MECHANICAL ENGINEERING AMP

All students must meet the Requirements for the Accelerated Master's Degree Programs (http://catalogue.uvm.edu/graduate/degreerequirements/requirementsforacceleratedmastersdegreeprograms/)

OVERVIEW

Qualified undergraduate students who plan to earn a M.S. in mechanical engineering may enroll in the Accelerated Master's Entry Program, which enables students to begin working on the M.S. while still an undergraduate. Students apply to the program in the second semester of their junior year. Following acceptance by the Graduate College, students may take up to 6 graduate credits while still an undergraduate that can be counted toward both the B.S. and the M.S. degrees, subject to approval of the student's graduate advisor. Another 3 graduate credits can be counted towards the M.S. degree while an undergraduate but cannot count towards the B.S. degree. Students in the Accelerated Masters Program must follow either the non-thesis option or research thesis option M.S. degree requirements. For the thesis option, research counting toward the thesis must begin immediately in the summer following the completion of the bachelor's degree.

SPECIFIC REQUIREMENTS

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

To apply for the program, students must be enrolled at the University of Vermont in mechanical engineering with a cumulative grade point average of at least 3.20 at the time of application, and must complete the CEMS Accelerated Masters Permission Form and the Graduate College application. For thesis students, the application should name a graduate faculty member who has agreed to serve as their thesis advisor. No Graduate Record Examination (GRE) is required for AMP applicants.

Minimum Degree Requirements for the Degree of Master of Science

The Mechanical Engineering AMP requires the completion of advanced courses in mechanical engineering, mathematics, and other approved courses and research (for thesis students) totaling at least 30 credits.

Students are required to complete:

A prescribed set of nine core course credits which cover areas of advanced engineering, mathematics, continuum mechanics, and numerical methods	
6 course credits in the area of specialization for their degree	6

Currently, the program offers areas of specialization in:

- Biomechanics and Biomaterials
- Control and Design of Mechanical Systems;
- Materials Engineering and Nanomechanics;
- Thermodynamics, Fluids and Energy; and
- Computational Mechanics.

Further details on the core course requirements and the areas of specialization can be obtained from the Mechanical Engineering Graduate Program website.

OPTION A (THESIS)	
In addition to core courses, students selecting the thesis option must complete between 6 and 9 thesis credits (ME 391) prior to the master's thesis defense, with the expectation that the student's research must culminate in an original piece of work publishable as a conference proceedings paper or a peer-reviewed journal article. Those opting for a 6-credit thesis must complete an additional 3 credits of approved course work	
OPTION B (NON-THESIS)	
Students selecting the non-thesis option must complete an additional 15 credits of course work beyond the core credits in lieu of a thesis. Of the additional course work, a minimum of 9 credits must be in a chosen area of specialization.	

Comprehensive Examination

The comprehensive examination for the thesis option consists of successfully presenting a proposal research seminar.

Candidates in the non-thesis option must successfully present a 25-min. public seminar for the Mechanical Engineering Seminar Series. The seminar should be a comprehensive literature review on a subject matter relevant to the candidate's chosen area of specialization in mechanical engineering.

The candidate is given a maximum of 2 opportunities to pass the comprehensive examination.

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

A cumulative grade point average of 3.00 or better.