



GRADUATE

Mechanical Engineering

School of Engineering
Department of Mechatronics and
Mechanical Engineering

SIUE

siue.edu/grad/mechanical-engineering

Mechanical Engineering at SIUE

The SIUE School of Engineering is one of the most comprehensive engineering schools in the region, offering a broad collection of professionally accredited engineering programs.

As part of the mechanical engineering program, courses are offered in the areas of:

- Fluid mechanics and thermal sciences
- Structural mechanics and vibrations
- Nonlinear dynamical systems
- Mechatronics, robotics and control systems

Degrees Available at SIUE

- Master of Science in Mechanical Engineering

Combined Degrees

- Accelerated Combined BS and MS in Mechanical Engineering
- Accelerated Combined BS in Mechatronics and Robotics Engineering and MS in Mechanical Engineering
- Early Entry MS in Mechanical Engineering

Program Format

The program can be completed through a mix of traditional daytime and evening courses.

What can I do with a degree in mechanical engineering?

Students with a graduate degree in mechanical engineering will be well prepared to pursue a career in a wide range of industries, including:

- Aerospace
- Manufacturing
- Energy
- Automotive
- Bioengineering
- Robotics and automation
- Computer-aided design and engineering

Recent SIUE graduates have earned positions in the private sector and governmental agencies. Some graduates also choose to pursue a doctoral degree.

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
GRADUATE SCHOOL

Admission Requirements

- Graduate School application and \$40 fee
- Submission of all postsecondary academic transcripts
- Undergraduate GPA of at least 2.75 on a 4.0 scale in engineering, mathematics and physical science courses
- A baccalaureate degree in mechanical engineering from an ABET-accredited program. Applicants who completed a non-ABET-accredited program or whose undergraduate studies were in a country other than the United States must have a baccalaureate degree in mechanical engineering which is comparable to the United States' bachelor's degree and are encouraged to take the Graduate Record Examination (GRE) (verbal, quantitative, and analytical portions) to support their applications.
- International Applicants: Proof of English Proficiency, minimum requirements are TOEFL (79), IELTS (6.5) or equivalent
- Accelerated Combined Degrees: Current SIUE undergraduate students may apply for the accelerated option to earn graduate-level credit for courses taken their senior year.

Program application materials may be uploaded during the application process, but official transcripts must be sent directly from the school attended, and test scores must be verifiable with the appropriate testing service. Please contact the Graduate Admissions office with questions regarding the application submission process at graduateadmissions@siue.edu.

Applicants from selected areas of mathematical and physical sciences, or those whose undergraduate engineering degrees are not in mechanical engineering, will be considered for admission on a case-by-case basis. Such applicants may be required to take remedial courses in the deficient area before taking graduate-level ME courses.

In exceptional cases, the graduate admission committee may consider applicants who meet the Graduate School admission standards, but do not meet certain specified program admission requirements. The committee may consider other evidence that indicates high promise of the applicant's success in the program. Such supportive evidence may include high scores on GRE, professional registration, extensive professional experience, professional publications, or satisfactory graduate-level work.

Graduation Requirements

Students must have completed all coursework with a minimum grade of C and have a minimum program GPA of 3.0. Both thesis and non-thesis students are required to pass a final examination.

The final exam will include an oral presentation and defense of the thesis or project. Final examination will be conducted by an examination committee primarily on the content of the thesis or project, but may also include the subject matter of relevant courses. The examination committee will consist of a minimum of three faculty members, with at least two ME faculty members. Prior to the final oral examination, students are required to submit copies of their thesis or project to all committee members, sufficiently in advance of the exam date to allow the committee to review the material. The student must schedule the exam at least two weeks prior to the exam date. The student is responsible for informing the committee and the Graduate Program Director of the date, time, and place of the exam.

Required Credit Hours/Tuition and Fees

- 30
- Visit siue.edu/graduate-tuition for detailed tuition information

Curriculum

The department offers both thesis and non-thesis options. Both options require the completion of 30 graduate credit hours. To take full advantage of the academic experience available, however, students are encouraged to take the thesis option.

The thesis option requires a minimum of 24 credit hours of coursework plus six credit hours of ME 599-Thesis.

Thesis students will be guided in thesis work by a thesis advisor with the assistance and concurrence of an advisory committee. The thesis topic will be selected from an area in mechanical engineering and approved by the student's advisor. When possible, part-time students will be encouraged to select topics complementing their professional responsibilities. Writing a thesis involves an intensive research effort and generally requires several semesters of work to complete. Students are encouraged to find a thesis advisor and begin their thesis work well in advance of registering for thesis credits.

The non-thesis option requires a minimum of 30 credit hours of coursework plus the completion of a research project.

Non-thesis students are required to work on a research project, the topic of which is mutually agreed upon by the student and a faculty advisor, and write a report describing their project and present their findings to an examining committee. A research is less involved than a thesis. No credit is awarded for completion of the research project.

Of the 30 credit hours required, at least 21 credit hours must be in mechanical engineering courses, of which at least 15 credit hours must be at the 500-level (which may include up to six credit hours of ME 599-Thesis). Six credit hours must be in mathematics and must be selected from a list of courses already approved by the mechanical engineering faculty. The program allows students to take one graduate-level elective course from outside the program. The elective course may be taken from any of the courses listed in the current Graduate Catalog, provided the student meets prerequisites.

All students are required to complete either ME 530-Advanced Dynamics or ME 575-Advanced Fluid Mechanics.

The mechanical engineering discipline has a close interface with civil engineering in the areas of stress analysis and elasticity, and with electrical engineering in the areas of system dynamics and control theory. Whenever possible, courses in these areas will be cross-listed to enrich the variety of course offerings for students in all programs.

The specific program of study is selected by the student and approved by the student's advisor.

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