

Oregon State University

MEng Degree Program in Environmental Engineering

Program Philosophy

The Master of Engineering (MEng) degree provides students with the option of obtaining a Master's-level degree, but without the research component requirement associated with the traditional Master of Science degree (MS).

The MEng is a coursework-only Master's degree of 45 credits based on curricula that allow graduate students to efficiently focus on the academic courses that are most relevant to their professional objectives. The specific learning outcomes for this degree differ from those of the MS program, because MEng students will not be required to learn research methods or to conduct independent research. Rather, the emphasis is on learning specific job-related knowledge and skills as currently presented in existing graduate level courses.

The MEng is now offered because professional engineering societies are calling for a Master's degree as the entry-level engineering degree. Furthermore, many graduate students are interested in pursuing more advanced studies in specialized areas, but a career in research is not their professional goal. For part-time students, the MEng program can be more feasible and attractive than an MS program due to the lack of a thesis or project requirement. Thus, the MEng offers these students a viable alternative to the MS degree.

1.1 MEng Thesis Requirement

The MEng degree in Environmental Engineering does not have a Thesis requirement.

1.2 Minimum Academic Requirements for the MEng Degree

The MEng degree is intended for only students who wish to pursue a "coursework only" terminal graduate degree in Environmental Engineering. The MEng degree program requires a minimum of 45 credit hours in graduate-level coursework. This includes 24 credits of required Environmental Engineering coursework, 6 credits of coursework in an approved Engineering Emphasis area, and 15 credits of Minor coursework. Approximately two thirds of the work (the 24 required and 6 Engineering Emphasis credits) should be listed in the Major field in the "Masters Program Form" (see 1.5 below) and one third (the 15 Minor credits) listed in the Minor field. In some cases the student's advisory committee must include a member from the minor department. The program is developed under the guidance of the major professor and minor professor, when a minor is included, and signed by those professors and chair of the academic unit before filing in the Graduate School. Credit hours used in one Master's Program Form may not be used in an additional Master's Program Form for another degree.

A grade-point average of 3.00 (a "B" average) is required: 1) for all courses taken as a degree-seeking graduate student, and 2) for courses included in the graduate degree or graduate certificate program of study. Grades below "C" (2.00) cannot be used on a graduate program of

study. A grade-point average of 3.00 is required before the Final Oral Examination may be undertaken.

1.3 Residence Requirements

After admission, 30 OSU graduate credits as a degree-seeking graduate student are required in residence. This does not include credits reserved as an undergraduate or post-baccalaureate student or credits taken as a post-baccalaureate or non-degree graduate student.

Unless on approved Leave of Absence, all graduate students in graduate programs must register continuously for a minimum of 3 graduate credits, excluding summer session, until their degree is granted.

1.4 Registration Requirements

Full-time status as a graduate student is defined by Oregon University System (OUS) as enrollment in 9 credits per term.

1.5 Graduate Study Program

A MEng degree student is required to prepare and submit a Master's Program Form with the Graduate School before completing 18 hours of graduate credit. A student who does not file a program after 18 credit hours are completed will not be allowed by the Graduate School to register for the next term.

1.6 Time Limit

All work toward an MEng degree must be completed within 7 years.

1.7 Final Oral Examination

The Final Oral Examination for the MEng degree in Environmental Engineering will include a 15 minute presentation highlighting the following two items:

1. A statement of the candidate's professional goals for obtaining the MEng degree.
2. An overview on how the MEng Coursework Program, including the ENVE Core, Minor, and Engineering Emphasis courses, provided the preparation needed to achieve the candidate's professional goals.

The MEng candidate must also provide a two page MEng Coursework Program Summary Statement that highlights items 1 to 3 above and includes a section highlighting positive and negative experiences within the program and suggestions for positive change, - to be handed in at the beginning of the Final Oral Examination.

The second part of the examination will include questions on your presentation and knowledge gained from the candidate's coursework.

