

## MATHEMATICAL SCIENCES AMP

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

### OVERVIEW

A Master's Degree in mathematical sciences, statistics or biostatistics can be earned in a shortened time by careful planning during the Junior and Senior years at UVM. Because 6 credits of undergraduate courses can be counted concurrently toward the M.S. degree, it is possible to earn the M.S. degree through the Accelerated Master's Program with only 1 additional year. Another 3 graduate credits can be counted towards the M.S. degree while an undergraduate at UVM, but cannot count towards the B.S. degree.

### SPECIFIC REQUIREMENTS

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

Students are strongly encouraged to declare their wish to enter the Accelerated Master’s Entry Pathway in writing to the Director of the Mathematics Program by the end of their Sophomore year at UVM. This is needed for successful planning of the student's coursework, as indicated below. The student needs to apply to and be accepted by the Graduate College before taking the first 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 6 credits of 5000- or 6000-level courses. Another 3 graduate credits can be counted towards the M.S. degree while an undergraduate but cannot count towards the B.S. degree.

Additional information is available in the Handbook for Graduate Studies in Mathematics, found on the Mathematics and Statistics Department website.

#### Minimum Degree Requirements for the Degree of Master of Science

Each student must complete one of the following options:

Requirement Description	Credits
OPTION A (THESIS)	
24 semester hours of acceptable graduate credits in advanced mathematics courses, and 6 semester hours of thesis research (MATH 6391) culminating in a master's thesis.	30
OPTION B (NON-THESIS)	
30 semester hours of acceptable graduate credits in advanced mathematics courses. No thesis is required.	
BOTH OPTIONS	
Under either option, students must take, or acquire the knowledge of the content in, the courses MATH 6441 and MATH 6444, and must satisfactorily complete at least 4 6000-level mathematics courses.	

In both options, each student declares a concentration in either Pure Mathematics or Applied Mathematics. The concentration shall consist of at least 9 approved credits in advanced mathematics courses in the respective area, 3 of which must be at the 6000-level; students writing a thesis may count the 6 hours of thesis credit toward these 9 hours.	
With approval of the student's advisor up to 6 credits of courses outside mathematics may be used to fulfill the major, minor, or degree requirements.	

### Comprehensive Examination

M.S. students must pass a comprehensive exam consisting of two parts: a written exam and either a second written exam or a thesis.

Written exams are offered each August and January. Students must pass both exams (1, if writing a thesis) by the January before their final semester. Students may first attempt one of the written exams in August at the beginning of their first year as a Master's student, or earlier with the approval of the Mathematics Graduate Committee. For students who are writing a thesis, a successful M.S. thesis defense takes the place of 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 2 additional mathematics or statistics courses at the 5000-level approved for graduate credit with grades of B or better in each. Of the 5000-level courses in mathematics, 2 must have been completed with a grade of B+ or better.
3. Completion of a 6000-level course in Mathematics with a grade of B or better. This course will count towards the master's degree 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.