

MECHANICAL ENGINEERING, MASTER OF SCIENCE IN ENGINEERING

The Master's Degree Program

The department offers a variety of options to earn the master's degree, known as the Master of Science in Engineering degree in Mechanical Engineering.

Essay Option

Students writing an essay will successfully complete a coordinated sequence of eight courses and graduate research, and submit a master's essay (sometimes known as a "thesis"). The degree typically requires three to four semesters of study.

There are two options to complete the essay:

- Conduct Laboratory Research
 - Work with world-renowned engineering professors by conducting original research to produce an essay worthy of publication.
 - Learn more about the Research option here! (<https://me.jhu.edu/education/graduate-studies/masters-program/>)
- Work in a Cooperative Educational Environment (Co-Op)
 - To broaden the practical training for master's students, the Institute for Nanobiotechnology (INBT) (<https://inbt.jhu.edu/>) teams with companies to provide an immersive master's industry "co-op" experience (<https://inbt.jhu.edu/masters/>) in a professional working environment. Goals and objectives are developed for the student in conjunction with faculty and INBT academic advisors, which will be used to complete the master's essay.
 - Learn more about the Co-Op program here! (<https://me.jhu.edu/education/graduate-studies/masters-program/>)

All-Course Option

Students completing an "all-course" degree will successfully complete a coordinated sequence of ten courses. A master's essay or thesis is not required for this degree, which typically requires three semesters of study.

Both options provide students with an intensive exposure to advanced topics in mechanical engineering and strengthens understanding of engineering fundamentals.

Where Do our Master's Graduates Go?

Visit our Master's Alumni page (<https://me.jhu.edu/mse-alumni-by-year/>) to see where our graduates have made their mark around the world. You, too, can join this elite group with an admission to our master's degree program!

Admissions

To be admitted to graduate study in the Department of Mechanical Engineering, applicants must submit credentials sufficient to convince the faculty that they will thrive in a program of advanced course work and/or research. Graduate Record Examination scores must be submitted.

Program Requirements

Essay Option: For the Master of Science in Engineering degree at least eight one-semester courses are required. At least four of them must be selected among those listed as graduate courses in this catalogue. The remaining courses can be chosen from .400-level courses in this catalogue, with the advisor's approval. At least three courses must be offered by Mechanical Engineering (EN.530.xxx). All students must follow a course of study approved by their individual advisor.

- *Essay (Research)* - A completed piece of original research will be conducted under the guidance of a full-time faculty member of the department and reported as a master's essay.
- *Essay (Co-Op)* - A co-operative work arrangement will be conducted under the guidance of a full-time faculty member of the department and reported as a master's essay.

All-Course Option: The student must successfully complete a coordinated sequence of ten courses, which requires one year of full-time resident graduate study.

- At least six of the ten courses, or the equivalent of 18 credits or more, must be selected among the graduate courses of this catalogue. Up to 6 of these 18 credits, or the equivalent of two courses, can be achieved by a combination of 1.5-credit or 3-credit courses from the Center for Leadership Education.
- At least four courses, or the equivalent of 12 credits or more, must be offered by Mechanical Engineering (EN.530.xxx).

The intent of this program is to provide the student with an intensive exposure to fundamental and advanced topics within mechanical engineering. Students must follow a course of study approved by their individual advisor.

Details on grade requirements and other departmental academic policy for the M.S.E. degree can be found on the Mechanical Engineering Graduate Advising page (<https://me.jhu.edu/education/graduate-studies/advising/>).