

MASTER OF SCIENCE SECONDARY EDUCATION

DEPARTMENT OF MATHEMATICS
NORTHEASTERN ILLINOIS UNIVERSITY
CHICAGO ILLINOIS 60625

Program Overview

The M.S. in Mathematics is designed for those with a strong undergraduate background in mathematics who wish to better prepare themselves for careers in applied mathematics or in the teaching of mathematics. The program is designed so that the student can concentrate in an area of Applied Mathematics, Statistics, Operation Research or in Teaching of Secondary Mathematics. For the latter concentration, students may earn up to 12 hours of course work in education, and apply them toward secondary teaching certification. Courses are scheduled to accommodate the evening student.

Requirements for admission to the Program:

General:

Students must fulfill the requirements for admission to the Graduate College.

Specific:

The student must have a standard calculus sequence and 6 undergraduate courses after calculus. A B average is required in these six courses. A student with four or more of these courses may be admitted conditionally at the discretion of the advisor. For the student who is less well prepared, additional course work must be taken before admittance to the program

Degree Requirements

General:

The program consists of 10 courses (30 credit hours) selected according to the concentration. At least seven of the courses must be at the 400 level. Up to six hours of graduate transfer credit may be applied to the program with the approval of the Graduate College and the Department of Mathematics.

Students are cautioned that at most THREE 300-level courses may be applied to meet the degree requirements. As a consequence, students needing more than THREE 300 level courses may have to take more than 30 credit hours to complete the program. In addition, students are expected to be familiar with at least one mathematics or statistical computer package, such as Maple, Matlab, SPSS, SAS etc. The student's complete program must be approved by the advisor.

In the case of the M.S. in the Secondary Education program, students must fulfill the requirements of the National Council for Accreditation of Teacher Education (NCATE) in order to graduate. These requirements include the following courses:

Math 305 Probability and Statistics
Math 312 Foundations of Geometry

Math 321 History of Mathematics
Math 331 Foundations of Algebra I

Requirements (Secondary Education):

The following courses are REQUIRED for all students:

Math 430 Discrete Mathematical Structures
ScEd 401M New Directions in Teaching Mathematics in the
Junior and Senior High School
ScEd 410 Computers in the Teaching of Secondary School Mathematics
Math 421 Modern Geometry
Math 495 Project in Mathematics

Note: These courses are required of all students, and may not be satisfied by transfer credit. Math 430 should be taken as early as possible in the program, while Math 495 is generally taken towards the end and requires the approval of the program advisor for registration.

plus at least ONE course from

Math 406 Linear Programming: Theory and Practice
Math 471 Introduction to Stochastic Models
Math 472 Simulation Modeling and Analysis
Math 474 Mathematical Modeling
Math 464 Advanced Topics in Real Analysis
Math 467 Advanced Topics in Algebra

AT MOST THREE courses from

Math 302 Ordinary Differential Equations II
Math 305 Probability and Statistics
Math 312 Foundations of Geometry
Math 321 History of Mathematics
Math 322 Number Theory
Math 328 Complex Variables
Math 331 Foundations of Algebra I
Math 332 Foundations of Algebra II
Math 334 Mathematical Statistics I
Math 336 Mathematical Statistics II
Math 337 Theory of Equations
Math 338 Advanced Calculus: Single Variable
Math 343 Linear Algebra II
Math 365 Statistical Computer and Data Analysis Packages

NO MORE THAN TWO LIMITED ELECTIVES can be used from the following list:

ScEd 408 The Nature of Mathematical Abilities in School Children
ScEd 409 Teaching Mathematical Problem Solving in the Secondary Schools

Total

30cr.

Project (Secondary Education)

Each student must carry out a three credit hour project in the area of concentration under the supervision of a faculty advisor. In order to register for the project course Math 495, students must submit a signed topic approval form. Upon completion of the project, students must submit an approved written project report and present an oral report.

Comprehensive Exam (Secondary Education)

All students must pass a written qualifying examination, which ensures that students meet the standards that qualify them for the master degree in mathematics. The exam should be taken and passed before applying for candidacy. The exam will cover basic topics in algebra, geometry and calculus. No more than three attempts are permitted.

Certification (Secondary Education)

Requirements for certification should be met before completion of the program. Those seeking certification through the program will be required to take additional Education courses, including student teaching, which are not applicable to the program.

Tuition Waivers:

Merit Tuition awards are available. Contact the Graduate College for details.

Applications:

To apply, or for further information on general Graduate College regulations, contact

The Graduate College
Northeastern Illinois University
5500 N. St. Louis Avenue
Chicago, IL 60625-4699
(773) 583-4050 Ext 6008

TO APPLY ONLINE:

<https://www.applyweb.com/apply/neiu/>

Northeastern Illinois University subscribes to the principle of affirmative action and does not discriminate against any individual on the basis of age, color, handicap, national origin, race, religion, sex, or veteran status.



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**MASTER OF SCIENCE
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