INTRODUCTION TO THE MAJOR

The Molecular and Cell Biology (MCB) major focuses on the study of molecular structures and processes of cellular life and their roles in the function, reproduction, and development of living organisms. This covers a broad range of specialized disciplines, such as biochemistry, microbiology, biophysics, molecular biology, genetics, cell physiology, cell anatomy, immunology, and neurobiology.

The MCB major provides excellent preparation for many careers and post-baccalaureate training programs, including graduate programs and health-related professional programs (e.g., medicine, dentistry, optometry, pharmacy), science writing, law school, biotechnology, teaching, and academic research.

AMPLIFY YOUR MAJOR

• Take advantage of summer research opportunities in Berkeley or beyond.
• Explore math and science education and learn teaching skills with CalTeach.
• Conduct research and present your findings as part of the MCB Honors Program.

EMPHASES IN MCB

All MCB students complete the same lower division coursework to gain critical training in Biology, Mathematics, Chemistry, and Physics. Upon declaring the major, MCB students choose an emphasis, or concentration, which determines their upper division core courses and elective courses. There are five emphases in MCB:

• Biochemistry & Molecular Biology
• Cell & Developmental Biology
• Genetics, Genomics & Development
• Immunology & Pathogenesis
• Neurobiology

MY CLASSES CHALLENGE ME TO THINK CRITICALLY IN AN EXPERIMENTAL SETTING, AND MY PROFESSORS ARE CONSTANTLY UPDATING THE COURSE MATERIAL WITH THE LATEST FINDINGS.

– Joanna Maltbaek, MCB major

HOW TO USE THIS MAP

Use this map to help plan and guide your experience at UC Berkeley, including academic, co-curricular, and discovery opportunities. Everyone’s Berkeley experience is different and activities in this map are suggestions. Always consult with your advisors whenever possible for new opportunities and updates.

Visit vcue.berkeley.edu/majormap for the latest version of this major map.
### Explore your major

- **FIRST YEAR**
  - Visit the MCB website to learn about the five emphases within the MCB major.
  - Meet with an MCB Peer advisor to discuss your options and map out a 4-year plan.
  - Enroll in Freshman Seminars on interesting topics, explore major opportunities and resources.

- **SECOND YEAR**
  - Continue completing lower division requirements.
  - Consider a minor or summer minor to complement your MCB major.
  - Talk to an MCB staff advisor to review your major requirements and discuss declaring.

- **THIRD YEAR**
  - Finish lower division requirements for the major and start your emphasis-specific upper division courses.
  - If still undeclared, visit the MCB website to start the declaration process.
  - Expand your studies with an enrichment course or elective in another department.

- **FOURTH YEAR**
  - Check your Academic Progress Report (APR) and meet with an MCB staff advisor and college advisor to ensure you are on track to fulfill all major, college, and campus requirements.
  - Finish any remaining major and college requirements.
  - Complete an optional senior honors thesis.

### Connect and build community

- **FIRST YEAR**
  - Attend the Calapalooza student activities fair and explore student organizations such as MCBUSA and MCBcDNA.
  - Form a study group and get tutoring in the Student Learning Center.
  - Follow MCB on Facebook, Instagram and Twitter.

- **SECOND YEAR**
  - Go to office hours to build relationships with MCB faculty and graduate student instructors.
  - Sign up for the MCB newsletter to find out about events happening in the department.
  - Connect with a community of biology students in the Biology Scholars Program.

- **THIRD YEAR**
  - Give back by becoming an MCB Peer Advisor or tutor at the Student Learning Center.
  - Get involved with citizen science in the community.
  - Apply for leadership positions in student organizations.

- **FOURTH YEAR**
  - Connect with faculty and advisors about future career goals and opportunities.
  - Present at or attend the MCB Fall Poster Session.

### Discover your passions

- **FIRST YEAR**
  - Visit the Office of Undergraduate Research and Scholarships to learn about research opportunities and resources on campus.
  - Take L&Ss for an introduction to the College.
  - Explore new topics in student-facilitated DeCal courses.

