

# NEUROSCIENCE (SCIENCE)

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## Learning Outcomes

Students graduating from this program will be able to:

1. Explain the structure and function of the nervous system at the molecular, cellular, and systems levels with respect to:
  - a. Their role in generating behavior, cognition, and emotion.
  - b. The processes associated with neurodevelopment, homeostasis, and aging.
  - c. The development and expression of neurological and mental health diseases.
2. Describe the mechanisms by which neurons and other cells in the nervous system communicate via chemical and electrical signals.
3. Explain the experimental approaches that can be used to interrogate the anatomy, physiology, and function of the nervous system and how these can lead to dysfunction and disease.
4. Demonstrate the ability to develop and test hypotheses regarding the structure, function, and diseases of the nervous system.
5. Develop a rigorous experimental approach to test hypotheses about the function, anatomy, and physiology of the nervous system.
6. Conduct neuroscience research in which experiments are performed in a rigorous and ethical manner consistent with professional standards.
7. Develop the ability to communicate research results in a clear and comprehensive manner in both oral and written formats.