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 modeling 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.

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/majormaps for the latest version of this major map.
**APPLIED MATHEMATICS**

**Bachelor of Arts**

**FIRST YEAR**
- Review your major and college requirements.
- Complete the prerequisites and declare Applied Mathematics as your major.
- 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.
- Attend a lecture or workshop hosted by the Math department.
- Connect with peers at UC Berkeley.
- Go to offices hours to build connections with professors and graduate student instructors.
- Discover hundreds of student organizations at Calpalooza.
- Build your community through Math undergraduate organizations.
- Get a mentor by enrolling in a Mathematics department section of Berkeley Connect.
- Enroll in a Freshman & Sophomore Seminar.
- Attend the Putnam Competition.
- Take the MATH 191: Advanced Problem Solving.
- Work closely with a graduate student through the Directed Reading Program.

**SECOND YEAR**
- Consider applying for an Honors Program in Applied Mathematics with the help of the Honors Program Advisor.
- Join career-oriented groups, such as Data Scholars or the Cal Actuarial League.
- Consider applying for a leadership position within your student organization.
- Attend the Putnam Competition.
- Work closely with a graduate student through the Directed Reading Program.
- Conduct research during the summer through the MSRI Undergraduate Program.

**THIRD YEAR**
- 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.
- Complete a Research Experience for Undergraduates Summer Program.
- Apply to the Research Experience for Undergraduates Summer Program.
- Attend the Putnam Competition.
- Take classes at another UC or college through Berkeley Study Abroad.

**FOURTH YEAR**
- 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.
- Register for the department and campus-wide commencement ceremonies.
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**WHAT CAN I DO WITH MY MAJOR?**

**Jobs and Employers**
- Actuarial Analyst, Aon Risk Services
- AI Research Director, Numerate
- Analyst, Kohl’s
- Applications Engineer, Revolv
t Business Analyst, Wayfair
- Data Analyst, Tribe Dynamics
- Data Scientist, Oracle
- Digital Analyst, McKinsey & Company
- Energy Analyst, CA Energy
- Financial Consultant, Deloitte
- Research Assistant, IMF
- Software Developer, Engineer, Amazon
- Software Engineer, PayPal
- SW Engineer Intern, City & Cty. of SF
- Software Quality Associate, Waymo

**Graduate Programs**
- Accounting
- Agricultural 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

**Examples gathered from the First Destination Survey of recent Berkeley graduates.**

**Explore your major and build your community.**

**Discover your passions.**

**Engage locally and globally.**

**Reflect and plan your future.**

**Calendar**
- Stay up-to-date with important events.
- Follow the campus.
- Check out volunteer opportunities on campus.
- Follow the Mathematics Undergraduate Calendar to stay up-to-date with important events and opportunities.
- Deepen your knowledge of applied mathematics by attending workshops and conferences.
- Study abroad as a sophomore, junior, or senior with Berkeley Study Abroad.
- Take classes at another UC or college through the Directed Reading Program.
- Attend the Putnam Competition.
- Work closely with a graduate student through the Directed Reading Program.

**Tutor students at the Student Learning Center.**
- Intern and study in Washington D.C. with the UCDC or Cal in the Capital.
- Study Mathematics abroad in Moscow, Russia or Budapest, Hungary.
- Apply to be an Undergraduate Mathematics Tutor.
- Explore gap year opportunities that you may wish to pursue before your next big adventure.
- Go on service trips over spring or winter break with the Alternative Breaks program.

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