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BRIGHAM YOUNG UNIVERSITY  
**NEUROSCIENCE CENTER**  
*Graduate Programs*



OUR COMMUNITY

UTAH

#1 fiscal stability  
#1 economic outlook  
#2 health-care quality  
#3 most-livable state  
#3 best state for business  
#4 community engagement  
Known for the “Greatest snow on earth”  
13 National Parks, Monuments, and Recreation Areas  
Host to the Sundance Film Festival

PROVO

#1 in job growth  
#1 fastest growing economy  
#1 most compassionate city  
#2 best city for millenials  
Thriving music scene  
Two LDS temples  
Nearby ski resorts

OUR UNIVERSITY

BYU

#1 largest religious/private university in the U.S.  
#3 Forbes America’s Best Value Colleges  
#3 top university for engaged learning  
#4 graduates with the least debt  
#5 in graduates earning research doctorate degrees  
Nationally recognized athletic program  
Library consistently ranked as one of best in the U.S.  
Visionary undergraduate mentoring program

STUDENTS AND PROGRAMS

31,000 undergraduate students  
3,000 graduate students  
26 doctoral programs, 68 master's programs  
Students from all 50 states and 105 countries  
65% of students speak a second language

**SOURCES:** US News Best States, 2018; American Legislative Exchange Council, 2017; National Park Services, 2018; Forbes Best States for Business, 2017; Forbes Best Places for Business and Careers, 2017; SpareFoot Moving Guides, 2017; Realtor.com, 2017; Apartment List, 2017; Wall Street Journal, 2016; US News Rankings, 2016; Forbes Best Value Colleges, 2018; Survey of Earned Doctorates, 2017.

OUR DEPARTMENT

ABOUT NEUROSCIENCE

Neuroscience is the field of study that encompasses the development, structure, and function of the central nervous system and its role in behavior. The interdisciplinary nature of neuroscience requires training in biology, genetics, physiology, molecular biology, chemistry, physics, engineering, psychology, stastics, calculus, and research design and analysis.

FACULTY

27 full-time faculty  
Productive researchers, passionate teachers, and supportive mentors

RESOURCES

Research-dedicated MRI scanner  
EEG equipment  
Animal facilities  
Eye-tracking lab  
Up-to-date computers and classroom technology  
Analysis software (SPSS, SAS, Stata, etc.)  
Funding for research and travel

OUR GRADUATE PROGRAMS

DEGREE PROGRAMS

Neuroscience, MS

Neuroscience, PhD

FINANCIAL SUPPORT

Graduate students may receive financial support in the form of complete or partial tuition remission, teaching assitantships, and research assistantships.

APPLICATION AND ADMISSION

Fall-semester entrance only  
Application deadline: **January 15th**  
*(date subject to change, check website to confirm)*  
See **NEUROSCIENCE.BYU.EDU** for more information

FACULTY RESEARCH INTERESTS

PHYSIOLOGY AND DEVELOPMENTAL BIOLOGY

- Chronic Pain
- Learning and Memory
- Reward/Addiction Pathways
- Electrophysiology
- Pharmacology
- Molecular Biology/ Molecular Neuroscience
- Synaptic plasticity
- Epilepsy and abnormal brain states
- Alzheimer’s and abnormal brain states
- Genetic components of Alzheimer’s disease
- Nervous system development
- Neurotransmitter receptors and synaptic transmission
- Development and formation of neurocircuits at a genetic and molecular level
- Neurons involved in sensory systems
- Membrane biophysics

HUMAN DEVELOPMENT

- Socialization of behavioral and psychophysiological characteristics
- Neural control on cardiac vagal tone
- Developmental changes in cognitive abilities
- Development of social problem-solving

ENGINEERING

- Movement and movement disorders
- Technology to help with movement disorders
- Biomechanics, robotics, and rehabilitation
- Peripheral nerve regeneration

PSYCHOLOGY

- Neuropsychiatric diseases
- Neuromorphometrics
- Primary Progressive Aphasia (rare language-based dementia)
- Neurologic populations (e.g. TBI, stroke, epilepsy)
- Neuroimaging techniques and their correlation with cognitive function
- Neurodegenerative diseases, effect of chronic infection and inflammation on such
- Effect of parents, other environmental influences on developing brain and behavior
- Addiction
- Social relationships, physical health and longevity
- Mental illness
- Neurophysical outcomes of critical illness
- Memory and effect of brain injury
- Mechanisms and functions of sleep
- Neuropsychology
- Reading and language
- Limbic system and development of autism

AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

- Electrophysiology of language, brain function, and auditory development
- Speech and language disorders
- Psychoacoustic function

BYU Neuroscience

