ENGINEERING MECHANICS: FUNDAMENTALS OF APPLIED MECHANICS, M.S.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
No	No	No	Yes	Yes

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement	Detail
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	15 of the required 30 credits must be in graduate-level coursework from E M A and Engineering Physics; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide (https://registrar.wisc.edu/course-guide (https://registrar.wisc.edu/course-guide/)/).
Overall Graduate GPA Requirement	3.00 GPA required.
Other Grade Requirements	Courses in which grades of BC, C, or below are received cannot be counted toward the degree except as follows: 1) Credits of C will be allowed provided they are balanced by twice as many credits of A or by four times as many credits of AB, 2) Credits of BC will be allowed provided they are balanced by twice as many credits of AB or by an equal number of credits of A.
Assessments and Examinations	None.
Language Requirements	No language requirements.

REQUIRED COURSES

Code	Title	Credits
Summer Session		**3-6**
E M A 303	Mechanics of Materials	3
E M A 202	Dynamics (strongly recommended prerequisite) [1]	3
Fall Semester		**14**
M E/E M A 307	Mechanics of Materials Lab	1
E M A 506	Advanced Mechanics of Materials I	3
E M A 542	Advanced Dynamics	3
E M A/E P 547	Engineering Analysis I	3
E M A 601	Special Topics in Engineering Mechanics (Topic: Mechanics Seminar)	1
E M A 405	Practicum in Finite Elements	3
or E M A 605	Introduction to Finite Elements	
Spring Semester		**13**
E M A/E P 548	Engineering Analysis II	3
E M A 601	Special Topics in Engineering Mechanics (Topic: Mechanics Seminar)	1
Choose three of the following: [2]		9
E M A/CIV ENGR/ M E 508	Composite Materials	
E M A 519	Fracture Mechanics	
E M A/M E 570	Experimental Mechanics	
E M A 611	Advanced Mechanical Testing of Materials	
E M A 622	Mechanics of Continua	
E M A 642	Satellite Dynamics	
E M A 705	Advanced Topics in Finite Elements	

1

While strongly recommended, E M A 202 Dynamics will not satisfy any degree requirement for this program and will not count toward the 30 credits required to earn the degree.

2

At least one of the three must be either E M A 705 Advanced Topics in Finite Elements, E M A 622 Mechanics of Continua, or E M A 642 Satellite Dynamics.

Students in this program may not take courses outside the prescribed curriculum without faculty advisor and program director approval. Students in this program cannot enroll concurrently in other undergraduate or graduate degree programs.