

NEUROSCIENCE (HERSHEY)

Learning Outcomes

Master of Science (M.S.)

1. **KNOW:** Graduates will demonstrate a) a broad base of the knowledge and concepts required to understand the molecular, cellular, and organismal processes related to neuroscience; b) a broad understanding of experimental approaches used in neuroscience investigations; c) specific knowledge within their area of research interest, and d) the highest standards of research ethics.
2. **APPLY/CREATE:** Graduates will participate in the development of experimental approaches to test hypotheses and ideas of current relevance to their research interests.
3. **APPLY/CREATE:** Graduates will perform experiments that address current problems in neuroscience leading to rigorous and reproducible outcomes.
4. **THINK:** Graduates will begin developing skills to evaluate experimental approaches and the results of their research.
5. **COMMUNICATE:** Graduates will convey ideas, experimental approaches, and results in clear and concise oral and written formats.
6. **PROFESSIONAL PRACTICE:** Graduates will collaborate in a collegial and ethical manner with other professionals within their field or with diverse scientific backgrounds.
7. **PROFESSIONAL PRACTICE:** Graduates will evaluate potential careers to pursue following graduation and choose their specific career interest(s).

Doctor of Philosophy (Ph.D.)

1. **KNOW:** Graduates will demonstrate a) a broad base of the knowledge and concepts required to understand the molecular, cellular, and organismal processes related to neuroscience; b) a broad understanding of experimental approaches used in neuroscience investigations; c) in-depth knowledge within their specific areas of research interests, and d) the highest standards of research ethics.
2. **APPLY/CREATE:** Graduates will creatively synthesize theory and literature to generate questions, ideas, or hypotheses addressing current problems in human health and disease related to the central and peripheral nervous system, and will devise critical experimental approaches to test these ideas and hypotheses.
3. **APPLY/CREATE:** Graduates will perform independent and original research studies that address current problems in neuroscience leading to rigorous and reproducible experimental outcomes.
4. **THINK:** Graduates will critically evaluate experimental approaches and the results of their research and the research of others.
5. **COMMUNICATE:** Graduates will convey ideas, experimental approaches, and results in clear, concise, well-organized papers, posters, proposals, oral presentations, and discussions.
6. **PROFESSIONAL PRACTICE:** Graduates will collaborate in a collegial and ethical manner with other professionals within their field or with diverse scientific backgrounds.
7. **PROFESSIONAL PRACTICE:** Graduates will evaluate potential careers to pursue following graduation and choose their specific career interest(s).