FACULTY RESEARCH INTERESTS

Neurons involved in sensory system

AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

Membrane biophysics

EARNS DOCTORATES, 2017.

2016; US News Rankings, 2016; Forbes Best Value Colleges, 2018

SOURCES:

BYU

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, Memorials, 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 millennials

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

5,000 graduate students

26 doctoral programs, 68 master’s programs

Students from all 50 states and 105 countries

63% of students speak a second language

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, statistics, 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 DEPARTMENT

DEGREE PROGRAMS

Neuroscience, MS

Neuroscience, PhD

FINANCIAL SUPPORT

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

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

AUDIOLGY AND SPEECH-LANGUAGE PATHOLOGY

• Electrophysiology of language, brain function, and auditory development

• Speech and language disorders

• Psychoacoustic function