Hands-on Learning
At CU, students learn by doing. The Department of Applied Math offers a broad range of undergraduate research opportunities funded by NSF grants. Research areas include computational mathematics, probability and statistics, nonlinear phenomena, mathematical biology, and physical applied math.

Did You Know?
CU students have excelled in the international Mathematical Contest in Modeling, which challenges student teams to solve complex, open-ended problems in a 96-hour marathon competition.

Degrees Offered
- BS
- MS
- PhD
- BS/MS
- Minor

Rankings
- Applied Math (NRC)
  - 6th–13th in multiple areas by the National Research Council
- College (USNWR)
  - 17th among public undergraduate engineering programs nationwide
  - 20th among public graduate engineering programs nationwide

Did you enjoy solving challenging problems through step-by-step, logical analysis? If so, applied mathematics might be the major for you. As an applied math student, you study mathematics combined with various engineering applications, the natural sciences, or quantitative finance. Regardless of the career path you choose, the ability to define and formulate problems, find solutions, and communicate your results is critical. At CU, the applied math curriculum prepares you to meet these diverse challenges. Our applied math graduates are very successful in the job market, and an undergraduate major provides excellent preparation for graduate programs in engineering, science, business, and medicine.

“I want to go into a field that’s really competitive. The energy and encouragement of my Applied Math faculty advisor have helped me find creative ways to meet my goals. With her help and my involvement in the Society of Women Engineers, I now have a job on Wall Street when I graduate.”
— Julia Whippo

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What can I do with a degree in applied mathematics?
- Analysis, modeling and design related to the spread of disease, weather prediction, medical imaging, or manufacturing
- Evaluate and minimize risk as an actuary
- Work in communications, education, finance, defense, consulting, etc.

Applied Math faculty and students developed the Mathematical Visualization Toolkit, an award-winning online instructional tool for graphing and illustrating mathematical concepts.

University of Colorado
Boulder
Every Applied Math major, as part of their degree requirements, takes a minimum of 24 credits in an “area of emphasis.” The area of emphasis is a series of technical courses that allow the student to customize their applied math major to meet their educational and career goals. Students have great flexibility in choosing these courses. Possible areas include computer science, engineering physics, quantitative finance or actuarial studies, computational biology, as well as any area of engineering or science.

**Computation and Computational Biology**
Computational biology is at the intersection of mathematics, computation, and biology and applied math majors with this focus study all three areas. Due to the vast improvement in the speed of computers and their algorithms over the past decades, we are able to model increasingly complex biological problems. Hot topics right now include model selection and control of in vivo HIV pathogenesis dynamics, the analysis of heart rhythm instabilities, and the analysis of patterns in biological sequences such as DNA and RNA. Interested undergraduates are encouraged to get involved in a research project. Graduates with this emphasis are prepared to work in a variety of pharmaceutical and health-related fields or continue to graduate school.

**Quantitative Finance**
Quantitative finance provides a strong analytical foundation for application in the business world. Students study economics, finance, and probability and statistics, in addition to applied math. Due to the scarcity of undergraduate programs nationally that combine quantitative methods and extensive financial training, our students encounter strong job demand upon graduation.

For more information visit amath.colorado.edu