MECHANICAL AND AEROSPACE ENGINEERING, MS

Chair

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Faculty

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The Department of Mechanical and Aerospace Engineering offers graduate programs leading to the following degrees:

- Master of Science (M.S.) in Mechanical and Aerospace Engineering
- Doctor of Philosophy (Ph.D.) in Mechanical and Aerospace Engineering

It also oversees one interdisciplinary master programs leading to the following degrees:

- Master of Science (M.S.) in Engineering Management

Admission Requirements

Master of Science (MS) in Mechanical and Aerospace Engineering

Admission to the MS degree program is granted on the basis of undergraduate preparation and performance, GRE scores, and letters of recommendation documenting the recent technical proficiency of the applicant. A grade-point average (GPA) of 3.0 or higher on a 4.0 scale (or equivalent), and a GRE Quantitative Reasoning score of 700 or higher (155 or higher on the new scale) are normally expected.

Admission to this MS degree program requires a Bachelor's degree in Engineering, or an acceptable field of Science.

If a student's background is not particularly strong in mechanical or aerospace engineering, he/she may be required to take undergraduate courses (not counted towards the MS degree) as specified in the letter of admission.

Application Procedure

Online application is the preferred method of applying to graduate programs at Syracuse University. Applications submitted online can be processed faster and more efficiently than those filed on paper. Access the online application.

You will receive an e-mail or postcard from Syracuse University when your application has been received and processed. Find out more information on the application process.

Department Policies

Independent Study Maximum

A graduate student may not count more than 3 credits of Independent Study towards the completion of their degree requirements:

- MAE 990 Independent Study 1-6 credit(s)

Special Projects Maximum

A graduate student may not count more than 6 credits of Special Projects towards the completion of their degree requirements:

- MEE 996 Special Projects 1-6 credit(s)

Transfer Credit Policy

A maximum of 9 credits of graduate coursework with a grade of B or better can be transferred into the program from another university with approval from the department.

Coursework Planning

Working closely with their assigned faculty advisor, students can create a flexible program of study that is tailored to his or her interests. Students may construct their own sequence of courses, or choose courses from a number of focus areas in the department, including Thermal/Fluids, Solids/Structure, Design/Manufacturing, Control/Robotics, and Energy/Built-Environment. Suggested courses for each focus area are available in the department (see "Guide to Graduate Studies in Mechanical & Aerospace Engineering").

Students intending to pursue a PhD degree after the MS degree should plan to meet the PhD admission requirements and PhD qualifying examination requirements, and select MS level courses accordingly.

Student Learning Outcomes

1. An ability to use the principals of mathematics to solve mechanical & aerospace engineering problems
2. An ability to use advanced techniques and modern tools to solve mechanical & aerospace engineering problems
3. An ability to use advanced engineering principles to identify, formulate and solve mechanical & aerospace engineering problems
4. An ability to understand and communicate advanced technical contents effectively

Degree Requirements

All students must complete core coursework (see below). Additionally, out of the 30 required credits, at least 21 must be taken within the MAE Department. The remaining 9 credits may be taken from any department within the College of Engineering and Computer Science. Coursework taken outside the college must be approved by the Program Director. Please note that MAE 670 (experience credit) does not count towards the degree requirements.

Completion of the program with less than 24 semester credits in engineering does not lead to credit toward licensure.

Core Coursework

All MS students are required to complete the following core courses in engineering analysis:

- MAE 675 Methods of Analysis in Mechanical Engineering 3 credit(s)
- MAE 994 Capstone Project 0 credit(s)

One additional course in computational/numerical method from a list of approved courses (see “Guide to Graduate Studies in Mechanical & Aerospace Engineering”).

Seminar Requirement

MS students must also attend at least two (2) semesters of the MAE graduate seminars:

- MAE 995 Graduate Seminar 0 credit(s)

500-Level Coursework Maximum

No more than 9 credits of 500-level coursework may be counted toward degree requirements.

GPA Requirement

A minimum GPA of 3.0 for coursework included in the Program of Study for the degree along with a minimum GPA of 2.8 for all credits earned must be achieved to graduate.