

**Department of Mathematics
Northeastern Illinois University
Chicago, IL 60625**

Handbook for Minors

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Advisor to Mathematics Minors:

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INTRODUCTION

Mathematics minors at Northeastern Illinois University may choose from two programs:

- Applied Mathematics Minor
- Elementary Education and Humanities Mathematics Minor

The choice of a program determines both the set of required and the set of elective courses in mathematics.

Mathematics provides tools and techniques that can be applied to solve problems in many fields. With a minor in Mathematics, students learn to apply these tools, and consequently improve their career opportunities. Our programs are designed to prepare Mathematics minors for jobs currently offered by industry, business, government and educational institutions. The choice of a program should reflect the student's academic interests as well as career plans.

The Mathematics Department has institutional memberships in American Mathematical Society, Society for Industrial and Applied Mathematics, and Association for Women in Mathematics.

Mathematics minors are encouraged to take an active part in the Math Club, which is open to all students with an interest in mathematics. Mathematics minors are also encouraged to attend the weekly seminar series in the mathematical sciences sponsored by the Computational Dynamics in Physics and Populations Research Community and the Society of Physics Students.

APPLIED MATHEMATICS MINOR

(24 credit hours)

Required Courses

Math 187	Calculus I (Math 185)
Math 202	Calculus II (Math 187)
Math 203	Calculus III (Math 202)
Math 243	Linear Algebra I (Math 187)
Math 251	Discrete Mathematics (Math 187 co-requisite)

Elective Courses

Two courses must be chosen from the list that follows at the top of the next page:

Elective Courses (applied track)

Math 301	Ordinary Differential Equations I (Math 203)
Math 302	Ordinary Differential Equations II (Math 301)
Math 303	Partial Differential Equations (Math 301)
Math 304	Introduction to Numerical Analysis (Math 203, 340, & 243)
Math 305	Probability and Statistics (Math 202)
Math 306	Linear Programming and Extensions (Math 203 & 243)
Math 307	Probability Models for Operations Research (Math 305)
Math 334	Mathematical Statistics I (Math 203)
Math 336	Mathematical Statistics II (Math 334)
Math 338	Advanced Calculus: Single Variable (Math 203 & 251)
Math 339	Advanced Calculus: Multi-variable (Math 203 & 243)
Math 340	Computing for Mathematicians (Math 202 co-requisite)
Math 343	Linear Algebra II (Math 203 & 243)
Math 365	Statistics Computer Packages (Math 334 & 340)

**ELEMENTARY EDUCATION AND
HUMANITIES MATHEMATICS MINOR**

(23 credit hours)

Required Courses

Math 187	Calculus I (Math 185)
Math 202	Calculus II (Math 187)
Math 243	Linear Algebra I (Math 187)
Math 251	Discrete Mathematics (Math 187 co-requisite)
Math 305	Probability and Statistics (Math 202)

Elective Courses

Two courses must be chosen from the list below:

Math 312	Foundations of Geometry (Math 243 & 251)
Math 321	History of Mathematics (Math 243 & 251)
Math 322	Number Theory (Math 243 & 251)
Math 331	Foundations of Algebra (Math 243 & 251)
Math 337	Theory of Equations (Math 202 & 251)

Prerequisites are given in parentheses

Students in the Elementary Education and Early Childhood Education Program who select this minor must complete a minimum of 9 hours at the 300-level to meet graduation and certification requirements.

FACULTY

- Paul P. O'Hara (Chair)
- Tanya Cofer (Advisor, MS Elem.Ed. track)
- Sarah Cordell
- Lidia Z. Filus (Associate Chair and Advisor to Majors)
- Marian Gidea (Advisor, MS Applied and MS Secondary Ed. track and Math Club)
- Phillip W. Gwanyama
- Anna Mitina
- Marina Polyashuk (Advisor to Minors)
- Rakesh K. Rustagi
- Nancy C. Wrinkle
- Zhonggang Zeng

OTHER HELPFUL INFORMATION

Declaring the minor:

It is advisable to complete a Calculus course before declaring this minor. "Declaration of Minor" forms are available from the advisor.

Scheduling:

To accommodate working students, most of our upper level courses are offered in the later afternoon and evening.

D-grade policy:

Courses in which a student has earned a D will not count toward meeting graduation requirements in Mathematics. The student may either repeat the course or, if the course is not required in the program, take an alternate course. The same applies to courses transferred from other institutions.

Independent/Tutored study:

Tutored study allows a student to take a course listed in the catalog but which is not regularly offered. Students meet individually with the instructor several hours a week. Tutored study courses require approval of the Department and the Dean of the College of Arts and Sciences at least two weeks before registration. Required courses are not given on a tutored study basis. No instructor is under the obligation to offer tutored studies.

Residency requirement:

At least three courses applicable to the Mathematics minor must be taken at Northeastern Illinois University.

Other requirements:

Students are responsible for satisfying General Education and other University requirements. You may wish to consult the advisor on these matters.