

MATHEMATICS: FOUNDATIONS OF ADVANCED STUDIES, M.A.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	Yes

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirements Detail	
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	The coursework must consist of graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide (https://registrar.wisc.edu/course-guide (https://registrar.wisc.edu/course-guide/)).
Overall Graduate GPA Requirement	3.00 GPA required.

Other Grade None.

Requirements

Assessments and Examinations None.

Language Requirements

No language requirements.

Requirements

REQUIRED COURSES

Code	Title	Credits
------	-------	---------

Required Courses:

These courses must be taken by all students, except when it is determined by the director of graduate studies that equivalent courses were taken prior to entering the program.

MATH 522	Analysis II	3
MATH 542	Modern Algebra	3

Basic Electives:

All other 500-level and all 600-level courses in Mathematics may be taken as elective courses. Currently the following courses are available. Select four of the following:

MATH/ COMP SCI 513	Numerical Linear Algebra	
MATH/ COMP SCI 514	Numerical Analysis	
MATH 519	Ordinary Differential Equations	
MATH/COMP SCI/ I SY E/STAT 525	Linear Optimization	
MATH 531	Probability Theory	
MATH 552	Elementary Geometric and Algebraic Topology	
MATH 561	Differential Geometry	
MATH 567	Modern Number Theory	
MATH/ PHILOS 571	Mathematical Logic	
MATH 605	Stochastic Methods for Biology	
MATH 606		
MATH 608	Mathematical Methods for Physical Modeling in Biology	
MATH/B M I/ BIOCHEM/ BMOLCHEM 609	Mathematical Methods for Systems Biology	
MATH 619	Analysis of Partial Differential Equations	
MATH 621	Analysis III	
MATH 623	Complex Analysis	
MATH 627	Introduction to Fourier Analysis	
MATH 629	Introduction to Measure and Integration	
MATH/I SY E/ OTM/STAT 632	Introduction to Stochastic Processes	
MATH 635	An Introduction to Brownian Motion and Stochastic Calculus	
MATH/E C E 641	Introduction to Error-Correcting Codes	

Advanced Electives:

All 700 level courses in Mathematics may be taken as elective courses. Students must pass at least four of the following core graduate courses with a Grade of B or higher. Select four of the following: 12

MATH 703	Methods of Applied Mathematics 1
MATH 704	Methods of Applied Mathematics-2
MATH/ COMP SCI 714	Methods of Computational Mathematics I
MATH/ COMP SCI 715	Methods of Computational Mathematics II
MATH 721	A First Course in Real Analysis
MATH 722	Complex Analysis
MATH 725	A Second Course in Real Analysis
MATH/STAT 733	Theory of Probability I
MATH/STAT 734	Theory of Probability II
MATH 741	Abstract Algebra
MATH 742	Abstract Algebra
MATH 751	Introductory Topology I
MATH 752	Introductory Topology II
MATH 761	Differentiable Manifolds
MATH 770	Foundations of Mathematics
MATH 771	Set Theory
MATH 773	Computability Theory
MATH 776	Model Theory

Total Credits 30