

# NEUROSCIENCE (CONCENTRATION)

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## Program Guidelines & Mission

**Neuroscience** is the study of the nervous system, seeking to understand not only the biology of the brain and nervous system, but also how chemical and cellular functions relate to the cognitive processes and behavior of organisms. Thus, neuroscience is founded on the tenet that an understanding of the brain and nervous system is only possible when approached from an interdisciplinary perspective.

The **Neuroscience Concentration** at Denison is designed to offer students an interdisciplinary perspective on the nervous system and behavior via courses in Biology, Computer Science or Data Analytics, Philosophy, and Psychology. This design is rooted in the liberal arts, providing a study with breadth and depth of study as students build connections across courses. The courses are intended to complement, and potentially overlap with, the student's major and general education requirements. Through these courses, many of which have labs, students will cultivate their understanding of the scientific method, as well as various research designs and the corresponding data-analysis techniques. They will also be introduced to different ways of thinking about and conceptualizing problems through courses in philosophy and either computer science or data analytics. As they continue through advanced course work in biology and psychology, students will develop depth in the concentration by learning more detailed and advanced topics. They will also refine their "hands on" laboratory skills, including experimental design, data collection, analysis and scientific writing. Finally, the students participate in a senior seminar in neuroscience in which they dive deeply into recent neuroscience literature, applying knowledge from other courses to current questions in the field, and practicing their skills in verbal and written communication.