitive.*

Degree Requirements

The Ph.D. in Psychology requires a minimum of 75 semester credits of graduate work beyond the baccalaureate, including a masters project and a dissertation based on the student’s original research. A maximum of 36 credits may be transferred from a completed masters degree program with the approval of the program director.

Required Courses

Cognitive Neuroscience doctoral students are required to complete 9 credits of departmental core course requirements established across majors in the Department, along with specialized content courses and courses involving directed independent effort, as listed below:

(a) Common core courses (9 credits)

Statistics/Methodology courses (9 credits minimum)

(b) Cognitive Neuroscience Content Courses (15 credits drawn from the following 3 credit courses and approved by the major area director):

DEP 5058 Bio-Behavioral Development
EXP 5667 Cognitive Neuroscience
EXP 5508 Applied Cognitive Psychology
EXP 5527 Memory and Consciousness
ZOO 5785 Advanced Neurobiology or PSB 6247 Biological Bases of Behavior
PSB 6215 Human Neuroanatomy
CBH 5256 Animal Cognition
CLP 6426 Neuropsychology
PHZ 6706/PSB 6350 Cognitive Neuroimaging Methods I
PHZ 6707/PSB 6351 Cognitive Neuroimaging Methods II

(c) Supervised research/independent study/field experience/internship courses (18 credits)

(d) Electives (12 credits approved by the major area director)

(e) Master's Project (6 credits supervised research)

(f) Comprehensive exam

(g) PSY 7980 Ph.D. Dissertation (15 credits)