Neuroscience, PhD

GCBMENPHD

Are you interested in recent breakthroughs pertaining to the function of the nervous system and disease? In conducting innovative research in basic science? This interdisciplinary training program provides you a strong foundation in molecular, cellular, systems, and behavioral neuroscience, preparing you for a wide range of careers.

Program description

Degree awarded: PHD Neuroscience
Neuroscience is the scientific study of the nervous system. Studies in neuroscience can be multifaceted and combine physiology, anatomy, molecular biology, developmental biology, cytology, computer science and mathematical modeling to understand the fundamental and emergent properties of the many different cells in the brain and how they interact and coregulate each other.

Students integrate several levels of analysis --- molecular, cellular, systems, behavioral and cognitive --- to investigate basic, translational and clinical questions about the relationship between the brain and behavior.

The PhD program in neuroscience includes aspects of graduate-level training from many different units on campus as well as from the program's partner institutions distributed across the greater Phoenix area. Partner institutions include Barrow Neurological Institute, Translational Genomics Research Institute, University of Arizona College of Medicine and Sun Health Research Institute.

At a glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe

Degree requirements

84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

Required Core (8 credit hours)
BIO 610 Introduction to Responsible Conduct of Research in Life Sciences (1)
NEU 556 Human Systems Neuroscience (4)
NEU 576 Advanced Cellular and Molecular Neuroscience (3)

Electives or Research (58 credit hours)

Other Requirements (6 credit hours)
NEU 558 Neuroscience Journal Club (3)
NEU 591 Seminar (3)

Culminating Experience (12 credit hours)
NEU 799 Dissertation (12)

Admission requirements

Applicants must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Regular admission may be granted to applicants who have achieved the minimum cumulative GPA requirement or better in the last two years of work leading to a bachelor's degree and who are competitive in the applicant pool as evidenced by letters of recommendation. Particular attention is paid to research experience and overall preparation in problem-solving abilities as evidenced by previous coursework and research experiences.

There are no specific undergraduate course requirements other than those implied by the degree requirements described above. Most students are expected to have had coursework in biology, chemistry and math.

All applicants must submit:

1. graduate admission application and application fee

2. official transcripts
3. academic record form
4. personal statement
5. curriculum vitae or resume
6. three letters of recommendation
7. proof of English proficiency

Additional Application Information
An applicant whose native language is not English must provide proof of English proficiency regardless of their current residency.

Research experience is a desired qualification.

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about ASU tuition and financial aid options to find out which will work best for them.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Apply core neuroscientific concepts to address fundamental questions regarding nervous system function and associated pathologies.
- Execute an independent research plan of their own design that tests hypotheses related to neuroscience.
- Effectively communicate neuroscientific concepts, both orally and in writing.

Career opportunities

A doctorate in neuroscience provides strong preparation for academic careers at every level, from community colleges to research universities. Graduates also apply the skills and knowledge obtained in this program in government careers in federal and state agencies, in industry (biotech, medical or pharmaceutical), as well as in nongovernmental organizations.

Career examples include:

- health care scientists in academic, private and industrial labs
- principal investigators in government labs and nonprofit organizations
- professors or instructors in universities and colleges
- science teachers in elementary and high schools

Contact information

School of Life Sciences | LSA 181
sols.grad@asu.edu | 480-965-1768