

# ENVIRONMENTAL ENGINEERING - PROFESSIONAL MASTER OF SCIENCE (MSENV)

The professional master's degree (MSENV) in environmental engineering is a coursework-only program that offers possibilities for a range of prospective students.

Whether a prospective student is a working engineer or an undergraduate considering widening their exposure to areas of environmental engineering, we have program options to meet their needs. Prospective professional master's degree students may choose between three different tracks:

- Environmental engineering
- Water reuse
- Water engineering & management

For more information, visit the department's Curriculum and Courses (<http://www.colorado.edu/even/prospective-students/graduate-studies/curriculum-and-courses/>) webpage.

## Requirements

### General Requirements

The following course requirements are subject to change; for the most current information, visit the Program's Curriculum and Courses (<http://www.colorado.edu/even/prospective-students/graduate-studies/curriculum-and-courses/>) webpage.

The professional master's degree requires 30 credit hours of graduate-level courses with a minimum cumulative GPA of 3.00.

For students who have undertaken prior graduate study, up to 9 semester credit hours of relevant graduate-level course work may be transferred to meet the course requirements for the MSENV degree, following the rules established by the Graduate School for transfer credit.

### Program Tracks

#### General Environmental Engineering Track

Code	Title	Credit Hours
<b>Required Courses</b>		
CVEN 5464	Environmental Engineering Processes	3
CVEN 5404	Water Chemistry	3
	or CHEM 5151 Atmospheric Chemistry	
CVEN 5484	Applied Microbiology and Toxicology	3
MCEN 5131	Air Pollution Control Engineering	
<b>Electives</b>		
Choose one of the following:		3
CVEN 5524	Drinking Water Treatment	
CVEN 5534	Wastewater Treatment	

Choose five additional electives in consultation with the student's faculty advisor.	15
<b>Total Credit Hours</b>	<b>27</b>

#### Water Reuse Track

Code	Title	Credit Hours
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##### Required Courses

CVEN 5464	Environmental Engineering Processes	3
CVEN 5484	Applied Microbiology and Toxicology	3
CVEN 5404	Water Chemistry	3
CVEN 5524	Drinking Water Treatment	3
CVEN 5534	Wastewater Treatment	3

##### Water Reuse Required Courses

CVEN 5594	Water Reuse and Reclamation	3
CVEN 5834	Special Topics (Water Reuse Planning and Implementation)	3

##### Elective Courses

*General Water Reuse Track:* 9

Choose one of the following 3

CVEN 5393 Water Resources System and Management

CVEN 5834 Special Topics (Advanced Water Treatment)

And choose two from the following or above: 6

CVEN 5564 Water Profession: Communication and Utility Finance

CVEN 5574 Water Utility Management: Current Issues and Future Challenges

CVEN 5424 Environmental Organic Chemistry

EVEN 5584 Sustainable Engineering Design

*Water Reuse Management Track* 9

CVEN 5393 Water Resources System and Management

CVEN 5564 Water Profession: Communication and Utility Finance

CVEN 5574 Water Utility Management: Current Issues and Future Challenges

*Water Reuse Advanced Technology Track* 9

CVEN 5834 Special Topics (Advanced Water Treatment)

EVEN 5584 Sustainable Engineering Design

CVEN 5424 Environmental Organic Chemistry

**Total Credit Hours** 30

#### Global Environmental Engineering Track

Code	Title	Credit Hours
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##### Required Courses

CVEN 5464	Environmental Engineering Processes	3
CVEN 5404	Water Chemistry	3
	or CHEM 5151 Atmospheric Chemistry	
CVEN 5484	Applied Microbiology and Toxicology	3
CVEN 5919	Global Development for Engineers	3
CVEN 5939	Global Development Practicum	3

**Global Engineering Series <sup>1</sup>**

Choose one of the following: 3

CVEN 5969 Water, Sanitation, and Hygiene

MCEN 5228 Special Topics in Mechanical Engineering (Household Energy Systems in the Global South)

Choose 6 one-credit modules from remaining Global Engineering Series offerings: 6

EVEN 5004 Introduction to Humanitarian Aid

EVEN 5014 Disaster Risk Reduction

EVEN 5024 Refugees and Displacement

CVEN 5837 Special Topics for Seniors/Grads (Program & Project Management (1), Solution Identification & Proposal Development (1), Community Appraisal (1), Study Design & Impact Evaluation (1), Data Collection & Analysis Tools (1))

CVEN 5838 Special Topics (Intro to Development Economics for Engineers (1), Intro to Global Health for Engineers (1))

**Electives**

Choose one of the following: 3

CVEN 5524 Drinking Water Treatment

CVEN 5534 Wastewater Treatment

MCEN 5131 Air Pollution Control Engineering

Choose one additional elective in consultation with the student's faculty advisor. 3

**Total Credit Hours 30**

<sup>1</sup> Global Engineering Series course options can be found on the Mortenson Center website (<https://www.colorado.edu/center/mortenson/graduate-education/professional-masters-degrees/>).