

78 Lomb Memorial Drive
Rochester, NY 14623-5604
585-475-2270 Fax: 585-475-5227

Master of Science in Mechanical and Manufacturing Engineering Technology (MMET)

Capstone Option

The Master of Science in Mechanical and Manufacturing Engineering Technology (MMET) degree is an opportunity for students in the program to greatly expand their knowledge of design and integration of manufacturing and mechanical systems. Each student in the program will be able to customize the program to fit their specific needs and interests through course and research topic selection and choosing a thesis option (more research intensive) or capstone option (more course work intensive).

The requirements for graduation and details of the Capstone option are described below. These requirements are the same for students entering the program through the 2/3 (BS/MS) Undergraduate/Graduate program or post baccalaureate.

Program Overview

The MMET program requires a minimum of 36 credit hours to meet the requirements for graduation. Of the required credits, 18 credit hours (6 courses) are allocated to required courses, 9 credit hours (3 courses) for a student's particular concentration, 6 credit hours (2 course) for an elective to be chosen by the student with advisor approval, and 3 credit hours to plan, execute, and document their capstone project. An example schedule of courses is available at:

www.rit.edu/MMSI

Upon acceptance into the MMET program, students will work with the Director of Graduate Studies & Research (Graduate Director) to successfully integrate into the department and schedule their first semester of classes.

During the first semester, with the help of the Graduate Director, each student must identify a faculty advisor. Once you have identified your faculty advisor, submit the "Capstone of Thesis Identification form for processing to the MMSI office. The faculty member will be the primary technical mentor to the student, direct their Capstone research, and guide/approve course selection to support the student's area of concentration. Achieving a good relationship between the student and advisor and identifying a meaningful topic for study are key elements in a successful Master's degree program.

By the conclusion of the student's second semester, with the advice and consent of their advisor, students must:

- Identify a graduate committee consisting of one additional faculty member (may be outside the MMET department) and the Graduate Director.
- Submit a Capstone Research Plan to the Graduate Director for approval.
- Submit a Plan of Study listing all courses to be taken during course of study to fulfill the concentration/technical elective requirements to the Graduate Director.

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Capstone Project Topic Selection

Selection of a capstone topic and completing the independent research work commensurate with the project is a central aspect of the Master degree program. The student should take great care in identifying a topic of interest to them, and supports the research efforts of the faculty advisor. Students who leave the decision of a capstone topic until late in their graduate program, and are slow to get started on their literature review and background research, historically have a lower probability of completing their degree.

A Master's program of study is quite different from an undergraduate program, particularly because of the manner in which the student is expected to self-direct their capstone work, be self-motivated, and determine their own schedule. Therefore, it is important for you to establish a project work and timing plan for your own benefit. The project plan should be updated regularly to ensure timely completion of all tasks.

By the **end of week 10 of the second semester after acceptance into the MMET** program the student must complete a formal capstone proposal for review by their committee. The proposal must include a project topic/hypothesis, a detailed plan or work, and timing plan for each step. The advisor will review the proposal with the student and when it is ready for submittal, will request the student schedule a meeting with their committee at which the student will present their proposal. The committee has 1 week from the date of the proposal presentation to either approve the proposal or submit to the student a written list of improvements that must be made to the proposal prior to approval. An approved proposal is required by the end of week 14 of the students second semester after acceptance to the MMET program.

Required Proposal Content

- Title
- Abstract (200-500 words, summary of proposal)
- Introduction/Background on topic/problem/project
 - Definitions, assumptions, significance of issue
- Project Aims, rationale, question(s) to be addressed
- Method used for research (analysis, testing, case study)
 - Design, testing, equipment needed
 - **Required materials, services, etc., anything that needs financial support**
- Expected results
- The plan of action (MS Project Gantt Chart)
 - Step by step actions/due dates/required resources
- Bibliography
- Appendices containing any additional pertinent information

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Capstone Project and Faculty Advisor Identification Form

The MMSI program provides guidance for students to complete their Capstone project proposal their second semester. In the event that this has not been completed, students requesting to enroll in MFET 797 Capstone Project or requesting a Full Time Equivalency (FTE) MUST have identified a Faculty Advisor and an idea for their Capstone project before they can be enrolled in this course or have an FTE approved.

Students who have completed their Capstone Proposal Defense are not required to submit this form.

Today's date _____

Student Name _____

Student UID _____

CAPSTONE TOPIC: _____

Faculty Advisor:

Signatures:

Student _____ Date _____

Faculty Advisor _____ Date _____

Graduate Director _____ Date _____

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Capstone Project Form

(Completed Proposal required by end of week 14 of second semester following acceptance to the MMET program including the 3/2 (BS/MS)option)

Today's date _____

Student Name _____

Student UID _____

PROPOSED CAPSTONE TITLE:

Attachments: Approved Proposal

Signatures:

Student _____ Date _____

Faculty Advisor _____ Date _____

Committee Member _____ Date _____

Graduate Director _____ Date _____

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Plan of Study (Capstone Project)

(Completed Plan of Study required by end of week 5 of second semester following acceptance to the MMET program including the 3/2 option)

Today's date _____

Student Name _____

Student UID _____

Concentration Courses

Course Title	Course Number	Term to be Completed

Elective

Course Title	Course Number	Term to be Completed

Signatures:

Student _____ Date _____

Faculty Advisor _____ Date _____

Graduate Director _____ Date _____

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Capstone Approval Form

Student Name _____

Student UID _____

Capstone Title:

Attachments: Approved Capstone Report

Signatures:

Student _____ Date _____

Faculty Advisor _____ Date _____

Committee Member _____ Date _____

Graduate Director _____ Date _____

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Checklist of Activity

Getting Started (During your first term)

- Contact the Director of Graduate Studies & Research concerning plan of study
- Complete course work
- Register for next term

Making Progress (During your second term)

- Submit completed Plan of Study to Research Director for approval
- Schedule regular status reviews of your work with capstone faculty advisor
- Review/revise plan of action with capstone faculty advisor
- Register for courses based on plan of study
- Select your faculty advisor
- Select advisory committee
- Develop Capstone Proposal and review with advisor (by week 10)
- Schedule presentation of proposal with MMET office
- Present Proposal to Committee (by week 12)
- Receive Committee Feedback and address as required
- Submit signed Capstone Plan Approval Form and all attachments to Research Director

Nearing Completion (one term before you graduate)

- Write capstone report and publication
- Revise and re-review (may require multiple iterations)
- Register for courses based on plan of study

Graduating (the term you plan to graduate)

- Register for final classes as required
- Clear all incomplete grades
- Clear all holds
- Submit plan to graduate to Graduate Director
- Schedule presentation of capstone project with MMET office (No later than week 12)
- Complete your capstone presentation
- Receive Committee Feedback and address as required
- Submit completed and approved copy of capstone report to Research Director (electronic and paper)
- Celebrate, and join RIT Alumni Association