

# Master of Engineering

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## An Interdisciplinary Program

Graduate study is offered through the Office of the Dean, James Worth Bagley College of Engineering, leading to the degree of Master of Engineering (M Eng) with a concentration in General Engineering or Military Engineering. The M Eng is an interdisciplinary program which combines graduate-level courses from different engineering programs into an advanced-level educational experience that is thematic in nature to allow students to specialize in areas critical to their career advancement. This has both a thesis and non-thesis option.

All students admitted to the M Eng should become familiar with academic requirements and processes associated with graduate studies in the Bagley College of Engineering and Mississippi State University as noted in the MSU *Graduate Catalog* in the General Requirements of the Graduate School and General Master's Degree Requirements sections. The *Graduate Catalog* is available at <http://catalog.msstate.edu/graduate/> (<http://catalog.msstate.edu/archives/2020-21/graduate/>). For specific information about the program, email [graduate@bagley.msstate.edu](mailto:graduate@bagley.msstate.edu).

## Admission Criteria

In addition to meeting the requirements set forth by the Graduate School as noted in the admission section of this publication, the basic requirements for admission to the M Eng include a minimum 3.00/4.00 GPA on a B.S. degree in an engineering discipline or closely related area or remedial engineering coursework. Students should refer to the General Requirements for Admission section in the *Graduate Catalog* regarding University admission policy.

A satisfactory performance is required on the GRE for students with a degree from a program that is not EAC/ABET-accredited. Consideration may be given to students who hold non-engineering undergraduate degrees on a case-by-case basis. Admission decisions are made by the Associate Dean for Research and Graduate Studies.

As part of the standard engineering undergraduate program, a student will have had the following coursework.

- Calculus I-IV and Differential Equations
- One year of calculus-based physics
- One semester of general chemistry class
- Two or three engineering science courses (e.g. electronic circuits, engineering mechanics, thermodynamics, production control systems)

The commonality in fundamental coursework in ABET-accredited engineering programs generally allows for the offering of graduate-level engineering courses with a prerequisite of "graduate standing." A student with a significant practical work experience in an area will have "consent of Instructor" as a standard prerequisite. If specific, significant prerequisites are required for any course, these will be clearly identified when the course is posted.

## Provisional Admission

An applicant who does not meet a programmatic or university admission requirement stipulated by the University may be admitted on a provisional basis. The provisionally-admitted student is eligible for a change to regular status after receiving a 3.00 GPA on the first 9 hours of graduate courses at Mississippi State University (with no grade lower than a C). The first 9 hours of graduate courses must be within the student's program of study.

Courses with an S grade, transfer credits, or credits earned while in Unclassified status cannot be used to satisfy this requirement. If a 3.00 is not attained, the provisional student may be dismissed from the graduate program. **While in the provisional status, a student is not eligible to hold a graduate assistantship.**

## Unclassified Admission

In certain circumstances, a student may be granted admission in unclassified status. Only 9 hours of graduate coursework received as an unclassified student **may** be transferred to the M Eng with the approval of the Associate Dean for Research and Graduate Studies. Hours completed in unclassified status may not be used to satisfy provisional admission requirements.

## Academic Performance

To be in good academic standing, a student is required to maintain a cumulative graduate GPA of 3.00 after admission to the program. If a graduate student's cumulative GPA falls below 3.00, the student will be placed on academic probation. The student must raise the cumulative GPA to at least a

3.00 on the next 9 hours of approved coursework in order to return to satisfactory academic performance. DIS credits, transfer credits and courses with S grades cannot be used to satisfy this requirement.

A student may be dismissed from the M Eng if:

- In any subsequent semester the student's cumulative GPA again falls below 3.00
- A student makes a grade of D, F, or more than two Cs.

In the case of academic dismissal, the student may appeal his/her academic dismissal according to Appeal of Academic Dismissal as outlined in the *MSU Graduate Catalog*.

