MATHEMATICS, MINOR (BEHREND)

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

The minor in mathematics shows students how to use mathematical tools and ways of thinking in many fields. The choice of several upper-level courses allows students to focus on specific areas of interest. Business majors might choose linear programming and operations research. Engineering students could enroll in numerical methods. Chemistry students might choose numerical methods and linear programming, while biology majors could enroll in mathematical modeling and differential equations. A solid mathematical background can be a strong asset in fields of education, neurobiology and behavior, plant biology and agriculture, immune system studies and pathology, medical sciences, marketing and management science, engineering, national security, ecology, and ecosystems.

What is Mathematics?

The study of mathematics emphasizes careful problem analysis, precision of thought and expression, and the development of mathematical skills needed for work in many other areas. Theoretical mathematicians increase basic knowledge in "pure" fields like abstract algebra, analysis, or topology. Applied mathematicians use tools growing out of calculus, analysis, computing, statistics, and operations research to solve problems in science, industry, government, and other areas.

You Might Like This Program If...

- You want to add a second discipline to your science major.
- You want to add a science discipline to a non-science major.
- You are thinking of graduate study in a technical field.
- You want to expand your employment opportunities by adding science expertise to study of marketing, communications, political science, psychology, chemistry, engineering, or another similarly broad discipline • You are preparing for a career in the health sciences.

Program Requirements

Requirement	Credits
Requirements for the Minor	18

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
Prescribed Courses: Require a grade of C or better		
MATH 311W	Concepts of Discrete Mathematics	4
Supporting Courses and Related Areas		
Supporting Courses and Related Areas: Require a grade of C or better		
Select 8 credits of MATH courses at the level of MATH 140 or above		8
Select 6 credits of 400-level MATH courses [1]		6

[1] No more than three credits from MATH 495 courses can be used to satisfy this requirement.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

Read Senate Policy 32-00: Advising Policy (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/)

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Career Paths

A mathematics minor can lead to broader and more challenging opportunities in both careers and advanced studies. Penn State Behrend has a comprehensive support system to help you identify and achieve your goals for college and beyond. Meet with your academic adviser often and take advantage of the services offered by the Academic and Career Planning Center beginning in your first semester.

Careers

Mathematics' emphasis on problem solving makes it excellent additional preparation for careers in science, engineering, business, or computing. A biologist proficient in mathematics will better understand the numerical aspects of environmental problems. A chemist employing linear programming can model the results of an experiment. An engineer with advanced mathematical skills can tackle non-standard problems with confidence. Business students with mathematical experience are prepared for sophisticated financial analyses.

More Information About Potential Career Options for Graduates with a Minor in Mathematics (https://behrend.psu.edu/school-of-science/academic-programs/minors/mathematics)

Opportunities for Graduate Studies

A minor in the sciences, particularly when added to a major program outside of the sciences, demonstrates to graduate school admissions committees your commitment to interdisciplinary thinking.

More Information About Opportunities for Graduate Studies (https://behrend.psu.edu/school-of-science/academic-programs/minors/mathematics)

Contact

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https://behrend.psu.edu/school-of-science