

NEUROSCIENCE

Major Map

Study the biological and computational basis of brain function, cognition and behavior.

Neuroscience is the study of the biological mechanisms that underlie behavior and cognition. The **Bachelor of Arts degree in Neuroscience** in the College of Letters & Science affords students the opportunity to learn how the brain works at the molecular, biochemical, and cellular levels; how it processes information; and how it generates sensation, action, emotion, and high-level cognition. Students learn about the nature of neural computation in the brain, the causes of neurological and neuropsychiatric disease, and how emerging neurotechnologies are uniting brain science and engineering.

HIGHLIGHTS

- Engage in **undergraduate research** on a faculty-initiated project or your own research topic.
- Conduct research and present your findings as part of the **Neuroscience Honors Program**.
- Get teaching experience as a **DeCal facilitator**.
- Help other students as a Neuroscience Peer Advisor.



Photo credit: Elena Zhukova

“

Neuroscience is clearly in its era of major discovery. It's happening now.

”

—Professor Dan Feldman, Neuroscience Chair

UC Berkeley

UNDERGRADUATE PROGRAM

Neuroscience

CURRICULUM

The Neuroscience major combines biology, psychology, behavior, and computation, providing a broad education that spans the interdisciplinary field of neuroscience. Lower division prerequisites include chemistry, biology, calculus/stats and physics. Upper division courses include:

- Tier 2 Core Neuroscience Sequence, which will span molecular, cellular, circuit-systems, cognitive and behavioral neuroscience
- Scientific Communication course
- Neuroscience Lab course
- Tier 3 Elective courses, like Neurobiology of Disease, Cognitive Neuroscience, Neurotechnology
- Outside Perspective Course in STEM or neuroscience-related field
- An optional senior capstone experience exploring an in-depth research question

Learn more at neuroscience.berkeley.edu/

STUDY OPTIONS

Students who are interested in studying the biological and computational basis of brain function, cognition and behavior should join the new Neuroscience major. Students who are interested in mind and cognition from the psychological perspective should join the psychology or cognitive science majors. The neurobiology emphasis within Molecular and Cell Biology (MCB) is no longer accepting new majors. Thus, students who are specifically interested in studying neuroscience from a biological perspective should join the Neuroscience major.

DECLARING THE MAJOR

Upon acceptance to UC Berkeley, you are admitted to the College of Letters & Science as an undeclared student. To **declare the Neuroscience major**, complete the major prerequisites and submit our online declaration form to get started. The Neuroscience Advising staff will review your form and then invite you to a declaration meeting.

If you entered UC Berkeley as a freshman, we prefer that students declare by the end of their second year. However, declaring during your third year is generally fine. If you entered UC Berkeley as a transfer, declare the major before you begin your second semester.

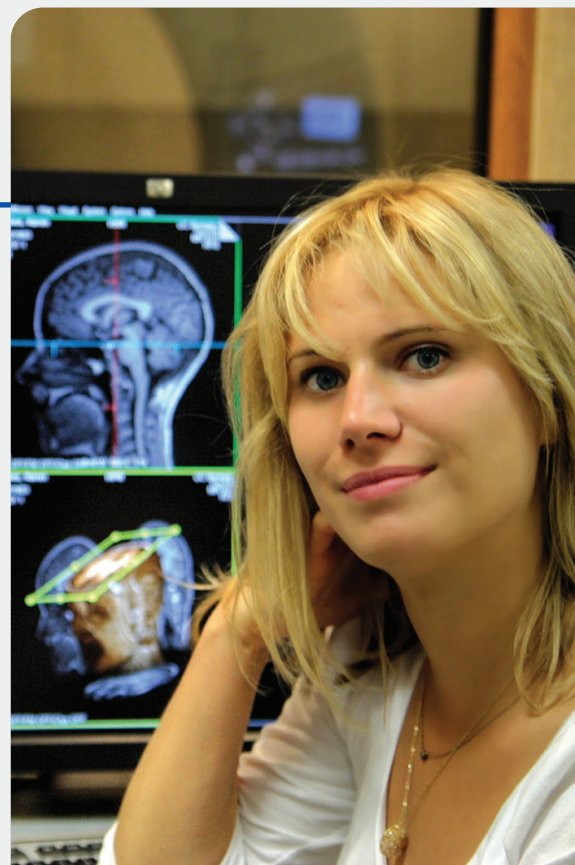


Photo credit: UC Berkeley

WHAT CAN I DO WITH MY MAJOR?

