

# ENGINEERING MANAGEMENT, M.S.

MS Engineering Management is an interactive online engineering master's degree. It is designed to help engineering professionals become exceptional leaders and managers. Throughout the degree, students immediately apply what they learn to their workplace.

This program creates a supportive, interactive online environment that enhances learning from fellow students as well as instructors, while still providing the flexibility necessary to integrate with students' professional lives.

Curriculum focuses on project management, professional ethics, communication, data analysis, problem-solving and collaboration across an engineering enterprise. Students complete the program in 2.5 to four years and may enter in summer, fall or spring terms.

MS Engineering Management is an evolution of the successful M.Eng Engineering: Engineering Management program.

Students must have at least two years of professional engineering experience to qualify for admission. Early career engineers may begin their studies with the Capstone Certificate in Applied Engineering Management (<http://guide.wisc.edu/nondegree/capstone/applied-engineering-management-capstone-certificate/>).

## ADMISSIONS

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website.

Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet** the minimum requirements (<https://grad.wisc.edu/apply/requirements/>) **of the Graduate School as well as the program(s)**. Once you have researched the graduate program(s) you are interested in, apply online (<https://grad.wisc.edu/apply/>).

| Requirements                       | Detail   |
|------------------------------------|--|
| Fall Deadline                      | July 1   |
| Spring Deadline                    | November 1   |
| Summer Deadline                    | May 1  |
| GRE (Graduate Record Examinations) | Not required but may be considered if available.*  |
| English Proficiency Test           | Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements ( <a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a> ). |
| Other Test(s) (e.g., GMAT, MCAT)   | N/A  |

Letters of Recommendation Required 3

\* Applicants are recommended to submit GRE scores if they have already taken the exam.

Admission requirements for engineers interested in applying are:

- A B.S. degree in engineering from an ABET-approved program
- A minimum undergraduate grade-point average (GPA) of 3.00 on the equivalent of the last 60 semester hours (approximately two years of work) or a master's degree with a minimum cumulative GPA of 3.00
- Two years of post-baccalaureate work experience in engineering (co-op or intern experience counts toward requirement)

Interested applicants with B.S. degrees in related fields should contact the graduate programs coordinator for more specific admission information at [gradadmissions@interpro.wisc.edu](mailto:gradadmissions@interpro.wisc.edu). For further details about the program, please see the program website (<https://interpro.wisc.edu/online-degrees/engineering-management/>).

## FUNDING

## GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (<https://grad.wisc.edu/funding/>) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

## REQUIREMENTS

## MINIMUM GRADUATE SCHOOL REQUIREMENTS

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

## NAMED OPTION REQUIREMENTS

### MODE OF INSTRUCTION

| Face to Face | Evening/<br>Weekend | Online | Hybrid | Accelerated |
|--------------|---------------------|--------|--------|-------------|
| No           | No                  | Yes    | 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

| Requirements                            | Detail   |
|---|--|
| Minimum Credit Requirement              | 30 credits   |
| Minimum Residence Credit Requirement    | 16 credits   |
| Minimum Graduate Coursework Requirement | 27 credits must be graduate-level coursework. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) policy ( <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ( <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a> )). |
| Overall Graduate GPA Requirement        | 3.00 GPA required. This program follows the Graduate School's policy: <a href="https://policy.wisc.edu/library/UW-1203">https://policy.wisc.edu/library/UW-1203</a> ( <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a> ).   |
| Other Grade Requirements                | Must retake any courses for which a grade below C is recorded.   |
| Assessments and Examinations            | n/a  |
| Language Requirements                   | No language requirements.  |

## REQUIRED COURSES

| Code   | Title  | Credits  |
|--|--|----------|
| <b>Required Courses</b>  |  |          |
| E P D 518  | Quality Engineering and Quality Management                     | 3        |
| E P D 610  | Engineering Analysis for Decision Making                       | 3        |
| E P D 611  | Engineering Economics and Management                           | 3        |
| E P D 612  | Technical Project Management                                   | 3        |
| E P D 616  | Engineering Law  | 2        |
| E P D 617  | Communicating Technical Information                            | 3        |
| E P D 618  | Applied Leadership and Management of Engineering Organizations | 3        |
| E P D 710  | Foundations of Engineering Leadership                          | 2        |
| E P D 712  | Ethics for Professionals                                       | 1        |
| <b>Select 6 elective credits from these courses</b>              |  | <b>6</b> |
| E P D 613  | International Engineering Strategies and Practices             |          |
| E P D 614  | Marketing for Technical Professionals                          |          |
| E P D 619  | Fostering and Leading Innovation                               |          |
| (Students may not take both E P D 619 and E P D 708 for credit.) |  |          |

|  |   |           |
|--|---|-----------|
| I SY E 412   | Fundamentals of Industrial Data Analytics |           |
| <b>Select 1 elective credit from these courses</b>               |   | <b>1</b>  |
| E P D 706  | Change Management                         |           |
| E P D 708  | Creating Breakthrough Innovations         |           |
| (Students may not take both E P D 619 and E P D 708 for credit.) |   |           |
| E P D/GEN BUS/ M H R 785   | Effective Negotiation Strategies          |           |
| <b>Total Credits</b>   |   | <b>30</b> |

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, graduate or certificate programs.

