MATHEMATICS: FOUNDATIONS FOR RESEARCH, M.A.

This is a named option within the Mathematics M.A. (http://guide.wisc.edu/graduate/mathematics/mathematics-ma/), which is offered for work leading to the Ph.D.

Information about the requirements and policies for this program can be found in this Guide.

ADMISSIONS

The M.A. (no named option) is offered for work leading to the Ph.D. Students may not apply directly for the master's, and should instead see the admissions information for the Ph.D (http://guide.wisc.edu/graduate/mathematics/mathematics-phd/).

Students may also apply to the M.A. Named Option in Foundations of Advanced Studies (http://guide.wisc.edu/graduate/mathematics/mathematics-ma/mathematics-foundations-advanced-studies-ma/).

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

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

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
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</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>30 credits</td>
</tr>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
</tbody>
</table>

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/).

Overall Graduate GPA Requirement | 3.00 GPA required.

Other Grade Requirements | At least 12 credits from a specified list of 700 courses are required to be passed with grade B or higher.

Assessments and Examinations | None.

Language Requirements | No language requirements.

REQUIRED COURSES

Select four of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 703</td>
<td>Methods of Applied Mathematics 1</td>
<td></td>
</tr>
<tr>
<td>MATH 704</td>
<td>Methods of Applied Mathematics-2</td>
<td></td>
</tr>
<tr>
<td>MATH/COMP SCI 714</td>
<td>Mathematics I</td>
<td></td>
</tr>
<tr>
<td>MATH/COMP SCI 715</td>
<td>Methods of Computational</td>
<td></td>
</tr>
<tr>
<td>MATH 721</td>
<td>A First Course in Real Analysis</td>
<td></td>
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<tr>
<td>MATH 722</td>
<td>Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 725</td>
<td>A Second Course in Real Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH/STAT 733</td>
<td>Theory of Probability I</td>
<td></td>
</tr>
<tr>
<td>MATH/STAT 734</td>
<td>Theory of Probability II</td>
<td></td>
</tr>
<tr>
<td>MATH 741</td>
<td>Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 742</td>
<td>Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 751</td>
<td>Introductory Topology I</td>
<td></td>
</tr>
<tr>
<td>MATH 752</td>
<td>Introductory Topology II</td>
<td></td>
</tr>
<tr>
<td>MATH 761</td>
<td>Differentiable Manifolds</td>
<td></td>
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<tr>
<td>MATH 770</td>
<td>Foundations of Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 771</td>
<td>Set Theory</td>
<td></td>
</tr>
</tbody>
</table>
PRIOR COURSEWORK

NO CREDIT UNLESS "PERMITTED BY DEPARTMENT"

Students must complete an advanced computer science course which involves substantial programming. Other courses require prior approval of the director of graduate studies. This requirement is waived for Math Ph.D. students, provided two qualifying exams have been passed.

COMP SCI 400 Programming III
COMP SCI 536 Introduction to Programming Languages and Compilers
COMP SCI 537 Introduction to Operating Systems
COMP SCI 564 Database Management Systems: Design and Implementation
COMP SCI 704 Principles of Programming Languages
COMP SCI/MATH 714 Mathematics I
COMP SCI/MATH 715 Mathematics II
COMP SCI/ISY E 719 Stochastic Programming
COMP SCI/ISY E 730 Nonlinear Optimization II

Total Credits: 30

1. Students must pass with a grade of B or higher.
2. The graduate advisor may also approve to have courses at the 500 level counted for this requirement (but typically no introductory courses such as MATH 521 Analysis I, MATH 541 Modern Algebra or MATH 551 Elementary Topology).

NAMED OPTION-SPECIFIC POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

STUDENT APPEAL PROCEDURE

Students are recommended to meet with an advisor.

ADVISOR / COMMITTEE

POLICIES

GRADUATE SCHOOL POLICIES

Students in the M.A. program are allowed to count no more than 14 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

UW–Madison University Special

No more than 7 credits from a UW–Madison undergraduate degree are allowed to count toward the degree. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

PROBATION

TIME CONSTRAINTS

The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

1. Good standing (progressing according to standards; any funding guarantee remains in place).
2. Probation (not progressing according to standards but permitted to enroll; loss of funding guarantee; specific plan with dates and deadlines in place in regard to removal of probationary status).
3. Unsatisfactory progress (not progressing according to standards; not permitted to enroll, dismissal, leave of absence or change of advisor or program).

ADMISIR / COMMITTEE

Students are recommended to meet with an advisor.

CREDITS PER TERM ALLOWED

15 credits

1. Students must pass with a grade of B or higher.
2. The graduate advisor may also approve to have courses at the 500 level counted for this requirement (but typically no introductory courses such as MATH 521 Analysis I, MATH 541 Modern Algebra or MATH 551 Elementary Topology).

GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaffprovost.wisc.edu/)
- Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
• Graduate School (https://grad.wisc.edu/) (for informal advice at any
level of review and for official appeals of program/departmental or
school/college grievance decisions)
• Office of Compliance (https://compliance.wisc.edu/) (for class
harassment and discrimination, including sexual harassment and
sexual violence)
• Office of Student Conduct and Community Standards (https://
conduct.students.wisc.edu/) (for conflicts involving students)
• Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/)
(for employed graduate students and post-docs, as well as faculty
and staff)
• Title IX (https://compliance.wisc.edu/titleix/) (for concerns about
discrimination)

Students should contact the department chair or program director with
questions about grievances. They may also contact the L&S Academic
Divisional Associate Deans, the L&S Associate Dean for Teaching and
Learning Administration, or the L&S Director of Human Resources.

OTHER
n/a

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development
resources (https://grad.wisc.edu/pd/) to build skills, thrive academically,
and launch your career.

PEOPLE

Faculty: Professors Anderson, Angenent, Arinkin, Căldăraru, Craciun,
Denisov, Ellenberg, Feldman, Gong, Kent, Lempp, Mari Beffa, Maxim, Miller,
Paul, Poltoratski, Roch, Seeger, Seppäläinen (chair), Smith, Stechmann,
Street, Terwilliger, Thiffeault, Valko, Waleffe, Yang; Associate Professors
Andrews, Dymarz, Erman, Gorin, Gurevich, Ifrim, Kim, Li, Marshall,
Soskova, Spagnolie, Stovall, Tran; Assistant Professors Chen, Cochran,
Guo, Kemeny, Rodriguez, Shankar, Shcherbyna, Shen, Waldron, Wang, Wu,
Zepeda-Núñez, Zimmer; Affiliate Faculty Pimentel-Alarcón, Ron.