The Neuroscience major prepares students for many careers and post-baccalaureate training programs, including health-related professional programs (e.g., medicine, dentistry, optometry, pharmacy), PhD training programs, biotechnology, teaching, science communication, data science, and scientific research.

UC Berkeley offers a number of career resources for students studying Neuroscience. The College of Letters & Science offers **advising** for undergraduates pursuing medical or health professions programs, law school, or masters and PhD programs. Additionally, **Berkeley Career Engagement** provides career and graduate school advising, job and internship listings, and events such as career and graduate school fairs.



SPOTLIGHT

Richard Ivry, Faculty

Richard Ivry is Distinguished Professor of Psychology and Neuroscience and serves as faculty advisor for the Neuroscience undergraduate program.

"Berkeley has created a unique neuroscience major that immerses our majors in the fascinating world of the brain and nervous system. The breadth and depth of the curriculum—from genetics through consciousness, as well as hands-on lab experience—is designed to ensure students gain a deep understanding of the diverse scientific methods used to unlock the mysteries of the mind. This rich and dynamic foundation will prepare you for careers in fields such as medicine, biological sciences, biotechnology, and artificial intelligence."

EMPLOYMENT

Alumni find employment in a variety of fields and industries after completing graduation. Examples include:

Academic or Industry Research
Biotech
Data Science
Neurotech
Pharmaceutical
Science Communication
Teaching

GRADUATE STUDY

Alumni pursue graduate education to gain more depth of knowledge in their field as well as prepare for jobs that require advanced degrees. Examples include:

Computation-related Disciplines
Dentistry
Medicine
Neuroscience
Nursing
Optometry
Other Biology-related Disciplines
Pharmacology
Pharmacy
Physiology
Veterinary Medicine

FOUR-YEAR STUDENT TIMELINE

Neuroscience

	FIRST YEAR	SECOND YEAR
Plan your studies	<p>Start exploring with L&S 1 and the L&S New Freshmen Student Guide.</p> <p>Visit L&S Advising for help with major exploration and degree requirements.</p> <p>Explore Neuroscience with NEU 77 and a Freshman Seminar.</p> <p>Familiarize yourself with the Neuroscience major and sample program plans; begin satisfying lower division requirements for the major.</p> <p>Learn how to prepare for office hours and build relationships with faculty.</p>	<p>Meet with your major and college advisor to discuss your academic plans.</p> <p>Keep working on lower division requirements; if complete, talk with your major advisor about starting upper division courses like NEU 100A-100B, the Scientific Communication course, or an Outside Perspectives course.</p> <p>Enrich your studies with a certificate, course thread, or minor such as Science, Technology, and Society.</p> <p>Verify you have completed all major prerequisites and declare the major.</p>
Engage outside the classroom	<p>Get involved with a Neuroscience or other student organization.</p> <p>Join Berkeley Connect for 1:1 mentoring and to meet peers with shared interests.</p> <p>Visit Berkeley Discovery to get started with research, entrepreneurship, public service, and creative projects.</p> <p>Find community and support in the Biology Scholars Program.</p> <p>Explore research opportunities on the OURS and Neuroscience websites.</p>	<p>Check out events in the Neuroscience Department and Helen Wills Neuroscience Institute.</p> <p>Develop your skills in the Berkeley Student Leadership Academy.</p> <p>Build your research skills by assisting faculty projects in URAP or the Bakar Ignite Scholars Program.</p> <p>Look into the Stent Undergraduate Research Scholars Program and REP-Neuroscience Program.</p> <p>Promote STEM to local youth with Bridging Berkeley, EYH, or SENDforC.</p>
Pursue your career goals	<p>Visit UHS Career Counseling and Berkeley Career Engagement.</p> <p>Start exploring career paths for the major.</p> <p>Begin making a plan to get career ready.</p> <p>Create or update your resume and LinkedIn profile.</p> <p>Use Handshake to start connecting with career events and opportunities.</p>	<p>Meet with a BCE career educator to discuss career options and goals.</p> <p>Begin building your network and exploring career fields via job shadowing and informational interviews.</p> <p>Pursue an internship to build skills and explore fields.</p> <p>Considering graduate school? Explore resources from the Graduate Division, L&S Advising, and BCE; look into the UC LEADS program.</p> <p>Check out CalTeach if interested in teaching and STEM education.</p>

UC Berkeley

THIRD YEAR

Begin taking **upper division requirements** in the major (some are taught only once every other year).

