

The Mathematics major is designed to provide an understanding of the discipline at various levels, ranging from applied courses to those leading to graduate study. All Mathematics majors develop strong analytic reasoning and problem solving skills essential for success in today's workplace. A major in Mathematics prepares students for careers in business, industry, government, and teaching at the secondary and university level.

Mathematics Core Courses

MATH 111: Pre-Calculus
MATH 120: Analytic Geometry and Calculus I
MATH 200: Analytic Geometry and Calculus II
MATH 210: Analytic Geometry and Calculus III
MATH 215: Analytic Geometry and Calculus IV
MATH 451: Seminar

Mathematics Elective Courses

In addition to the required Mathematics courses, the Mathematics major must also take 18 hours of Mathematics courses numbered 300 or above. Some examples of courses that can be taken include:

MATH 300: Differential Equations
MATH 301: Linear Algebra
MATH 302: Mathematical Statistics
MATH 323: Number Theory
MATH 333: Concepts of Geometry
MATH 340: Introduction to Real Analysis
MATH 342: Numerical Analysis
MATH 373: History of Mathematics
MATH 402: Introduction to Modern Algebra
MATH 403: Internship
MATH 450: Special Topics
MATH 499: Special Project

Seminar

Mathematics majors are required to complete the Seminar. All students majoring in Mathematics must conduct in-depth research related to their chosen career. Each student's research culminates in an oral and written presentation of their findings to the Mathematics faculty. Some of our recent Mathematics graduates have chosen to immerse themselves in a particular theorem, while others have studied Mathematical applications to present day situations:

- **Wes Wilson** — *Applicability of Mathematics in Designing Baseball Parks*

Career Opportunities

A major in Mathematics at UIU prepares students to begin a career right after graduation. Some of the most popular career choices of Mathematics majors include the following:

Actuary	Forensic Analyst
Animator	Market Research Analyst
Appraiser	Pollster
Benefits Administrator	Population Ecologist
Climate Analyst	Public Utilities Analyst
College Professor	Quantitative Analyst
Commodities Trader	Research Scientist
Cryptanalyst	Statistician
Epidemiologist	Teacher
Foreign Exchange Trader	Urban Designer

A major in Mathematics at Upper Iowa University also serves as excellent preparation for graduate school.

Here are a few examples of what some of our recent graduates are doing:

- Dominique Caspars — Insurance Specialist
- Jenni Thompson — Secondary Math Teacher
- Jason Wong — M.A. University of California, Riverside

Double Major

A double major is very common in Mathematics. Due to the structure of the Mathematics major, students are able to complete an additional major and still graduate in four years. The most popular majors that are taken in conjunction with Mathematics are Biology, Chemistry, and Education. Students are required to complete all of the courses for the Mathematics major and all of the courses that are required for the other major they chose. For example, an additional 54 hours are required for a double major in Mathematics and Biology. For a double major with Mathematics and Chemistry, an additional 48 hours are required. And, for a double major with Mathematics and Education, an additional 59 hours are required. Former Upper Iowa University students who have double majored are currently doctors, college professors, and high school mathematics teachers.

Awards & Honors

Each year a student showing excellence in Mathematics is selected to receive the *Raymond Deming Scholarship*. An outstanding advanced Mathematics student is also selected each year to receive the *Paul and Margaret Pickett Scholarship*.

Faculty

Dr. Maureen Busta,
Associate Professor of Mathematics
B.A. Mt. Mercy College
M.A., Ed.D. University of Northern Iowa

Dr. Jeff Butikofer,
Assistant Professor of Environmental Science
B.S. Upper Iowa University
Ph.D. University of Wyoming

Dr. Nigel George,
Assistant Professor of Math & Physics
B.Sc., M.Sc. University of Auckland
M.S., Ph.D. Yale University

Cheryl Northrop
*Coordinator of Academic Support Center and
Coordinator of Supplemental Instruction*
B.S. Upper Iowa University



Office of Admissions

Parker-Fox Hall
P. O. Box 1859
Fayette, IA 52142

1-800-553-4150, Ext. 2
www.uiu.edu
admission@uiu.edu