

MASTER OF EDUCATION IN MATHEMATICS



Further your expertise in Mathematics while gaining practical application skills through three graduate-level degree programs offered at Millersville University: the Master of Education (M.Ed) in Mathematics, the post-baccalaureate teacher certification or the post-master's supervisory certification.

Due to the diversity in undergraduate mathematics education programs, a main goal of the master's course of study is to strengthen candidates' mathematical content knowledge. The post-baccalaureate certification program is designed for students with bachelor's degrees in Mathematics who would like to teach in the state of Pennsylvania or to add another instructional area of certification to their present certificate. A post-master's supervisory certification program is also available for educators who wish to pursue leadership roles in education.

The major strength of the graduate-level Mathematics programs at Millersville University is the balance of mathematics content and pedagogy. The University offers a variety of mathematics education courses that allow graduate students to investigate the nature of teaching and learning mathematics, and to apply this immediately in their own mathematics classrooms. Most students complete their coursework during the summer months, but graduate courses are also offered periodically in the evening during the fall and spring semesters to allow for additional flexibility.

Students seeking their first instructional certificate through the post-baccalaureate certification program receive coursework based on their incoming knowledge and experiences to best prepare them as educators. Most applicants need to complete foundational education courses, professional education courses and a semester of student teaching. In order to be certified as a Mathematics teacher and receive a Pennsylvania Instructional I certificate, you must pass the Pennsylvania Department of Education mandated Praxis Tests. Instructional I certification is required for entry into a teaching position in Commonwealth of Pennsylvania schools.

Applicants interested in earning teacher certification, whether in addition to certification obtained through an undergraduate teacher education program or as a supplement to a liberal arts baccalaureate program, should contact the Certification Office, 717- 871-7362.

Application Procedure:

Applicants interested in earning a master's degree in a program of study must submit the following documents to the Office of Graduate Studies:

- A completed Graduate Studies Admissions Application.
- A nonrefundable application fee of \$35 payable at the time of filing application
- One official copy of an undergraduate transcript and official transcripts of any previous graduate work (it is not necessary to send Millersville University transcripts.)
- Three letters of recommendation written by professors or others capable of assessing the applicant's potential for success in a graduate program.
- A written statement of academic and professional goals.
- Any additional information required by the specific department.
- Applications are accepted throughout the year utilizing a system of rolling admissions to the program.
- Admission to master's degree programs is contingent on the recommendation of the department in which the student proposes to study.

Contact:

Dr. Erin Moss
Phone: 717-871-5903
Email: Erin.Moss@millersville.edu



Mathematics (M.Ed.)

33 credits

Major Sequence and Degree Requirements

I. Required Mathematics Proficiency

Demonstrated mathematical proficiency is required for the degree. Students who enter the program having earned a grade of B- or higher in the following undergraduate courses (or their equivalent) are considered to have met this requirement:

- MATH 502 Linear Algebra I
- MATH 503 Probability and Statistics for Teachers
- MATH 504 Modern Algebra for Teachers
- MATH 505 Classical and Modern Geometry
- MATH 506 Modern Analysis for Teachers

II. Mathematics courses (4 minimum)

Four of the following:

- MATH 502 Linear Algebra
- MATH 503 Probability and Statistics for Teachers
- MATH 504 Modern Algebra for Teachers
- MATH 505 Classical and Modern Geometry
- MATH 506 Modern Analysis for Teachers
- MATH 520 Logic and Foundations of Mathematics
- MATH 535 Statistical Methods I
- MATH 536 Statistical Methods II
- MATH 566 Complex Variables
- MATH 577 Problems in Applied Mathematics
- MATH 592 Graph Theory
- MATH 642 Linear Algebra
- MATH 650 Topics in Geometry
- MATH 670 Operations Research
- MATH 675 Numerical Analysis
- MATH 683 General Topology
- MATH 691 Combinatorics
- MATH 693 Number Theory
- MATH 695 Topics in Mathematics
- MATH 696 Independent Study in Mathematics

III. Professional Core (3 courses)

One of the following:

- EDFN 601 Research Methods
- MATH 535 Statistical Methods I

One of the following:

- PSYC 525 Advanced Child Psychology
- PSYC 526 Advanced Adolescent Psychology
- EDFN 545 Advanced Educational Psychology
- PSYC 625 Human Growth and Development

One of the following:

- EDFN 511 Comparative Education
- EDFN 590 Social Foundations of Education
- EDFN 603 Philosophy of Education
- EDFN 604 Education and Public Policy

IV. Mathematics Education (3 minimum)

No more than 2 courses numbered lower than 510 may count toward your major. A B- or better must be earned.

Three of the following:

- MATH 602 Equity Issues in Mathematics Education
- MATH 603 History of Mathematics
- MATH 604 Ethnomathematics
- MATH 610 Problem-Solving Seminar
- MATH 611 Learning Mathematics
- MATH 613 Elementary/Secondary Math Connections
- MATH 614 Current Issues in Middle-School Mathematics
- MATH 615 Current Issues in Secondary-School Mathematics
- MATH 616 Teaching Advanced Placement (AP) Calculus in the Secondary School
- MATH 617 Curricular Innovations in Middle- and Secondary-School Mathematics
- MATH 672 Mathematical Modeling in the Secondary-School Curriculum
- MATH 679 Technology in the Secondary School Mathematics
- MATH 697 Topics in Mathematics Education
- MATH 698 Independent Study in Mathematics Education

V. Thesis or Non-Thesis Requirement

Choose one of the following two options

1. Option 1 - Non-Thesis Option - Mathematics Electives
 - a. Choose 6 credit hours from Any MATH 510-698 course(s)
2. Option 2 Thesis Option
 - a. Math 699 Thesis