Review your **degree progress** with your major and college advisor.

Look into **studying abroad** and learning a **foreign language**.

Consider applying to the **Neuroscience Honors Program**; look into the **Haas Scholars** and **SURF** programs.

Help other students as a Neuroscience Peer Advisor.

Check out **College Corps** and the **Haas Public Service Leaders Program**.

Browse grants from the **Greater Good Science Center**.

Interested in teaching? Give it a try by teaching your own **DeCal course**.

Welcome new students to Berkeley as a **Golden Bear Orientation Leader**.

Talk with professors about research conferences to present at or attend.

Speak with faculty, advisors, and career educators about post-graduate options.

Check out pre-health resources from **BCE** and **L&S Advising**.

Join a professional association such as the **Society for Neuroscience**.

Interested in public service? Look into the **John Gardner Fellowship**, **Peace Corps**, **Teach for America**, and **US Department of State**.

FOURTH YEAR

Pursue an independent research project as part of a **Capstone Experience** or **NEU 191 Senior Research Thesis** (if not doing the honors program).

Finish all upper division requirements for the major.

Complete any remaining **degree requirements** and **prepare for graduation**.

Present at or attend the Neuroscience Poster Session.

Submit a course research project for the **Library Prize**, **American Cultures Student Prize**, or other awards.

Get published! Submit your thesis or research paper to the **Berkeley Scientific Journal** or **Cell Mates (Undergraduate Biology Journal)**.

Pursue a special project after graduation with the **Stronach Prize**.

Check in with a BCE **career educator**.

Start connecting with **alumni groups** and **events**.

Apply to graduate school or post-graduate programs.

Meet-employers at **info sessions**, **on-campus recruiting**, and **career fairs**.

Utilize **job search tools** from BCE and apply for job opportunities.

Learn about **alumni career services**.

SUMMER

Make progress on degree requirements with a **Summer Sessions** course; the lower division requirements and some Outside Perspective courses are offered over summer.

Go abroad through **Berkeley Study Abroad** or **UCEAP**.

Look into a summer internship with **Cal in the Capital**, **Cal in Sacramento**, or **Berkeley Global Internships**.

Pursue a **summer minor or certificate**—look into programs in **Cognitive Science** or **Data Science**.

Learn about applying to graduate school with the **PhD Admissions Bootcamp**.

Use this major map to help plan your undergraduate experience, including academic and co-curricular opportunities. Activities in this map are suggestions—always consult with your advisors whenever possible.

TRANSFER STUDENT TIMELINE

Neuroscience

	FIRST SEMESTER	SECOND SEMESTER
Plan your studies	<p>Get your bearings with a MCELLBI 198: IB/MCB/NEU Transfer Seminar, L&S 198 Transitioning to Cal, and the L&S New Transfer Student Guide.</p> <p>Review sample program plans; meet with your major and college advisor to discuss your academic plans.</p> <p>Explore neuroscience research with NEU 77 or new topics in student-facilitated DeCal courses.</p> <p>Learn how to prepare for office hours and build relationships with faculty.</p> <p>Verify you have completed all major prerequisites and declare the major.</p>	<p>Meet with your major advisor to discuss your academic plans and courses.</p> <p>Look into studying abroad and learning a foreign language.</p> <p>Enrich your studies with a certificate, course thread, or minor such as Science, Technology, and Society.</p> <p>Consider applying to the Neuroscience Honors Program; look into the Haas Scholars and SURF programs.</p>
Engage outside the classroom	<p>Get involved with a Neuroscience or other student organization.</p> <p>Join Berkeley Connect for 1:1 mentoring and to meet peers with shared interests.</p> <p>Find support at the Transfer Student Center or Re-entry Student Program.</p> <p>Visit Berkeley Discovery to get started with research, entrepreneurship, public service, and creative projects.</p> <p>Find community and support in the Biology Scholars Program.</p> <p>Explore research opportunities on the OURS and Neuroscience websites.</p>	<p>Check out events in the Neuroscience Department and Helen Wills Neuroscience Institute.</p> <p>Build your research skills by assisting faculty projects in URAP or the Bakar Ignite Scholars Program.</p> <p>Browse grants from the Greater Good Science Center.</p> <p>Talk with professors about research conferences to present at or attend.</p> <p>Promote STEM to local youth with Bridging Berkeley, EYH, or SENDforC.</p>
Pursue your career goals	<p>Visit UHS Career Counseling and Berkeley Career Engagement.</p> <p>Start exploring career paths for the major.</p> <p>Create or update your resume and LinkedIn profile.</p> <p>Use Handshake to start connecting with career events and opportunities.</p> <p>Meet with a BCE career educator to discuss career options and goals.</p> <p>Check out pre-health resources from BCE and L&S Advising.</p>	<p>Begin building your network and exploring career fields via job shadowing and informational interviews.</p> <p>Pursue an internship to build skills and explore fields.</p> <p>Considering graduate school? Explore resources from the Graduate Division, L&S Advising, and Berkeley Career Engagement.</p> <p>Speak with faculty, advisors, and career educators about post-graduate options.</p> <p>Check out CalTeach if interested in teaching and STEM education.</p>

