A GUIDE FOR WHAT'S NEXT

Neuroscience

Learning Goals

1. To demonstrate a broad intellectual foundation in neuroscience, including molecular, cellular, cognitive, philosophical, and systems-level perspectives, and to understand how those perspectives are interrelated.
2. To comprehend the significance of the scientific method as a route to understanding, including the importance of objective observation, hypothesis development, experimental design, statistical analysis, analytical reasoning, and arriving at conclusions based upon evidence.
3. To learn to critically assess neuroscience literature.
4. To develop written and oral communication abilities, in order to convey the essence of neuroscience to both technical and nontechnical audiences.
5. To become proficient with neuroscience research techniques.
6. To develop both the ability to work collaboratively, as well as independently, on scholarly projects because that reflects the nature of neuroscientific research.

Middlebury College
Center for Careers and Internships

About the major

Neuroscience is an interdisciplinary field, drawing upon biology, psychology, and philosophy to understand the mind, how the brain functions, and the role of the nervous system in normal and abnormal behavior.

The neuroscience major curriculum represents the interdisciplinary nature of the field. The core curriculum consists of seven courses that cover the biological, psychological, and philosophical roots of neuroscience, as well as three elective courses that majors select from an array of course offerings in the three core disciplines. In addition, neuroscience majors complete a minimum of one semester of senior work, either as part of a small seminar class or by conducting research with a faculty member.

> "Studying neuroscience taught me frameworks for how to think critically, how to address problems creatively, and how to collaborate effectively. I was encouraged to take risks on new lab experiments, and those experiences provided me with the foundation to be able to bring new ideas to my work every day."
>
> —Kathryn Benson '13
> *Scale Success Manager, Quip*

The neuroscience curriculum offers extensive hands-on laboratory experience for students as part of the major's formal course work, senior thesis work, and student-faculty research collaborations. Neuroscience researchers at Middlebury study a wide array of topics such as adult neurogenesis, the development of alcohol tolerance, the neural bases of cognitive flexibility, neural control of behavior, sex differences in spatial processing, the physiological bases of psychological trauma, and the bases of memory.

Neuroscience faculty and students utilize state-of-the-art facilities for both laboratory-based course work and scholarly research.

Reasons you might choose this major

- You have an interest not just in the biological sciences, but also in human and animal behavior.
- You are always thinking about the processes involved in understanding why and how people do things.
- You may want to do research, be in a lab or small seminar group, or work closely with faculty and students on major challenges.
- For you, one science isn't enough—you want to engage in biology, in computer science, in mathematics—and an interdisciplinary approach built on the liberal arts tradition is the way to go.
- You want a solid foundation for a future career in medicine, psychology, or any number of other paths both related and unrelated.

Translating Learning into Professional Competencies

Throughout your time at Middlebury, you will develop and enhance the following core professional competencies, skills, and dispositions highly valued by employers that will prepare you for leadership and success in any given field:

Critical Thinking: Exercise sound reasoning to analyze issues, make decisions, and overcome problems.

Oral/Written Communications: Articulate thoughts and ideas clearly and effectively in written and oral forms.

Teamwork/Collaboration: Build collaborative relationships with colleagues and customers from diverse backgrounds.

Leadership: Leverage the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others.

Professionalism/Work Ethic: Demonstrate personal accountability and effective work habits.

Global/Intercultural Fluency: Value, respect, and learn from diverse cultures, races, ages, genders, sexual orientations, and religions.

Digital Technology: Leverage existing digital technologies ethically and efficiently to solve problems, complete tasks, and accomplish goals.

Career Management: Identify and articulate one's skills, strengths, knowledge, and experiences relevant to career goals, and identify areas necessary for professional development.

Where neuroscience program majors go

Applying your learning through internships . . .

Students pursue internships and research in a variety of fields, enabling them to apply their liberal arts learning in real-world settings. Internships, research, and self-directed projects enrich your academic experience and help prepare you for life after Middlebury. Students have interned or done research at the following:

Philadelphia Zoo

The Feinstein Institute for Medical Research

Special Olympics Vermont

Columbia University Mailman School of Public Health

Neural Stem Cell Institute

Queen City Memory Café

Social Development and Learning Lab at Boston University

Open Door Clinic

The Neurology Foundation--Brown University

Saxelab Social Cognitive Neurosciences (MIT)

Stowers Institute for Medical Research

McLean Hospital

Third Root Community Health Center

Dartmouth Hitchcock Medical Center

The Scripps Research Institute

Massachusetts General Hospital

Oregon Health and Sciences University

Marine Biological Laboratory

The Child Health Institute at Rutgers Robert Wood Johnson Medical School

National Institutes of Health

University of Vermont, Communication Sciences and Disorders Department

. . . leading to meaningful, dynamic, and engaging career paths.

See just some of the many interesting ways our graduates have applied their liberal arts learning to engage the world. If you want to see what other Middlebury alumni are doing now, log into Midd2Midd and search by major. **go/midd2midd**

Connecticut Children's Medical Center, *Associate Medical Director of Quality and Safety*

OHS-Red Sweater Project, *Research Associate, Public Health Advisor*

Rutgers University, *Neurobiology Researcher*

NYU Langone Medical Center, *Patient Experience Designer*

Portsmouth Regional Hospital, *Neurosurgeon*

Boston Medical Center, *Gastroenterologist*

Frazier Healthcare Partners, *Vice President*

Community Behavioral Health (CBH), *Senior CQI Analyst*

Grantmakers In Health, *Program Director*

NYC Department of Education, *Director of Special Projects, Core Curriculum Team*

Urban Wellness, *Clinical Psychologist*

MITRE, *Senior Policy Analyst*

Global Emergency Care Collaborative (Uganda), *Research Coordinator and Program Administrator*

Hustle Con, *Cofounder and President*

U.S. Army/Center for Applied Brain & Cognitive Science, *Cognitive Scientist*

The International Center for Theoretical Physics, *Science Writer-Public Information Office*

Massachusetts General Hospital, *Clinical Research Coordinator, Neuroendocrine Unit*

Harvard University, *Culture, Cognition, and Coevolution Lab Manager*

Pictometry International Corp., *Geomatics Specialist*

JP Morgan, *Anti-Money Laundering Operation Analyst*

Friendship Hospital for Animals, *Staff Veterinarian*