2. Course Requirements

2.1 Major Courses (24 credits)

The Department of Environmental Engineering offers the following core courses which must be taken for graduate credit for the major in Environmental Engineering.

ENVE 532 Aqueous Environmental Chemistry	4	Fall
ENVE 536 Aqueous Environmental Chemistry Lab	1	Fall
ENVE 534 Physical and Chemical Processes for Water Quality Control	4	Fall
ENVE 531 Transport/Fate of Organic Chemicals in Environmental Systems	4	Winter
ENVE 541 Microbial Processes in Environmental Systems	4	Winter
ENVE 535 Physical & Chemical Processes For Hazardous Waste Treatment	4	Winter
ENVE 525 Air Pollution Control (3) or 556 Sustainable Water Resources Development (3)	3	Spring

2.2 Minor Courses (15 credits)

A graduate minor is an academic area that clearly supports the major. On a Master's Program, a minor may be:

- (1) an academic area available only as a minor,
- (2) a different major,
- (3) the same major with a different area of concentration,
- (4) an approved major at another institution in the OUS,
- (5) an integrated minor.

The graduate faculty member representing the minor must be from outside the department, except for option 3. An integrated minor consists of a series of cognate courses from two or more areas. These courses must be outside the major area of concentration, with most of the courses being outside the Environmental Engineering Department. A regular student may take up to two ENVE courses listed below for an integrated minor. The graduate faculty member representing the integrated minor must be from outside the department.

- ENVE 521 Water and Wastewater Characterization (4)
- ENVE 522 Environmental Engineering Design (4)
- ENVE 525 Air Pollution Control (3)
- ENVE 535 Physical and Chemical Processes for Hazardous Waste Treatment (4)
- ENVE 545 Microbial Processes Laboratory (1)

ENVE 551 Air, Water and Hazardous Substance Management (4)
ENVE 554 Groundwater Remediation (4)
ENVE (CE) 518 Groundwater Modeling (4)
ENVE 556 Sustainable Water Resources Development (3)
ENVE 505 Reading and Conference

Reading and Conference – ENVE 505 offered occasionally may be taken as a minor ENVE course but will be handled on a case-by-case basis. No more than 6 credits of blanket-numbered courses may be applied toward the minimum-45-credit Master’s of Engineering degree.

2.3 Engineering Emphasis Courses (6 credits)

The Engineering Emphasis area consists of 6 credits of graduate-level coursework in engineering. This could include graduate-level elective courses within Environmental Engineering or in other Engineering programs. The Engineering Emphasis area should, as much as possible compliment the Major. Course selections for the Engineering Emphasis area must be approved by the student’s Committee.

2.4 Transfer of Credits from MEng to MS or PhD Program

If a student enrolled in the Environmental engineering MEng program later decides to pursue an MS or PhD degree, then credits obtained from MEng program can be moved to the MS degree or PhD degree program, subject to approval by the student’s MS or PhD Committee.

2.5 Graduate Level Course Requirement

At least 50% of the total coursework for the MEng. degree must be “graduate level only” courses. True “graduate level only” courses are at the 500 level and are not cross-listed at 400 level. All 600 level courses are graduate level only.

3. Advisor and Committee

3.1 Advisor Selection

The Graduate Program Advisor will serve as the advisor to all MEng degree candidates.

3.2 Committee Selection and Duties

The Committee will consist of at least four members of the graduate faculty: the Graduate Program Advisor, one additional faculty member in the major field, one faculty member in the Minor field, and a Graduate School faculty representative. It is the student’s

responsibility to obtain his or her own Graduate School faculty representative from a list provided by the Graduate School.

The Committee will perform the following duties: 1) Review and approve the student's Graduate Study Program for the MEng degree in Environmental Engineering, including the student's Minor field of coursework study and Engineering Emphasis area of coursework study; and 2) participate in the Final Examination (see section 1.7).