

ENGINEERING: SUSTAINABLE SYSTEMS ENGINEERING, MENG

This is a named option within the Engineering MEng. (<https://guide.wisc.edu/graduate/engineering-college-wide/engineering-meng/>)

The named option Sustainable Systems Engineering (<https://interpro.wisc.edu/online-degrees/sustainable-systems-engineering/>) is an online master's degree designed to prepare students to understand and apply principles of engineering, science, policy, and economics to current and future environmental sustainability issues. Through objective, reliable, and cost-effective engineering methods, students will create sustainable solutions for society's energy and resource challenges.

In this program, you will:

- Apply sustainability principles to engineering practices and renewable/sustainable energy system design;
- Gain expertise and knowledge of the environmental, social and economic aspects, and design interplays of sustainability frameworks and renewable energy systems;
- Position yourself to create and lead sustainability and renewable/sustainable energy project initiatives through your organization and for your clients.

The program is tailored for working engineers, offering:

- Knowledge and skills that can immediately be applied to work situations;
- Project-based learning with experienced professionals;
- Award-winning distance-learning design.

Explore the curriculum for this program (p. 2).

UW-Madison's online engineering graduate programs are world-class degrees and are consistently ranked in the Top 20 online engineering master's programs by U.S. News & World Report.

ADMISSIONS

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	The program does not admit in the summer.
GRE (Graduate Record Examinations)	Not required but may be considered if available.
English Proficiency Test	Refer to the Graduate School: Minimum Requirements for Admission policy: https://policy.wisc.edu/library/UW-1241 (https://policy.wisc.edu/library/UW-1241/).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	2

The degree may be earned by engineers who have:

- A BS 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

Applications are accepted and reviewed after the deadline dates on a rolling admission basis for fall and spring terms.

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

Interested applicants with BS degrees in related fields should contact the graduate programs coordinator for more specific admission information at gradadmissions@interpro.wisc.edu. Prior coursework should include significant science and math courses. For more details, see the program website. (<https://epd.wisc.edu/online-degree/sustainable-systems-engineering/>)

FUNDING

FUNDING GRADUATE SCHOOL RESOURCES

The Bursar's Office provides information about tuition and fees associated with being a graduate student. Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information is available from the Graduate School.

Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

Students enrolled in this program are not eligible to receive tuition remission from graduate assistantship appointments at this institution.

Students in these programs cannot enroll in other graduate programs nor take courses outside the prescribed curriculum. If you intend to combine study in this program with other academic programs at UW-Madison, please contact Interdisciplinary Professional Program's Student Services Department (studentservices@interpro.wisc.edu).

Scholarships

Learn about scholarship opportunities (<https://scholarships.wisc.edu/>).

Employer Support

Many students receive some financial support from their employers. Often, students find it beneficial to sit down with their employer and discuss how this program applies to their current and future responsibilities. Other key points to discuss include how participation will not interrupt your work schedule.

Federal Loans

Students who are U.S. citizens or permanent residents are eligible to receive some level of funding through the federal direct loan program. These loans are available to qualified graduate students who are taking at least four credits during the Fall and Spring semesters, and two credits during Summer. Private loans are also available. Learn more about financial aid (<https://financialaid.wisc.edu/>).

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.

NAMED OPTION REQUIREMENTS MODE OF INSTRUCTION

Face to Face	Evening/ 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

Requirement Detail

Minimum	30 credits
Credit	
Requirement	

Minimum	16 credits
Residence	
Credit	
Requirement	
Minimum	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Graduate	
Coursework	
Requirement	
Overall	3.00 GPA required.
Graduate	
GPA	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/).
Requirement	
Other Grade	Must retake any courses for which a grade below C is recorded.
Requirements	
Assessments	No formal examination required.
and	
Examinations	
Language	No language requirements.
Requirements	

