

PROGRAMS AVAILABLE: Bachelor of Science | Bachelor of Science in Mathematics

Explore the study of quantity and space and the symbolism associated with them.

In today's data-saturated world, experts in mathematics are more in-demand than ever. Creighton's Bachelor of Science (B.S.) and Bachelor of Science in Mathematics (B.S.Mth) programs prepare graduates for positions in industry and teaching or to gain entrance to graduate mathematics programs. The B.S.Mth. degree is recommended to students who wish to pursue graduate study in mathematics.

If you are interested in teaching, certification courses for a field endorsement in math are included in the mathematics, statistics and informatics and computing science offerings. If you already hold a bachelor's degree in another field, or if you do not want to take all of the courses required for one, you may pursue a certificate in math or statistics by successfully completing a program consisting entirely of courses in mathematics or statistics.

Creighton's mathematics department offers a wide range of programs that are student-centered and feature flexible curriculums that allow students to pursue other areas of study if they choose.

WHAT YOU'LL LEARN

- You will hone and sharpen your calculation skills in large areas of mathematics
- You will develop the ability to construct and deliver well-structured and supported arguments in mathematical form
- You will gain a proficiency with deep applications of mathematics to a variety of subjects, such as physics, biology, and economics

EXPERIENTIAL LEARNING OPPORTUNITIES

Students can engage in a variety of undergraduate research projects with mathematics faculty members in pure and in applied mathematics, including:

- An understanding of ecological and climatological issues
- Graph theory
- Feynman's operational calculus
- Quantum computing and information theory
- Partial differential equations, especially related to fluid flow
- Applications of differential equations to mathematical ecology, epidemiology, bio-medical science, or other biological sciences

Students have presented their work at national and regional conferences, including the Joint Meetings of the American Math Society, and the MAA Mathfest, held annually in August.

CAREER OUTLOOK

According to the U.S. Bureau of Labor Statistics, the median annual wage for mathematicians in 2012 was \$101,360. Employment of mathematicians is projected to grow 23% by 2022, much faster than the average for all occupations. Businesses need mathematicians to analyze the increasing volume of digital and electronic data.

CAREER OUTCOMES

Employment Opportunities

Recent graduates have gone on to be employed by:

- ConAgra Foods
- National Indemnity Company
- AmeriCorps
- Tower Group Companies
- Department of Defense

Graduate Studies

Mathematics graduates are going into fields such as Engineering, Political Science, Quantitative Chemistry, Applied Mathematics, Applied Physics, Quantitative Biology, Bio Statistics. They are studying at:

- Purdue University
- University of Minnesota
- UCLA
- Pennsylvania State University
- University of Wisconsin
- New York University
- University of Nebraska Medical Center

MATHEMATICS TRACKS

Three tracks, including the general track, are available through the department.

Bachelor of Science (B.S.Mth) Major in Mathematics

- Pure Mathematics Track

- Medical Mathematics Track

Bachelor of Science (B.S.) Major in Mathematics

For more details on the full curriculum, visit:

<http://catalog.creighton.edu/undergraduate/arts-sciences/mathematics/mathematics-bs/>

CLASSES FOR THE GENERAL TRACK

Students desiring to major in mathematics should apply to the department and be assigned a major advisor after completing MTH 245 Calculus I or MTH 246 Calculus II or its equivalent.

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| MTH 310 | Fundamentals of Mathematics | 3 |
| MTH 347 | Calculus III | 3 |
| MTH 529 | Linear Algebra | 3 |
| MTH 545 | Differential Equations | 3 |
| MTH 581 | Modern Algebra I | 3 |
| MTH 591 | Analysis I | 3 |

Requisite Courses: Twelve 300-500 level credits (approved by the major advisor) in one or more departments (which could include mathematics). 12

Plus 9 additional hours in Mathematics or related subjects. 9

Total Credits 39

STUDENT ORGANIZATIONS AND ACTIVITIES

Math Club

Math Club is open to all mathematics majors and minors and anyone interested in mathematics and its applications. The club promotes fellowship and scholarly activity. Activities include trips to major conferences, seminars and various parties during the academic year.

Pi Mu Epsilon

The Creighton chapter of the national mathematics fraternity, is open to undergraduate students who have completed at least the equivalent of two semesters of calculus and two additional courses in mathematics, at or above the calculus level, all of which lead to the fulfillment of the requirements for a major in the mathematical sciences. In addition, such students must have maintained a grade point average equivalent to that of at least 3.0 on a 4 point scale, both for all courses that lead to fulfillment of requirements for a major in the mathematical sciences, and also for all courses that lead to fulfillment of requirements for an undergraduate degree.