## POLICIES

### GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

### MAJOR-SPECIFIC POLICIES

#### PRIOR COURSEWORK

##### Graduate Work from Other Institutions

This program follows the Graduate School's policy for Satisfying Requirements with Prior Graduate Coursework from Other Institutions. (<https://policy.wisc.edu/library/UW-1216/>)

##### UW–Madison Undergraduate

Up to 5 credits of courses numbered 500 or above can be counted toward the minimum graduate coursework (50%) requirement. No credits can be counted toward the minimum graduate residence credit requirement. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

##### UW–Madison University Special

This program follows the Graduate School's policy for Transfer from UW–Madison University Special Student Career at UW–Madison. (<https://policy.wisc.edu/library/UW-1216/>)

#### PROBATION

This program follows the Graduate School's Probation policy. (<https://policy.wisc.edu/library/UW-1217/>)

1. Good standing (progressing according to standards; any funding guarantee remains in place).
2. Probation (not progressing according to standards but permitted to enroll; loss of funding guarantee; specific plan with dates and deadlines in place in regard to removal of probationary status).
3. Unsatisfactory progress (not progressing according to standards; not permitted to enroll, dismissal, leave of absence or change of advisor or program).

## ADVISOR / COMMITTEE

All students have an academic advisor (program director). Students should meet with their advisor to outline an approved plan of study by the end of the first academic term.

## CREDITS PER TERM ALLOWED

15 credits

## TIME LIMITS

This program follows the Graduate School's Time Limits policy (<https://policy.wisc.edu/library/UW-1221/>).

## GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (<https://doso.students.wisc.edu/bias-or-hate-reporting/>)
- Graduate Assistantship Policies and Procedures (<https://hr.wisc.edu/policies/gapp/#grievance-procedure>)
- Hostile and Intimidating Behavior Policies and Procedures (<https://hr.wisc.edu/hib/>)
  - Office of the Provost for Faculty and Staff Affairs (<https://facstaff.provost.wisc.edu/>)
- Dean of Students Office (<https://doso.students.wisc.edu/>) (for all students to seek grievance assistance and support)
- Employee Assistance (<http://www.eao.wisc.edu/>) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (<https://employeeabilities.wisc.edu/>) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (<https://grad.wisc.edu/>) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
- Office of Compliance (<https://compliance.wisc.edu/>) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (<https://conduct.students.wisc.edu/>) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (<http://www.ombuds.wisc.edu/>) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (<https://compliance.wisc.edu/titleix/>) (for concerns about discrimination)

### Grievance Procedures

Students who feel that they have been treated unfairly have the right to a prompt hearing of their grievance. Such complaints may involve course grades, classroom treatment, advising, various forms of harassment, or other issues. Any student or potential student may use these procedures.

Procedures for proper accounting of student grievances:

1. The student should speak first with the person toward whom the grievance is directed. In most cases, grievances can be resolved at this level.
2. If that does not resolve the grievance, the student should contact the program's director.

3. Should a satisfactory resolution not be achieved, the student should contact one of the Interpro's Grievance Advisors to discuss the practice. The Interpro Grievance Advisors are:

#### **Susan Ottman**

Graduate Program Director  
608-262-3516  
sottmann@wisc.edu

#### **Ed Borbely**

Associate Dean  
608-263-0982  
borbely@wisc.edu

If the student prefers to talk with someone outside of Interpro, contact:

#### **David Noyce**

Executive Associate Dean  
College of Engineering  
danoyce@wisc.edu  
608-265-1882

The Grievance Advisor is responsible for facilitating any complaints or issues of students. The Grievance Advisor first attempts to help students informally address the grievance prior to any formal complaint. Students are also encouraged to talk with their advisors regarding concerns or difficulties if necessary.

University resources for sexual harassment concerns can be found on the UW Office of Equity and Diversity website and are included in the next section.

4. If the issue is not resolved to the student's satisfaction the student can submit the grievance to the Grievance Advisor in writing, within 60 calendar days of the alleged unfair treatment.
  5. On receipt of a written complaint, a committee will be convened by the Grievance Advisor to manage the grievance. The program committee will obtain a written response from the person toward whom the complaint is directed. This response will be shared with the person filing the grievance.
  6. The committee will determine a decision regarding the grievance. The Grievance Advisor will report on the action taken by the committee in writing to both the student and the party toward whom the complaint was directed within 15 working days from the date the complaint was received.
  7. At this point, if either party (the student or the person toward whom the grievance is directed) is unsatisfied with the decision of the committee, the party may file a written appeal. Either party has 10 working days to file a written appeal to the College of Engineering.
  8. Documentation of the grievance will be stored for at least 7 years. Significant grievances that set a precedent will be stored indefinitely. The Graduate School has established policies governing student conduct, academic dishonesty, and sexual and racial harassment. The Graduate School also has procedures for students wishing to appeal a grievance decision made at the College of Engineering level.
- The Graduate School has procedures for students wishing to appeal a grievance decision made at the school/college level. These policies are described in the Graduate School's Academic Policies and Procedures: <https://grad.wisc.edu/documents/grievances-and-appeals/>

## OTHER

Students are strongly discouraged to pursue positions as Project Assistants, Teaching Assistants or Research Assistants during their time in this program. Students in this program will not receive the tuition remission that is typically part of the compensation package for a graduate assistantship.

## PROFESSIONAL DEVELOPMENT

### GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (<https://grad.wisc.edu/pd/>) to build skills, thrive academically, and launch your career.

## LEARNING OUTCOMES

1. Apply engineering management principles to work and lead effectively in the business environment.
2. Analyze and interpret quantitative and qualitative data to make sound engineering and business decisions.
3. Assess and intentionally apply tools, techniques, and organizational systems to solve complex engineering problems.
4. Communicate engineering concepts effectively to engineers and non-engineers alike.
5. Recognize and apply principles of professional ethics in engineering management.
6. Examine methods to enhance the success of the engineering function through collaboration with critical organizational functions such as operations, project management, marketing, legal, finance, and quality.

## PEOPLE

MSEM faculty and staff (<https://interpro.wisc.edu/online-degrees/engineering-management/#faculty-staff>)