INTRODUCTION TO THE MAJOR

The Applied Mathematics major prepares students to use mathematical concepts to formulate, analyze, and solve real-world problems. Students in the major learn:

- Research, communications, analytical, and modelling skills to develop their mathematical reasoning skills.
- Techniques and procedures to formulate and solve problems in mathematical notation.
- To identify real-world problems as subject to mathematical reasoning and to abstract general principles from the examples.

Visit the Berkeley Academic Guide for more information.

AMPLIFY YOUR MAJOR

- Add a Teaching Concentration to your major and join CalTeach to prepare for a career in education.
- Test your problem-solving skills in the prestigious Putnam Competition.
- Apply to a Research Experience for Undergraduate Summer Program.
- Work alongside a graduate student mentor through the Directed Reading Program.
- Write an honors thesis or execute an independent study project.

MAJOR CLUSTERS

The Applied Mathematics major provides students with the opportunity to customize their learning by selecting a cluster pathway. A cluster is an approved concentration of courses in a specific field of applied mathematics. There are more than 15 approved clusters with the most popular being:

- Actuarial Science
- Computer Science
- Economics
- Statistics

More information on approved clusters can be found at math.berkeley.edu. Students can also design their own cluster with the guidance and approval of faculty.

“The rigorous classes helped me think deeply about problem-solving and made me a more analytical thinker.”

– Applied Math 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.

For more information or to contact an advisor, visit math.berkeley.edu/programs/undergraduate/advising.
# Applied Mathematics: Design Your Journey

**Bachelor of Arts**

## What Can I Do with My Major?

<table>
<thead>
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<th>Jobs and Employers</th>
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<tbody>
<tr>
<td>Actuarial Analyst, Aon Risk Services</td>
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<tr>
<td>AI Research Director, Numerate</td>
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<tr>
<td>Analyst, Kohl's</td>
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<tr>
<td>Applications Engineer, Revolv</td>
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<tr>
<td>Business Analyst, Wayfair</td>
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<td>Data Analyst, Tribe Dynamics</td>
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<td>Data Scientist, Oracle</td>
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<td>Digital Analyst, McKinsey &amp; Company</td>
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<tr>
<td>Energy Analyst, CA Energy</td>
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<tr>
<td>Financial Consultant, Deloitte</td>
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<tr>
<td>Research Assistant, IMF</td>
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## Graduate Programs

- Accounting
- Actuarial Science
- Artificial Intelligence and Robotics
- Applied Mathematics
- Biomedical Sciences
- Business
- Computational Mathematics
- Computer Graphics
- Computer Science
- Economics
- Electrical Engineering
- Finance
- International Studies
- Neurobiology
- Physics
- Secondary Education
- Statistics

## Jobs and Employers Examples gathered from the First Destination Survey of recent Berkeley graduates.

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## FIRST YEAR

### Explore your major
- Review your major and college requirements.
- Map out a 4-year plan on CalCentral.
- Get tutoring help from the Student Learning Center or individual tutors.
- Visit the peer advisor blog to learn about undergraduate life in the Math Department.

### Connect and build community
- Discover hundreds of students at Calpalooza student activities fair.
- Build your community through Math undergraduate organizations.
- Get a mentor by enrolling in a Mathematics department section of Berkeley Connect.
- Take L&Ss for an introduction to the College.
- Visit the Office of Undergraduate Research and Scholarships.
- Enroll in a Freshman & Sophomore Seminar.
- Compete in the Putnam Competition.
- Attend a lecture or workshop hosted by the Math department.
- Engage in volunteer opportunities on campus.
- Follow the Mathematics Undergraduate Calendar to stay up-to-date with important events and opportunities.

### Reflect and plan your future
- Use the Yearly Planner to guide your career path.
- Join Handshake to find Berkeley-specific internship opportunities and career development workshops.
- Discuss Mathematics with your major advisor.
- Consider attending a career fair on campus.
- Attend a career and graduate school fair.

## SECOND YEAR

### Explore your passions
- Complete the prerequisites and declare Applied Mathematics as your major.
- Consider a minor or a summer minor and plan your upcoming semesters accordingly.
- Challenge yourself by taking Honors sections of courses.
- Connect with faculty to discuss their work and research in Mathematics.
- Assist a professor in their research through the Undergraduate Research Apprenticeship Program.
- Work closely with a graduate student through the Directed Reading Program.
- Deepen your knowledge of applied mathematics by attending workshops and conferences.
- Study abroad as a sophomore, junior, or senior with Berkeley Study Abroad.
- Attend career and graduate school fairs.

## THIRD YEAR

### Connect and build community
- Join career-oriented groups such as Data Scholars or the Cal Actuarial League.
- Consider applying for a leadership position within your student organization.
- Become a Golden Bear Orientation Leader and welcome new students to the UC Berkeley campus and community.
- Attend Career Experience for Undergraduates Summer Program.
- Apply to a Research Experience for Undergraduates Program.
- Conduct research during the summer through the MSRI Undergraduate Program.
- Tutor students at the Student Learning Center.
- Intern and study in Washington D.C. with the UCDC.
- Study Mathematics abroad in Moscow, Russia or Budapest, Hungary.

### Reflect and plan your future
- Meet with your major advisor and with your college advisor to verify your completion of all major and college requirements.
- Plan your cluster courses or design your own with the help of a faculty advisor.
- Meet with your major advisor and with your college advisor to verify your completion of all major and college requirements.
- Take any “bucket list” courses and remaining major, college, and campus requirements.

## FOURTH YEAR

### Connect and build community
- Become a Mathematics Peer Advisor and help prospective and current Mathematics students.
- Connect with alumni groups and build your network as you prepare to graduate.
- Apply to complete the Honors Program in Applied Mathematics with the help of the Honors Program Advisor.
- Consider a gap year fellowship.
- Keep pursuing your interests through an independent study under the supervision of a faculty member.
- Write an honors thesis.
- Take any “bucket list” courses and remaining major and college requirements.

### Reflect and plan your future
- Meet with your major advisor and with your college advisor to verify your completion of all major and college requirements.
- Complete the prerequisites and declare Applied Mathematics as your major.
- Consider a minor or a summer minor and plan your upcoming semesters accordingly.
- Challenge yourself by taking Honors sections of courses.