REQUIRED COURSES

Code	Title	Credits
Capstone Course		
Required after completing 21 credits		3
E P D 669	Sustainable Systems Engineering Capstone	
Science and Sustainability Courses		
Complete at least 9 credits from these courses		9
BSE/ ENVIR ST 367	Renewable Energy Systems (can count as Science and Sustainability OR Engineering and Design)	
CIV ENGR 723	Energy Principles of Environmental Engineering	
CIV ENGR 729	Environmental Sustainability Tools	
E P D 639	Plastics Recycling and Sustainability	
E P D 660	Core Competencies of Sustainability (recommended for all SSE students)	
GEOSCI/ ENVIR ST 411	Energy Resources	
Engineering and Design Courses		
Complete at least 9 credits		9
CIV ENGR/ G L E 535	Wind Energy Balance-of-Plant Design	
E P D 690	Special Topics in Engineering Professional Development (multiple course topics available - refer to advisor for approved courses)	
E P D 699	Independent Study	
E P D 730	Sustainable Facilities	
E P D 731	Energy Efficiency in Buildings	
Elective Courses		
Complete at least 9 credits from the courses below or the two lists above		9
CIV ENGR 525	Case Studies Exploring Infrastructure Sustainability and Climate Change	

CIV ENGR 629	Special Topics in Environmental Engineering (specific course topics - refer to advisor for approved courses)
E P 418	Sustainable Energy Challenges and Solutions
E P D 605	Fundamentals of Technical Project Management
or E P D/ GEN BUS/ OTM 784	Project Management Essentials
E P D 606	Leading and Managing Technical Teams
or E P D/ GEN BUS/ M H R 783	Leading Teams
E P D 611	Engineering Economics and Management
E P D 612	Technical Project Management
E P D 616	Engineering Law
E P D 647	Trends in Electrification Seminar
E P D 701	Writing for Professionals
E P D 702	Professional Presentations
E P D 704	Organizational Communication and Problem Solving
E P D 706	Change Management
E P D 708	Creating Breakthrough Innovations
E P D 712	Ethics for Professionals
E P D/ACCT I S/ GEN BUS 781	Financial and Business Acumen
E P D/GEN BUS/ MARKETNG 782	Marketing for Non-Marketing Professionals
E P D/GEN BUS/ M H R 785	Effective Negotiation Strategies
Total Credits	
30	

Other Policy

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.

POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) serve as the official document of record for Graduate School academic and administrative policies and procedures and are updated continuously. Note some policies redirect to entries in the official UW-Madison Policy Library (<https://policy.wisc.edu/>). Programs may set more stringent policies than the Graduate School. Policies set by the academic degree program can be found below.

NAMED OPTION-SPECIFIC POLICIES

PRIOR COURSEWORK

Graduate Credits Earned at Other Institutions

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

Undergraduate Credits Earned at Other Institutions or UW-Madison

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

Credits Earned as a University Special Student at UW-Madison

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

PROBATION

Refer to the Graduate School: Probation (<https://policy.wisc.edu/library/UW-1217/>) policy.

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

Refer to the Graduate School: Advisor (<https://policy.wisc.edu/library/UW-1232/>) policy.

CREDITS PER TERM ALLOWED

15 credit maximum. Refer to the Graduate School: Maximum Credit Loads and Overload Requests (<https://policy.wisc.edu/library/UW-1228/>) policy.

TIME LIMITS

Refer to the Graduate School: Time Limits (<https://policy.wisc.edu/library/UW-1221/>) policy.

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/>)

- 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://employee disabilities.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 Student Assistance and Support (OSAS) (<https://osas.wisc.edu/>) (for all students to seek grievance assistance and support)
- 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 Interpro's Grievance Advisor to discuss the practice.

The Interpro Grievance Advisor is:

Heather Smith

Director of Graduate Programs

heather.smith@wisc.edu (<https://guide.wisc.edu/graduate/engineering-college-wide/engineering-meng/engineering-sustainable-systems-engineering-meng/heather.smith@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 seven 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

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.

COLLEGE OF ENGINEERING RESOURCES

The Interdisciplinary Professional Programs office in the College of Engineering offers a number of professional development opportunities in the form of short courses, certificates, and custom courses designed to enhance professional growth and provide opportunities for career advancement. Learn more about our professional development opportunities (<https://interpro.wisc.edu/courses/.html>) or offerings (<https://interpro.wisc.edu/courses/.html>).