- **SECOND YEAR**
  - Learn about the many ways to find research in MCB-related fields.
  - Apply to the Undergraduate Research Apprenticeship Program.
  - Develop skills teaching math and science to K-12 students in the CalTeach Program.

- **THIRD YEAR**
  - Apply to summer research opportunities such as SURF and the Haas Scholars Program.
  - Apply for fellowships to fund your own research project.
  - Talk to your major advisor about the MCB Honors Program.

- **FOURTH YEAR**
  - Teach your own DeCal course.
  - Enroll in non-major courses you haven’t had time to pursue or courses that are outside your comfort zone.
  - Talk with professors about research conferences to present at or attend.

### Engage locally and globally

- **FIRST YEAR**
  - Research study abroad options for MCB students.
  - Explore volunteering opportunities on campus and in the Berkeley community such as Berkeley Free Clinic or Sutliffe Clinic.
  - Learn about community service with the Public Service Center.

- **SECOND YEAR**
  - Apply to study abroad programs to fulfill breadth or major requirements.
  - Consider the Alternative Breaks program to go on service-learning trips over school breaks.
  - Look into the Career Center’s list of health volunteer opportunities.

- **THIRD YEAR**
  - Apply for NSF Research Experience for Undergraduates at colleges around the country.
  - Attend professional association conferences for networking opportunities.
  - Explore science and policy in Washington D.C. with UCDC or Cal in the Capital.

- **FOURTH YEAR**
  - Apply for fellowships available to recent Berkeley graduates.
  - Explore gap year opportunities prior to embarking on your next academic or career adventure.

### Reflect and plan your future

- **FIRST YEAR**
  - Join Handshake to find Berkeley-specific internship opportunities and career development workshops.
  - Shadow alumni with a winter externship.
  - Visit the Career Counseling Library to explore all of the career options in MCB.

- **SECOND YEAR**
  - Meet alumni and learn about their career paths in the Career Connections Networking Series.
  - Conduct informational interviews to learn more about different career fields.
  - Attend internship fairs.

- **THIRD YEAR**
  - Build job search skills and confidence with career center workshops.
  - Explore post-grad options at career and graduate school fairs.
  - Ask professors for letters of recommendation.
  - Plan for any post-grad exams (GRE, MCAT, etc.).

- **FOURTH YEAR**
  - Update resume and practice interviewing skills.
  - Find jobs and internships through the On-Campus Recruiting program.
  - Attend Employer Info Sessions and network through the MCB Industry Affiliates Program.
  - Apply for graduate schools, jobs, and research opportunities.

### WHAT CAN I DO WITH MY MAJOR?

**Jobs and Employers**
- Clinical Laboratory Tech, Illumina
- Clinical Research Coordinator, UCSF
- Consultant, Deloitte Consulting
- Fellow-Comm. Health, Peace Corps
- Histology Tech, Kaiser Permanente
- Lab Technician, UC Berkeley
- Medical Scribe, PhysAssist
- Recruiting Coordinator, Google
- Research Associate, Genentech
- Research Technician, CalTech
- Sales Rep., Vanda Pharmaceuticals Inc.
- Teacher, Teach for America

**Graduate Programs**
- Biochemistry
- Biostatistics
- Biomedical Engineering
- Biomedical Sciences
- Biomedical Sciences Education
- Biomedical Sciences Genetics
- Biostatistics
- Biomedical Sciences Immunology
- Biomedical Sciences Medicine
- Biomedical Sciences Neurobiology
- Biomedical Sciences Optometry
- Biomedical Sciences Organic Chemistry
- Biomedical Sciences Pharmacology
- Biomedical Sciences Physiology
- Biomedical Sciences Podiatry
- Biomedical Sciences Public Health

**Examples gathered from the Career Destinations Survey of recent Berkeley graduates.**