NEUROSCIENCE (MD/PHD)

The Neuroscience PhD Program provides students with a fundamental understanding of nervous system structure and function as well as the opportunity to develop the analytical and communication skills necessary to independently and collaboratively ask and answer novel and impactful research questions that advance our current understanding of central and peripheral nervous system function, disease processes and potential therapeutic targets.

MD/PHD at Loyola University Chicago

Loyola University Chicago Stritch School of Medicine offers a program designed for exceptional students to earn both an MD and a PhD degree, in preparation for a career in academic medicine. The program is flexible, individually tailored, and provides an opportunity to work concurrently toward an MD and a PhD degree in one of the six academic tracks available to Integrated Program in Biomedical Science (IPBS) PhD students:

- Biochemistry, Molecular, and Cancer Biology
- Cell and Molecular Physiology
- Integrative Cell Biology
- Molecular Pharmacology and Therapeutics
- Microbiology and Immunology
- Neuroscience

Ideal candidates for this program should demonstrate a strong interest in and exceptional motivation toward research. Our MD/PhD candidates undergo a challenging and excellent research training experience tailored to the interests and goals of each student. Students actively participate in presenting their respective research and/or clinical work at appointed monthly MD/PhD meetings.

The MD/PhD Program benefits from all the biomedical science disciplines of the Graduate School located at Loyola University Chicago Health Sciences Campus. Their teaching programs are integrated with those of the medical school. The PhD degree may be earned in any of the academic tracks listed for the IPBS. The ultimate goal is for the student to achieve both degrees in seven to eight years, depending on the student's goals, background, workload, and specific course schedule.

Curriculum

The MD/PhD curriculum consists of the first two years of medical school, then three to four years of graduate school in one of the IPBS tracks, followed by two more years of medical school. MD/PhD students must complete all degree requirements for the MD degree and the PhD degree with the IPBS. In addition, MD/PhD students must submit a competitive NIH F30/F31 or similar fellowship or funding consideration. The MD curriculum can be found on the Stritch School of Medicine website (https://www.luc.edu/stritch/education/doctorofmedicine/). The degree requirements for the PhD in Neuroscience portion of this dual degree program can be found below.

Course Requirements

The PhD in Neuroscience requires a total of 48 credit hours. Students in the MD/PhD program will complete 24 credit hours in the PhD program and transfer 24 hours from their MD coursework. Core IPBS requirements and track courses are detailed below.
Learning Outcomes
Upon completion of the MD/PhD program, students will be able to:

- Demonstrate a general knowledge base in the biomedical sciences with an understanding of fundamental biochemical, molecular and cellular processes and common biomedical research methods.
- Demonstrate a thorough conceptual understanding of structure and function of the nervous system as well as the biology and function of cells of the nervous system.
- Propose original biomedical research questions and design experiments to address these questions.
- Execute critical experiments to address the relevant biomedical research questions.
- Search and critically evaluate the scientific literature and scientific data.
- Clearly and effectively communicate scientific information in both oral and written forms.
- Incorporate high standards of ethics into research design, execution, data interpretation and presentation.