



## What if I want an MS degree in Environmental Engineering and do not have a BS in engineering—what are my options?

If you would like to enter the MS in Environmental Engineering program at Michigan Tech and do not have a BS degree in an engineering discipline, you have two options:

### Option 1: MS degree in Environmental Engineering Science

The Master of Science in Environmental Engineering Science offers focused study in the application of environmental science to environmental engineering practice. This program is designed as a pathway to a career in environmental science, and does not require the student to complete coursework equivalent to an undergraduate degree in engineering.

### Option 2: MS degree in Environmental Engineering

The Master of Science in Environmental Engineering is designed for the pursuit of advanced environmental engineering studies. This program is designed as a pathway to a career in environmental engineering, and requires the student to complete coursework equivalent to an undergraduate degree

The minimum courses (or equivalent) required for MS or PhD students who do NOT have a BS undergraduate degree in an Engineering Discipline and associated prerequisites are as follows:

Complete the following prerequisite courses:

Course	Course Title	Prerequisites
CH 1150/51	University Chemistry I and Lab	
CH 1160/61	University Chemistry II and Lab	CH 1150/51
MA 1160	Calculus I	MA 1032
MA 2160	Calculus II	MA 1160
MA 2321/ MA 3521	Lin Alg/Diff Eq	MA 1160 + MA 2160 + MA 2321
PH 1100/2100	University Physics I – Mechanics	MA 1160
ENG 3200	Thermo/Fluids	MA 2160 + CH 1150/1151 + PH 2100 + ENG 1102
CEE 3501 Or CEE 3503	Env. Engrg. Fundamentals Intro. to Env. Engrg.	MA 2160 + CH 1150/1151

**AND** Select **3** from the following **12** courses:

CEE 3502	Env. Monitoring, Measurement & Analysis	MA 2160 + CH 1150/1151
CEE 3620	Water Resources Engrg.	ENG 3200 + CEE 3502(C)
CEE 4501	Env. Engrg. Chemical Processes	CEE 3501/3503 + CEE 3502 + ENG 3200

CEE 4502	Wastewater Treatment Principles and Design	CEE 3501/3503
CEE 4503	Drinking Water Treatment Principles and Design	CEE 3501/3503
CEE 4504	Air Quality Engrg and Science	CEE 3501/3503
CEE 4505	Surface Water Quality Engineering	CEE 3501/3503
CEE 4506	Application of Sustainability Principles to Engrg. Practice	CEE 3501/3503
CEE 4507	Water Distribution & Wastewater Collection Design	CEE 3501/3503 and CEE 3620
CEE 4509	Env. Process & Simulation	CEE 3501/3503 + ENG 3200 + CEE 4502 + CEE 4503
CEE 4511	Solid & Haz. Waste Engrg.	CEE 3501/3503
GE 3850	Geohydrology	CEE 3620 recommended

**Example 1: For an incoming student who is missing all math and sciences, the easiest path forward would be:**

Math	Basic Sci.	Env. Engrg. Sci.	3 of 12 (Example)
MA 1160 (4 cr)	PH 1100/2100 (4 cr)	CEE 3501/3503 (3 cr)	CEE 4504 (3 cr)
MA 2160 (4 cr)	CH 1150/1151 (4 cr)	ENG 3200 (4 cr)	CEE 4502 (3 cr)
MA 2321/MA 3521 (4 cr)	CH 1160/1161 (4 cr)		CEE 4511 (3 cr)

**Example 2: For an incoming student who has taken a pre-engineering course of study, e.g., at Northland College ([http://catalog.northland.edu/preview\\_program.php?catoid=18&poid=1271&returnto=872](http://catalog.northland.edu/preview_program.php?catoid=18&poid=1271&returnto=872)):**

Math	Basic Sci.	Env. Engrg. Sci.	3 of 11 (Example)
	CH 1160/1161 (4 cr)	CEE 3501/3503 (3 cr)	CEE 4501 (4 cr)
		ENG 3200 (4 cr)	CEE 4502 (3 cr)
			CEE 4503 (3 cr)

**Note:**

(1) Engineering fundamentals will waive ENG 1102 as a prerequisite for ENG 2120 and 3200 for graduate students. They may even waive the other prerequisites.

(2) All 3000 and 4000 level CEE courses listed above (up to 12 credits) can be used toward the MS degree requirements as well.