THIRD SEMESTER

Continue making progress towards your degree.

Review your **degree progress** with your major and college advisor.

Explore new interests in a **Berkeley Changemaker** or **DeCal course**.

Help other students as a Neuroscience Peer Advisor, Transfer Mentor for MCELLBI 198, or **Transfer Peer Advocate**.

Develop your skills in the **Berkeley Student Leadership Academy**.

Check out **College Corps** and the **Haas Public Service Leaders Program**.

Welcome new students to Berkeley as a **Golden Bear Orientation Leader**.

Look into the **Stent Undergraduate Research Scholars Program**.

Check in with a BCE **career educator**.

Join a professional association such as the **Society for Neuroscience**.

Interested in public service? Look into the **John Gardner Fellowship**, **Peace Corps**, **Teach for America**, and **US Department of State**.

Apply to graduate school or post-graduate programs.

FOURTH SEMESTER

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Complete any remaining **degree requirements** and **prepare for graduation**.

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Submit a course research project for the **Library Prize**, **American Cultures Student Prize**, or other awards.

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Pursue a special project after graduation with the **Stronach Prize**.

Meet-employers at **info sessions**, **on-campus recruiting**, and **career fairs**.

Utilize **job search tools** from BCE and apply for job opportunities.

Start connecting with **alumni groups** and **events**.

Learn about **alumni career services**.

SUMMER

Get ready for Berkeley with **RHETOR 100 Writing at the University**.

Apply to the **REP-Neuroscience Program** in summer to join a faculty lab for fall semester.

Make progress on degree requirements with a **Summer Sessions** course (finish any remaining lower division requirements, or take an Outside Perspective course).

Go abroad through **Berkeley Study Abroad** or **UCEAP**.

Look into a summer internship with **Cal in the Capital**, **Cal in Sacramento**, or **Berkeley Global Internships**.

Pursue a **summer minor or certificate**—look into programs in **Cognitive Science** or **Data Science**.

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LEARN MORE

Undergraduate Advising

Have questions about Neuroscience or choosing a major?

The Neuroscience Department offers **undergraduate advising** for students planning to major in Neuroscience. Neuroscience staff advisors are here to support you through remote and in-person appointments, plus drop-in advising options. Starting Fall 2025, Neuroscience students will also provide peer advising on the content of specific classes, help you to develop plans, and answer general questions about being a student at Berkeley. Neuroscience faculty advisors are available by appointment to discuss courses, research, and the department as a whole. For more information, visit neuroscience.berkeley.edu/academics/undergraduate/advising.

The College of Letters & Science helps students with non-major-specific academic topics, including major exploration, general program planning, finding campus resources, and pre-professional graduate programs. L&S College Advisors are available for in-person and virtual meetings. Visit lsadvising.berkeley.edu or email asklms@berkeley.edu.



Scan to explore more
Major Maps!

majormaps.berkeley.edu

Related Programs

Looking for programs similar to Neuroscience? UC Berkeley also offers the following major, minor, and certificate programs:

- **Cognitive Science**
- **Computer Science**
- **Data Science**
- **Integrative Biology**
- **Molecular and Cell Biology**
- **Psychology**
- **Public Health**



Photo credit: Steve McConnell

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