PROGRAM GOALS AND EXPECTED LEARNING OUTCOMES

Neuroscience is the scientific study of the brain and nervous system, whose ultimate goal is to understand higher brain function at a variety of levels. The mission of the Undergraduate NSIDP is to provide students with current knowledge about brain structure and function from both a basic research and a clinical perspective, and to allow them to use this knowledge in completing independent or small-group capstone research projects. In the Neuroscience major, we invite students into an exploration of the nervous system on many different levels, from “Molecules to Mind.” Team-taught introductory courses provide a broad survey of nervous system construction and activity, while a variety of electives allow students to explore specific aspects of the brain and nervous system in greater detail. Students also have the opportunity to work with individual faculty members to engage directly in neuroscience research; many of our students have contributed significantly and substantially to independent research projects in faculty laboratories. Upon completion of the Neuroscience major, students should be able to:

1) Define the molecular, cellular, and tissue-level organization of the central and peripheral nervous system
2) Understand the properties of cells that make up the nervous system including the propagation of electrical signals used for cellular communication
3) Relate the properties of individual cells to their function in organized neural circuits and systems
4) Understand how the interaction of cells and neural circuits leads to higher level activities such as cognition and behavior
5) Generate testable scientific hypotheses and develop research plans to test these hypotheses
6) Evaluate and discuss primary research literature and evaluate the validity of hypotheses generated by others
7) Work on research projects independently and in small group settings
8) Communicate effectively orally and in writing

Opportunities for Student Involvement:
- Neuroscience Undergraduate Society (NUS): student-run club for anyone interested in Neuroscience
- Interaxon: student group that provides Neuroscience lessons and interactive activities to local K-12 classrooms
- NS 192B: Project Brainstorm: K-12 science education outreach program of Brain Research Institute (BRI), Neuroscience Ph.D., and undergraduate programs (open to all juniors and seniors)
- CruX UCLA: student group raising student awareness and interest in the emerging neurotechnology industry
- UCLA Joint Seminars in Neuroscience with the UCLA Brain Research Institute
- Undergraduate Advising Office Workshop Series (finding research positions, departmental honors, graduate school preparation, and more!)
- Neuroscience Poster Day: students present their research to family, friends, colleagues, faculty, and others
- Research Opportunities Across the Campus (during the school year and over the summer)

Contact Information for the Department:
Jaclyn Robbin & Aftin Whitten, Undergraduate Counselors for Neuroscience
1321 Gonda (Goldschmied) Neuroscience and Genetics Research Center
695 Charles E. Young Drive S., Los Angeles, CA 90095-1761
Phone: (310) 206-4407
Email: neurosci@ucla.edu

Department Website: http://www.neurosci.ucla.edu/
The Life Sciences Core Curriculum is a series of courses required of all Life Sciences majors. Upon completion of this multidisciplinary curriculum, students have the flexibility to choose the major that best suits their interests.

**Departments**

- **Ecology and Evolutionary Biology**
  Advising Office: 101 Hershey Hall / E-mail Address: eebundergrad@lifesci.ucla.edu

- **Molecular, Cell, and Developmental Biology**
  Advising Office: 128 Hershey Hall / E-mail Address: undergradmcdb@lifesci.ucla.edu

- **Psychology**
  Advising Office: 1531 Franz Hall / E-mail Address: undergraduate@psych.ucla.edu

- **Microbiology, Immunology, & Molecular Genetics**
  Advising Office: 1602B Molecular Science Building / E-mail Address: undergrad@microbio.ucla.edu

- **Integrative Biology and Physiology**
  Advising Office: 114 Hershey Hall / E-mail Address: gergel@physi.ucla.edu

- **Society and Genetics**
  Advising Office: 3360 Life Sciences Building / E-mail Address: socgen@socgen.ucla.edu

**Majors**

- **Biology** (Department of Ecology and Evolutionary Biology)
- **Cognitive Science** (Department of Psychology)
- **Computational & Systems Biology**
- **Ecology, Behavior and Evolution** (Department of Ecology and Evolutionary Biology)
- **Human Biology and Society** (Department of Society and Genetics)
- **Integrative Biology and Physiology** (Department of Integrative Biology and Physiology)
- **Marine Biology** (Department of Ecology and Evolutionary Biology)
- **Microbiology, Immunology, & Molecular Genetics** (Department of Microbiology, Immunology, & Molecular Genetics)
- **Molecular, Cell Developmental Biology** (Department of Molecular, Cell, and Developmental Biology)
- **Neuroscience**
- **Psychobiology** (Department of Psychology)
- **Psychology, B.A.** (Department of Psychology)

**Minors**

- **Applied Developmental Psychology Minor** (Department of Psychology)
- **Biomedical Research Minor** (Department of Molecular, Cell, and Developmental Biology)
- **Cognitive Science Minor** (Department of Psychology)
- **Conservation Biology Minor** (Department of Ecology and Evolutionary Biology)
- **Evolutionary Medicine Minor** (Department of Ecology and Evolutionary Biology)
- **Society and Genetics Minor** (Department of Society and Genetics)