

# Mechanical Engineering

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The Mechanical Engineering program offers graduate study leading to the degrees of Master of Science in Mechanical Engineering and Doctor of Philosophy in Engineering with a Mechanical Engineering concentration. Both M.S. and Ph.D. degrees are available via BCoE Learning (online). The major areas of study include but are not limited to: fluid mechanics, solid mechanics, energy systems, thermal sciences, materials and manufacturing, mechanical design, and system dynamics. Specific programs of graduate study are established by consultation between students and their advisors. For further information contact the Graduate Coordinator, Mechanical Engineering Department, BOX 9552, Mississippi State, MS 39762 or [gradcoord@me.msstate.edu](mailto:gradcoord@me.msstate.edu).

## Admission Criteria

A minimum GPA of 2.75 is required for admission. An entering graduate student with a bachelor's degree from a program that is not accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET) must submit GRE general-test scores. An international student must have a minimum TOEFL score of 550 PBT (79 iBT) or IELTS score of 6.5.

## Provisional Admission

A provisional student must receive a 3.00 GPA on the first 9 hours of graduate level courses on his or her program of study taken at Mississippi State University (courses with an S grade, transfer credits, or credits earned while in Unclassified status cannot be used to satisfy this requirement) in order to be released from provisional status and achieve regular status. If a 3.00 GPA is not attained, the provisional student may be dismissed from graduate study. While in provisional status, a student is not eligible to hold a graduate assistantship.

## Academic Performance

For students enrolled in either the M.S. or Ph.D. program, all issues related to academic probation, dismissal and appeal will be governed by University policy, as approved by Graduate Council and the Provost and outlined by the Graduate School in the Graduate Catalog (<http://catalog.msstate.edu/archives/2018-19/graduate/academic-policies/academic-requirements>).

## Accelerated Program

Highly qualified undergraduates in the Mechanical Engineering Department are encouraged to consider applying to the Accelerated Program. This program permits students to earn up to 9 hours of graduate-level coursework during their final year of undergraduate studies. Students in the Accelerated Program take graduate-level courses and earn both undergraduate credit and graduate credit simultaneously. Students need to consult with the potential graduate advisor to ensure graduate credit could be applied to a program of study for the graduate degree. Application to this program may be made as early as the junior year (i.e. after completion of 60 or more hours of graded undergraduate courses.) Students interested in applying to the Accelerated Program should contact the department's Graduate Coordinator, Dr. Yucheng Liu, for more details.

For students enrolled in an Accelerated Program, the MSU Graduate Council has established the following guidelines in cooperation with the Registrar's Office.

Once the student is accepted into the Accelerated Program, the student and the advisor may select up to 9 hours that will satisfy both undergraduate and graduate requirements. These courses may be split-level (i.e. split 4000-6000 level) or 8000-level classes. The student should take the courses for graduate credit (i.e., 6000-level or higher). The combination of undergraduate and graduate credit hours may not exceed 13 within a semester.

The student should use the Undergraduate Enrollment in Accelerated Degree Program form (<http://www.grad.msstate.edu/forms/pdf/accel.pdf>) to (i) receive from the Office of the Graduate School a level override that enables the student to enroll in the graduate course(s) and (ii) activate a process with the Registrar's Office to obtain both undergraduate and graduate credit for the course. After successfully completing the graduate-level class(es), the Registrar will grant credit for the undergraduate course and give the same grade as received for the graduate course. For the case of a split-level class, the transcript will show credit for both 4000- and 6000-level on the transcript. In the case of an 8000-level class, a special topics undergraduate course of the same title will be entered on the transcript to allow dual credit.

Students are permitted to opt out of the Accelerated Program at any time, at which point they could complete only the undergraduate portion of the program. No additional dual counting of courses would occur after the students opted out of the accelerated degree program.

Students are expected to apply to the graduate degree program during the last semester in which they are enrolled in the Bachelor's program.

Application to the graduate degree program would be made through the standard application process via the Office of the Graduate School. Students will receive the Bachelor's degree once the requirements for the Bachelor's degree are met. Students will be required to complete all of the requirements for both the bachelor's and graduate degrees in order to receive both degrees and those requirements will be identical to the requirements for students enrolled in traditional bachelor's and graduate degree programs. Students will be classified as undergraduates until they fulfill all the requirements for the undergraduate degree. At that time, upon admission to graduate school, they will be classified as graduate students and will be subject to all the guidelines pertaining to the graduate degree.

### Master of Science in Mechanical Engineering - Thesis

|                                      |   |    |
|--------------------------------------|---|----|
| ME 8011                              | Graduate Seminar  | 1  |
| XX 8XXX                              | Graduate-level coursework (can include up to 6 hours of DIS- ME 7000) | 12 |
| Additional graduate-level coursework |   | 12 |
| ME 8000                              | Thesis Research/ Thesis in Mechanical Engineering                     | 6  |
| Total Hours                          |   | 31 |

A thesis and a final oral exam are required.

### Master of Science in Mechanical Engineering - Non-Thesis

|                                      |   |    |
|--------------------------------------|---|----|
| ME 8011                              | Graduate Seminar  | 1  |
| XX 8XXX                              | Graduate-level coursework (can include up to 6 hours of DIS- ME 7000) | 15 |
| Additional graduate-level coursework |   | 15 |
| Total Hours                          |   | 31 |

An oral presentation and final are required.

### Doctor of Philosophy in Engineering with Mechanical Engineering Concentration

|   |   |    |
|---|---|----|
| ME 8011   | Graduate Seminar  | 2  |
| ME 8213 OR MA 6313 OR MA 6323 OR MA 8203 OR MA 8463   |   | 3  |
| XX 8XXX graduate-level coursework (may include up to 6 credit hours of DIS- ME 7000 taken since bachelor's) |   | 18 |
| Other graduate coursework   |   | 21 |
| ME 9000   | Dissertation Research /Dissertation in Mechanical Engineering | 20 |
| Total Hours   |   | 64 |

Students who have entered the ME Ph.D. program are required to take the Ph.D. qualifying exams after they have completed 18 graduate course credit hours or within their first 3 years, whichever comes first. An oral preliminary comprehensive examination is required at least six months prior to graduation and after determination of dissertation topic. A final oral dissertation defense is required. The student's program of study, including all coursework, must be approved by the committee and the graduate coordinator.