

# MATHEMATICAL SCIENCES DEPARTMENT

---

Emily Stone, Chair

Mathematics is studied both as a tool and for its own sake. Its usefulness in the sciences - physical, biological, social, behavioral, and environmental - and in decision-making processes is so established that it is an indispensable part of many curricula.

Mathematics is chosen as a major area of study by individuals who find it challenging, fascinating, and beautiful. It is also appreciated by many who seek primarily to use mathematics as a tool.

A career in mathematics, except for teaching at the secondary level, generally requires a graduate degree as preparation. Careers include teaching, research, and the application of mathematics to diverse problems in institutions of higher learning, business, industry, and government.

The Bachelor of Arts, Master of Arts, and Doctor of Philosophy degrees are offered as well as a Bachelor of Science in Mathematical Sciences–Computer Science.

**High School Preparation:** For studying mathematics at the University level, it is recommended that the high school course work consist of four years of college-preparatory mathematics, including geometry, trigonometry, and college algebra or precalculus. A course in calculus or statistics is helpful, but not necessary. It is unusual to complete an undergraduate degree in mathematics in four years without the necessary background to take M 171 during the freshman year (preferably during the first semester at the university).

## Undergraduate

- Mathematics B.A. (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-mathematics>)
- Mathematics B.A., Applied Mathematics Concentration (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-applied-mathematics>)
- Mathematics B.A., Combinatorics and Optimization Concentration (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-combinatorics-optimization>)
- Mathematics B.A., Mathematics Education Concentration (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-mathematics-education>)
- Mathematics B.A., Pure Mathematics Concentration (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-pure-mathematics>)
- Mathematics B.A., Statistics Concentration (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/ba-statistics>)
- Mathematical Sciences-Computer Sciences B.S. (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/bs-mathematical-science-computer-science>)

## Undergraduate Minors

- Mathematics (<http://catalog.umt.edu/colleges-schools-programs/humanities-sciences/mathematical-sciences/minor-mathematics>)