ELECTRICAL ENGINEERING, M.S.E.

The Electrical Engineering Major in the Master of Science in Engineering degree is designed to provide students with the knowledge, skill, and professional practices needed to develop and design electrical or computer engineering related systems. The program also prepares students who desire to pursue further graduate work leading to a Ph.D. degree.

Admission Requirements

1. 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 and at least one letter of recommendation detailing their qualifications for study at the graduate level. 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..
4. 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.
5. 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.
6. Eligibility to take the PE exam is based primarily on completion of an ABET-accredited undergraduate engineering degree in most states. Completion of a M.S.E. graduate degree at an institution with an ABET-accredited undergraduate degree does not fulfill that requirement to take the PE exam.

Graduation Requirements

Each degree candidate is required to complete at least 30 graduate credit hours, depending on the option chosen below (thesis, project, 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.

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

Required Courses

(15 CR)

All graduate students in the Electrical Engineering Major of the M.S.E. program must take a minimum of 15 CR of required courses. Theses courses include 9 CR of engineering core classes and 6 CR of required electrical engineering courses.

Major Elective Courses

(6-15 CR)

Graduate students pursuing the thesis option must complete a minimum of 6 CR of major elective courses. Graduate students pursuing the design project option must complete a minimum of 6 CR of major elective courses and 6 CR of additional electives. Graduate students pursuing the Coursework Only Option must complete a minimum of 6 CR of major elective courses and 9 CR of additional elective courses. The elective courses must be approved by the advisor.

Thesis Option (9 CR)

Prior to completing 12 CR of graduate work, students should prepare and present a formal thesis proposal to their faculty advisor. An acceptable proposal (including a statement of work, extensive literature search, and proposed timeline), signed by the student and approved by their faculty advisor and department head, is required prior to registering for thesis credits. The thesis option requires 3 CR of Research Methods preparation and 6 CR of Thesis Research hours.

Students must form a graduate thesis committee in coordination with their advisor and present their proposal to their committee for review and approval during the first semester in which they have registered for thesis credit. Students are required to deliver a successful written and oral presentation of their thesis. This defense of the thesis work serves the role of a comprehensive examination.

Project Option (3 CR)

The student may be permitted to enroll in a project only option. This option requires 3 CR of Thesis Research and the production of a formal report describing the process and results of the research project. During the first semester of the program, the student should select an advisor for their project. Each student will have an individual Plan of Study approved by the student's assigned advisor and the department chair by the end of the first semester of the program. For this option, the student must satisfactorily complete a comprehensive examination prior to graduation.

Coursework-Only Option (NC)

The Electrical Engineering Major in the M.S.E. degree may be completed without the preparation of a formal research thesis or project report. Instead, a student may be permitted to enroll in a no thesis/no report (coursework only) program which involves only coursework. The student must complete at least 30 graduate credits of approved courses. During the first semester of the program, the student should select an advisor. Each student will have an individual Plan of Study approved by the student's assigned advisor and the department chair by the end of the first semester of the program. For this option, the student must satisfactorily complete the comprehensive examination prior to graduation.

Course Requirements

Code	Title	Credit Hours
Engineering Core (9 CR):		
EM 660	Project Management	3
EM 675	Engineering Economics	3
ENGR 610	Applied Statistics	3
Required Electrical Engineering Courses (6 CR):		
EE 619	Digital Signal Processing	3
EE 640	Digital Control Systems	3
Major Elective Courses (12 CR):		
These courses must be chosen from the EE graduate courses.		
Elective Courses (0-9 CR): [1]		
Thesis Option:		
EE 608	Research Methods	3
ENGR 682	Research	6
Project Option:		
ENGR 682	Research	3
Elective Courses		6
Coursework Only Option:		
Elective Courses		9
Total Credit Hours (minimum)		**30**

[1] Elective courses must be chosen in consultation with the faculty advisor and appropriate to the discipline.