

ENGINEERING MANAGEMENT, M.S.E.

Program Description

The M.S. in Engineering (M.S.E.) program is an interdisciplinary engineering program designed to meet the specific needs of engineers employed in industry, government, and consulting, as well as those desiring a traditional research-based graduate degree. The program offers a broad core curriculum with opportunities for concentrated study in two majors: Engineering Management and Civil and Environmental Engineering.

Admission Requirements

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: <http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission> (<http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission/>). Each applicant must have an undergraduate engineering degree from either an accredited ABET curriculum or an internationally recognized program.

1. If applicants have an undergraduate 2.5 or higher GPA on a 4.0 scale and have already passed the PE exam in the major for which they are applying (official copy of certificate to be sent to the Marshall University Graduate Admissions Office), their applications will be accepted.
2. If applicants have an undergraduate GPA of 3.0 or higher on a 4.0 scale in an engineering major closely related to that for which they are applying, their applications will be evaluated on a case-by-case basis.
3. If applicants have an undergraduate GPA between a 2.5 and 3.0 on a 4.0 scale in an engineering major closely related to that for which they are applying, applicants must take the GRE exam or pass the FE exam, and have their official GRE scores or official FE certificate sent to the Marshall University Graduate Admissions office. The applications will be evaluated on a case-by-case basis.

At least one letter of recommendation is required for all applicants.

International applicants must provide proof of English proficiency according to applicable university requirements. International applicants must meet all other admission criteria prior to being admitted to the program and registering for the first semester of courses.

A current non-degree or degree-seeking Marshall University student who holds an undergraduate engineering degree, may apply to be considered for admission to the M.S.E. degree program if s/he has at least a minimum cumulative graduate GPA of 3.30 in his or her first 9 credit hours of M.S.E. courses. For international students, the English requirements stated above must still be satisfied.

Program Requirements

Each degree candidate is required to complete at least 30 graduate credit hours, depending on the option chosen below (project, thesis, or coursework only), with a cumulative Grade Point Average of 3.0 for the courses included in the student's Plan of Study. At least one-half of

the minimum required hours for the degree must be earned in classes numbered 600 or above.

Each degree-seeking student must file an approved Plan of Study, developed with a faculty advisor, before the student registers for the 12th credit hour. The Academic Regulations portion of the Graduate Catalog may be consulted for additional information.

A student may only earn the M.S.E. degree once. Therefore, students wishing to complete two M.S.E. majors (*i.e.*, double major) must complete all requirements for both majors before the degree is awarded. A maximum of 12 credit hours may be counted toward both majors, as approved by the student's academic advisor in each major. An option must be selected for each major and the two options are permitted to be different. However, each major must have its own comprehensive assessment (*i.e.*, comprehensive project, thesis, or comprehensive examination). For example, a single thesis and defense cannot satisfy the requirements for both majors.

Students may choose to complete either the project option, the thesis option, or the coursework-only option after consultation with their academic advisors.

Project Option. The comprehensive project involves the application of coursework completed as part of the degree to a practical problem. Students will work with their advisors to identify an appropriate project and scope. Students must prepare a formal written report and deliver an oral presentation to a committee. Students register for a 3 hours of ENGR 682 Research during the semester in which their project will be completed and presented, but preliminary work on the project may commence before that semester.

Thesis Option. The thesis option involves the completion of 6 hours of ENGR 682 Research under the direction of an advisor on an approved project. Students must summarize their work in the form of a formal, written document and successfully defend the thesis before a committee. Thesis work is typically conducted over two semesters.

Coursework-Only Option. Students complete 30 hours of coursework and then complete a comprehensive examination within the last two semesters of graduation to fulfill the requirements of their degree program. Examinations will be administered no more than once per semester for any student. If the student does not pass the exam within three attempts, the student will be dismissed from the program.

Plan of Study

Coursework-Only Option

Code	Title	Credit Hours
Required Courses		
EM 620	Mgt Tech HR & Orgs	3
EM 660	Project Management	3
EM 668	Operations Management	3
EM 675	Engineering Economics (or TM equivalent)	3
EM 694	Engineering Law	3
or ES 550	Environmental Law & Policy	
or LE 691	Gov Bus Relationships	
or HCA 630	Legal Issues/Health Care Mgt	
or STHM 615	Legal Concerns in STHM	
ENGR 610	Applied Statistics	3

or STA 634 Stat Mtds for Researchers
 or STA 545 Probability and Statistics I

Elective Courses

Select 12 hours from approved Engineering Management electives 12
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Total Credit Hours 30

Project Option

Code	Title	Credit Hours
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Required Courses

EM 620	Mgt Tech HR & Orgs	3
EM 660	Project Management	3
EM 668	Operations Management	3
EM 675	Engineering Economics	3
EM 694	Engineering Law	3
or ES 550	Environmental Law & Policy	
or LE 691	Gov Bus Relationships	
or HCA 630	Legal Issues/Health Care Mgt	
or STHM 615	Legal Concerns in STHM	
ENGR 610	Applied Statistics	3
or STA 634	Stat Mtds for Researchers	
or STA 545	Probability and Statistics I	

ENGR 682	Research	3
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Elective Courses

Select 9 hours from approved Engineering Management electives 9
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Total Credit Hours 30

Thesis Option

Code	Title	Credit Hours
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Required Courses

EM 620	Mgt Tech HR & Orgs	3
EM 660	Project Management	3
EM 668	Operations Management	3
EM 675	Engineering Economics	3
EM 694	Engineering Law	3
or ES 550	Environmental Law & Policy	
or LE 691	Gov Bus Relationships	
or HCA 630	Legal Issues/Health Care Mgt	
or STHM 615	Legal Concerns in STHM	
ENGR 610	Applied Statistics	3
or STA 634	Stat Mtds for Researchers	
or STA 545	Probability and Statistics I	

ENGR 682	Research	6
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Elective Courses

Select 6 hours from approved Engineering Management electives 6
 (p. 2)

Total Credit Hours 30

Approved Elective Courses for the Engineering Management Major

- Any EM (Engineering Management) course.
- Any College of Business course approved in advance by the advisor.
- Any engineering course approved in advance by the advisor.