

MECHANICAL ENGINEERING, PHD

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

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

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	60 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	30 credits must be graduate-level coursework. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) Requirement Policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/)
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/)

Other Grade Requirements Students must earn a C or above in all formal coursework. PhD candidates may not have any more than two Incompletes on their record at any one time.

Assessments and Examinations The PhD candidate will need to pass a qualifying exam, preliminary exam, and a final defense in order to obtain a degree.

Language Requirements No language requirements.

Graduate School Breadth Requirement All doctoral students are required to complete a doctoral minor or graduate/professional certificate. Refer to the Graduate School: Breadth Requirement in Doctoral Training policy: <https://policy.wisc.edu/library/UW-1200> (<https://policy.wisc.edu/library/UW-1200/>).

REQUIRED COURSES

Code	Title	Credits
Seminar Requirement¹		
Two terms of seminar, successfully completed, are required. These should be completed in the first two terms of enrollment. ¹		0
M E 903	Graduate Seminar	
Research Credits Requirement		
Students complete at least 24 credits of research. Course options include: ²		24
M E 790	Master's Research and Thesis	
M E 890	PhD Research and Thesis	
M E 990	Dissertator Research and Thesis	
Formal Credits Requirement³		
Complete the following requirements (requirements may overlap) ⁴		36
Minimum 9 credits (usually 3 courses) numbered 700 or above		
Minimum 3 credits (usually 1 course) numbered 700 or above in Mechanical Engineering (M E) and/or Engineering Mechanics (E M A) taken at UW-Madison		
Minimum 3 credits (1 course) math course from Math Requirement Course List (see below)		
Remaining credits to get to 36 minimum ⁵		
Total Credits		60

¹ If a UW-Madison Mechanical Engineering MS degree was completed with two successful terms of M E 903, then an additional two terms are not required.

² An overall grade of S is required.

³ Formal credits/courses are any course offering that is not a seminar course, thesis/research course, independent study, co-op/internship, etc.

⁴ Students must complete a minimum of 36 credits of formal coursework inclusive of the requirements listed below.

⁵ Acceptable courses for remainder of the required 36 formal credits (this total includes the courses taken in the PhD breadth requirement) are formal courses numbered 400 and above.

Math Requirement Course List

Code	Title	Credits
M E 737	Scientific Computing and Machine Learning for Engineering Applications	3
E M A/E P 476	Introduction to Scientific Computing for Engineering Physics	3
E M A/E P 547	Engineering Analysis I	3
E M A/E P 548	Engineering Analysis II	3
MATH 321	Applied Mathematical Analysis 1: Vector and Complex Calculus	3
MATH 322	Applied Mathematical Analysis 2: Partial Differential Equations	3

Courses numbered 400 and above in Math Department

Courses numbered 400 and above in Statistics Department

Graduate "transfer credits" equivalent to the above