MATHEMATICS AMP

All students must meet the Requirements for the Accelerated Master’s Degree Programs

OVERVIEW

A master’s degree in mathematics, statistics or biostatistics can be earned in a shortened time by careful planning during the junior and senior years at UVM. For example, the M.S. could be earned in just one additional year, because six credits of undergraduate courses can also be counted concurrently toward the M.S. degree requirements.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Master of Science for Accelerated Students

Students must declare their wish to enter the Accelerated Master’s Program in writing to the Department Chair, apply to and be accepted by the Graduate College before taking a course that they wish to count towards the M.S. degree requirements. Following acceptance by the Graduate College, they can receive concurrent undergraduate and graduate credit for up to six credits of 200-level courses approved for graduate credit. Students can take one additional pre-approved graduate course (3-credits) during their senior year that will count only towards the MS degree. Please refer to the Handbook for Graduate Studies in Mathematics, available on the Department website, for detailed information.

Students should discuss the possibility of an Accelerated Master’s Program in mathematics, statistics or biostatistics with the respective program director as soon as they think they may be interested in this program.

Minimum Degree Requirements for the Degree of Master of Science

Each student must complete one of the following options:

<table>
<thead>
<tr>
<th>OPTION A (THESIS)</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twenty-four semester hours of acceptable graduate credits in advanced mathematics courses, and six semester hours of thesis research culminating in a master’s thesis.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPTION B (NON-THESIS)</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thirty semester hours of acceptable graduate credits in advanced mathematics courses. No thesis is required.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOTH OPTIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under either option, students must take, or acquire the knowledge of the content in, the courses MATH 331 and MATH 333, and must satisfactorily complete at least four 300-level mathematics courses.</td>
<td></td>
</tr>
</tbody>
</table>

In both options students must select a major concentration from among the following areas: Analysis, Algebra, Applied Mathematics, or Discrete Mathematics. The concentration shall consist of at least nine approved credits in advanced mathematics courses in the respective area, three of which must be at the 300-level; students writing a thesis may count the six hours of thesis credit toward these nine hours.

With approval of the student’s advisor up to six credits of courses outside mathematics may be used to fulfill the major, minor, or degree requirements.

Comprehensive Examination

M.S. students must pass two written exams, offered each August and January. Ph.D. students in our program take these exams as well, but with a higher criteria for passing. For example, M.S. students need to demonstrate proficiency in the material covered by MATH 241 & MATH 242, but not necessarily in material covered by MATH 331 & MATH 333 (which Ph.D. students must do).

For example, a student taking MATH 241 & MATH 242 in their first year could sit for the analysis exam in August before their second year begins, with a second opportunity in January before their final semester.

All M.S. students need to take the real/complex analysis exam. For non-thesis students, the second exam can be in any of these areas: algebra, numerical analysis, differential equations, complex systems. For thesis students, a successful M.S. thesis defense will satisfies the second exam.

Requirements for Advancement to Candidacy for the Degree of Master of Science

Students who have been admitted to the Accelerated Master’s Program in mathematics normally advance to candidacy in this program at the end of their senior year. The criteria for advancement to candidacy are:

1. Completion of a bachelor’s program in mathematics at UVM, or completion of a bachelor’s program in science or engineering at UVM with a minor in mathematics;

2. Completion of at least two additional mathematics or statistics courses at the 200-level approved for graduate credit with grades of B or better in each (these are in addition to MATH 241 MATH 242 and the two 200-level courses required for admission to the program); and

3. Completion of a 300-level course in Mathematics with a grade of B or better. This course will count towards the master’s but may not be counted towards the student’s undergraduate degree or GPA, and so must be taken as an overload.

Students who have been admitted to the AMP on the completion of their junior year but who fail to meet the requirements for advancement to candidacy for the M.S. degree will only be permitted to continue towards their M.S. degree after review by the
Mathematics Graduate Committee and with the written approval of the Director of the Graduate Program in Mathematics.