## Accelerated Program

Highly qualified undergraduates in the departments of Aerospace Engineering; Agricultural and Biological Engineering; Chemical Engineering; Civil and Environmental Engineering; Computer Science and Engineering; Electrical and Computer Engineering; Industrial and Systems Engineering; and Mechanical Engineering 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 Master of Engineering Graduate Coordinator to ensure graduate credit could be applied to a program of study for the graduate degree. Application to this program may be made after completion of 90 or more hours of graded undergraduate courses. Students interested in applying should see Accelerated Programs (<http://catalog.msstate.edu/archives/2020-21/graduate/colleges-degree-programs/>) for information and contact the Master of Engineering Graduate Coordinator for more details.

At the time a student applies to the Accelerated Program, she or he must complete the following requirements:

- Be enrolled at Mississippi State University in one of the 11 undergraduate degree programs in the Bagley College of Engineering
- Have completed a minimum of 60 credit hours toward a Bachelor's degree
- Have an overall GPA of 3.5 or higher for all undergraduate work

An application packet to be submitted to the Graduate Coordinator of the Master of Engineer Program must include the following:

- Application form
- One-page résumé
- Three letters of recommendation from references who are knowledgeable about the applicant's academic work
- Admission into the Accelerated Program requires a GPA of 3.50 or higher on a 4.00 system for all undergraduate work

## Master of Engineering - Non-Thesis Option

### Major Required Courses

IE 6613 or ST 8114 or equivalent	Engineering Statistics I Statistical Methods	3
IE 6533 or CE 6703 or equivalent	Project Management Construction Engineering and Management	3
GE 8003	Master of Engineering Capstone Course	3
Any Bagley College of Engineering class in combination with up to 12 hours outside of engineering <sup>1</sup>		21
<b>Total Hours</b>		<b>30</b>

<sup>1</sup> A minimum of 15 hours at the 8000-level is required.

## Master of Engineering - Thesis Option

### Major Required Courses

IE 6613 or ST 8114 or equivalent	Engineering Statistics I Statistical Methods	3
IE 6533 or CE 6703 or equivalent	Project Management Construction Engineering and Management	3
Any Bagley College of Engineering class in combination with up to 12 hours outside of engineering <sup>1</sup>		18

Thesis-option	6
XX 8000 Research/Thesis taken in a College of Engineering department	
<b>Total Hours</b>	<b>30</b>

<sup>1</sup> A minimum of 12 hours at the 8000-level is required.

## Master of Engineering - Military Engineering Concentration - Non-Thesis Option

### Major Required Courses

IE 6613 or ST 8114 or equivalent	Engineering Statistics I Statistical Methods	3
IE 6533 or CE 6703 or equivalent	Project Management Construction Engineering and Management	3
GE 8003	Master of Engineering Capstone Course	3
Military Engineering Approved Elective courses (requires approval of graduate coordinator) <sup>1</sup>		21
<b>Total Hours</b>		<b>30</b>

<sup>1</sup> A minimum of 15 hours at the 8000-level is required.

## Master of Engineering - Military Engineering Concentration - Thesis Option

### Major Required Courses

IE 6613 or ST 8114 or equivalent	Engineering Statistics I Statistical Methods	3
IE 6533 or CE 6703 or equivalent	Project Management Construction Engineering and Management	3
Military Engineering Approved Elective Courses (requires approval of graduate coordinator) <sup>1</sup>		18
Thesis-option		6
XX 8000 Research/Thesis taken in a College of Engineering department		
<b>Total Hours</b>		<b>30</b>

<sup>1</sup> A minimum of 12 hours at the 8000-level is required.

The curriculum for the M Eng (both concentrations) is flexible with a minimum requirement of 30 credit hours for both the thesis and non-thesis tracks. Engineering Statistics I and Project Management (or their equivalent) must have been completed as part of another degree program or will be required on the M Eng program of study. For the thesis option, 24 hours of graduate-level coursework are required, with a minimum of 12 hours at the 8000 level, and 6 hours of research/thesis. For the non-thesis option, 30 hours of graduate-level coursework are required, with a minimum of 15 hours at the 8000 level. Coursework is selected from courses offered across the Bagley College of Engineering. Up to 12 hours may be taken from outside the engineering field (normally business, science, mathematics, or statistics; upon petition to the Associate Dean for Research and Graduate Studies, other areas may be considered). For the Military Engineering concentration, courses are selected from a set of identified courses that are applicable to this focus. Additionally, non-thesis students in either concentration must complete GE 8003 as the final capstone course for this program.