

Bachelor of Science in Neuroscience

Neuroscience is the multidisciplinary study of neuronal and brain function. Neuroscientists study the brain's cellular, synaptic and anatomical structures, its biology, physiology and biochemistry, its evolution and development across the lifespan, and diverse forms of neural plasticity that contribute to both normal function and to many disease processes.

The ability of individual neurons to respond to changes in their synaptic inputs over time scales ranging from nanoseconds to the entire lifespan is a key and fundamental area of study in the basic neurosciences. Combining expertise in behavioral, computational, neurophysiological, cell biological and molecular biological fields, our multidisciplinary scientists conduct research elucidating basic mechanisms of brain plasticity, and the relationship between this underlying plasticity and cognitive and behavioral change. Issues related to aging, addiction, recovery of function, stress and fear, arousal, attention and cortical sensory processing are all active areas of investigation. Students interested in neuroengineering approaches will also benefit from training in the neurosciences.

The UT Dallas neuroscience program provides students with the opportunity to focus on the brain from multiple perspectives, beginning with our introductory behavioral neuroscience course and moving on to coursework concentrating on cellular, neurophysiological, anatomical, developmental, pharmacological and molecular issues. It allows undergraduates extensive interactions with neuroscientists, and encourages participation using the latest experimental methods in research laboratories.

Careers in Neuroscience

The neuroscience program is designed to prepare students for admission and advanced training in neuroscience graduate programs or in medical or dental schools, as well as for careers in related biomedical research, industry and allied health science fields. Graduates of our program are found nation- and world-wide, at prestigious universities, research institutions, hospitals and clinics.

The University's Career Center is an important resource for students pursuing their careers. Licensed counselors are available to help clarify career goals, provide strategies for mastering job interviews, writing professional cover letters and resumes and help students connect with campus recruiters.



Neuroscience at UT Dallas

- The BS in neuroscience requires 120 hours to graduate: 42 hours from the University's core curriculum, 45 hours in neuroscience courses, and 33 hours of electives.
- The neuroscience minor requires 18 credit hours, with at least 12 hours of upper-division neuroscience core courses.
- Students who wish to continue their education in the fields of medicine, dentistry or allied professional areas should register with the Health Professions Advisory Committee during their first semester.

Internships

Junior and senior neuroscience majors with at least a 2.5 GPA are eligible to receive college credit for a volunteer internship in the community.

Fast-Track

The Fast-Track program enables undergraduate students to take up to 15 hours of graduate courses that will count toward both a bachelor's degree and a master's degree in applied cognition and neuroscience, communication disorders, and human development and early childhood disorders. Students must have at least 90 credit hours and meet the graduate admission requirements to qualify.

School of Behavioral and Brain Sciences

The School of Behavioral and Brain Sciences is focused on the intersection of mind, brain and behavior. Through the school's research-intensive culture, our professors and students work together to unravel mysteries that will improve human lives. They accomplish this by translating the latest research into treatments and sharing this knowledge through community outreach.

Areas of study include:

- Child learning and development
- Cognition and neuroscience
- Psychology
- Speech-language pathology and communication disorders
- Audiology

Degrees Offered

Bachelor of Arts: Psychology*

Bachelor of Science: Child learning and development*, cognitive science, neuroscience, speech-language pathology and audiology*

Master of Science: Applied cognition and neuroscience, communication disorders, human development and early childhood disorders, psychological sciences

Doctor of Philosophy: Cognition and neuroscience, communication sciences and disorders, psychological sciences

Doctor of Audiology: Audiology

*May be combined with a teacher certification degree plan

Research Centers

In addition to the many research opportunities in faculty labs, students can also gain valuable experience through the school's four affiliated centers committed to research, treatment and outreach.

- **Callier Center for Communication Disorders** – The center is a national leader in providing care for children and adults with a wide variety of speech, language and hearing disorders. Faculty members support the center's clinical services by engaging in research to provide the latest information on causes, treatments and prevention of communication disorders.
- **The Center for BrainHealth** – This center has a unique mission: to understand the brain's ability to restore or protect healthy function, to protect the brain from unnecessary mental decline and to heal the brain through treatments that regenerate function. To accomplish its mission, the Center for BrainHealth unites cutting-edge technologies in brain science with the intellectual talent of world-class scientists and clinicians, thereby advancing cognitive treatments and brain repair across diseases.

- **The Center for Vital Longevity** – This research center is focused on understanding and expanding the capacity of the aging mind. Center researchers use cutting-edge brain imaging technologies and advances in cognitive science to understand how the brain changes from young to old adulthood, the consequences of neural aging for everyday function and what interventions show promise for slowing cognitive aging.
- **The Center for Children and Families** – The center's research, programs and community outreach activities are organized around parenting healthy families, strengthening interpersonal relationships and enhancing thinking and learning.

To learn more about the research centers affiliated with the School of Behavioral and Brain Sciences and to view a complete list of the school's research labs, visit utdallas.edu/bbs/research.

Additional Facts about BBS

- BBS enrollment has increased by almost 50 percent during the last seven years.
- The graduate programs in audiology and speech-language pathology are both nationally ranked in the top five percent, according to *U.S. News & World Report*.
- The school is home to one of the state's largest concentrations of child development experts.
- Since September 2008, BBS faculty members have received close to \$35 million in research funding.
- BBS has more than 1,200 undergraduate students and more than 460 graduate students.

Contact Information

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