B.S. Environmental Engineering Degree (*Fall 2025 and later*)

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.

First Year

Fall

Course	Prerequisites	Credit
MA1160 Calculus with Technology 1		4
ENG1101 Engineering Analysis & Problem Solving	MA1160 *(Concurrent)*	3
CH1150 University Chemistry 1	CH1151 *(Corequisite)*	3
CH1151 University Chemistry Lab 1	CH1150 *(Corequisite)*	1
CEE1501 Experiences in Env. Eng.		1
UN1015 Composition		3
Total		**15**

Spring

Course	Prerequisites	Credit
MA 2160 Calculus with Technology 2	MA1160	4
ENG1102 Engineering Modeling & Design	MA1160 *(Concurrent)*, ENG1101	3
CH1160 University Chemistry 1	CH1150/51, CH1161 *(Corequisite)*	3
CH1151 University Chemistry Lab 1	CH1150/51, CH1160 *(Corequisite)*	1
PH1100 Physics 1 Lab	MA1160 *(Concurrent)*	1
Essential Education - Foundations in the Human World		3
Total		**15**

Second Year

Fall

Course	Prerequisites	Credit
MA3160 Multivariable Calculus 3	MA2160	4
CEE3501 Env. Engrg. Fundamentals	CH1150/51, MA2160	3
PH2100 University Physics 1	MA1160, PH1100 *(Concurrent)*	3
GE2000 Understanding the Earth		3
Essential Education - Communication Intensive		3
Essential Education - Activities for Well-Being and Success		1
Total		**17**

Spring

Course	Prerequisites	Credit
MA2321 Linear Algebra	MA1160	2
MA3521 Differential Equations	MA2160, MA2320	2
CEE3200 Thermo/Fluids	MA2160, PH2100, CH1150/51, ENG1101	4
CEE3502 Env. Monitoring & Measurement Analysis	CH1150/51, MA2160	3
ENG2120 Statics/Strength of Materials	MA2160, PH2100, ENG1101	4
Essential Education - Arts & Culture		3
Total		**18**

Third Year

Fall

Course	Prerequisites	Credit
CEE3620 Water Resources	MA3710 or CEE3710 *(Concurrent)*, CEE3200	4
CEE4505 Surface Water Quality Engrg	CEE3501	3
CEE4501 Env. Engrg. Chem Process.	CEE3501, CEE3502, CEE3200	4
BL1400 Principles of Biology		3
Essential Education - Intercultural Competency (3000+)		3
Total		**17**

Spring

Course	Prerequisites	Credit
CEE3331 Professional Practice	Junior Standing	2
CEE4506 Sustainable Engrg	CEE3501	3
CEE4503 Water Treatment	CEE3501	3
BL3310 Env. Microbiology	JR STDN, BL1400	3
Essential Education Experience (3000+)		3
Essential Education - Activities for Well-Being and Success		1
Total		**15**

Fourth Year

Fall

Course	Prerequisites	Credit
EC3400 Economic Decision Analysis	JR STDN, UN1015	3
CEE3810 Soil Mechanics **OR** FW3330 Soil Science	CEE3200, ENG2120, GE2000 (Concurrent) CH1150/51	4
CEE4502 Wastewater Treatment	CEE3501	3
CEE4504 Air Quality	CEE3501	3
Professional Elective	Varies by course	3
Total		**16**

Spring

Course	Prerequisites	Credit
CEE4905 Senior Design		3
CEE4509 Env. Process & Simulation	CEE3200, CEE4502, CEE4503 (Concurrent)	2
Selected Technical Elective	Varies by course	3
Professional Elective	Varies by course	3
Free Elective	Varies by course	3
Essential Education - Activities for Well-Being and Success		1
Total		**15**

Grand Total = 128 Credits

1. ***Essential Education Requirements:*** 24 total credits. Required courses are *UN1015-Composition* (3 credits), a *Foundations in the Human World* course (3 credits), a *Communication Intensive* course (3 credits), an *Arts and Culture* course (3 credits), an *Intercultural Competency* (3000+) course (3 credits), a *SHAPE* course (EC3400, 3 credits), an *Essential Education Experience* (3000+) course (3 credits), and 3 credits of *Activities for Well-being and Success*.
2. ***Selected Technical electives***: 3 total credits. Selected one course from the list below:
    - **GE3850** Geohydrology (Spring)
    - **CEE4507** Water Dist. & Wastewater Collect. (Spring)
    - **CEE4511** Solid & Hazardous Waste Engineering (Spring)
    - **CEE4518** Aquatic Biogeochemistry (Fall – Alt Years)
    - **CEE4521** Bioremediation Engineering (Spring)
    - **CEE4528** Global Biogeochemistry (Fall – Alt Years)
    - **CEE4620** River & Floodplain Hydraulics (Fall)
    - **CEE4640** Stormwater Management and LID (Summer)
    - **CEE4665** Stream Restoration (Spring)
    - **CEE4993** Engrg with Developing Communities (Fall)
    - **CH4515** Atmospheric Chemistry (Spring)
    - **MEEM4240** Combustion & Air Pollution (Fall/Spring)
3. ***Professional Electives:*** 6 total credits. Professional electives can come from any of the following areas:
    - **Any 1000 or higher** level course in **Biology, Chemistry, Computer Science, Construction Management, Geology, Forestry, or Physics (BL, CH, CS, CMG, GE, FW, PH)**
    - **Any 2000 or higher** level course in Business or Economics **(ACC, BUS, EC, FIN, MGT, MIS, MKT, OSM)**.
    - **Any 2000 or higher** level course in Geospatial Engineering **(SU)**
    - **Any 3000 or higher** level course in Civil and Environmental Engineering **(CEE) or any other Engineering Dept.**
    - **Any 3000 or highe**r level course in Humanities, Social Sciences or University Wide **(HU, SS, UN**).
    - **Any 4000 or highe**r level course in Mathematics **(MA**).
4. ***Senior Design (CEE4905) Prerequisites:*** Complete 7 of the following courses: CEE3620, CEE3810/FW3330, CEE4501, CEE4502, CEE4503, CEE4504, CEE4505, CEE4506, CEE4509.
5. ***Prerequisite*** (pre-req) course must be successfully completed ***PRIOR*** to taking the subsequent course.
   Concurrent Prerequisites (concurrent) may be taken at the same time, although it is not necessary if the prerequisite course is completed first.
   Required Corequisite (co-req) courses that ***MUST*** be taken together in the same semester.
6. ***Engineering Fundamentals:*** MA1160/1161 is a concurrent prerequisite for ENG1101 and ENG1102. ENG1102 project content varies by section number.
7. ***Math:*** Students are placed into an initial math course based on ACT/SAT math score, the online ALEKS assessment, or a math placement exam score for credit (AP, IB, CLEP). MA1160 (4 credits) or MA1161 (5 credits) satisfy the Calculus 1 requirement. Linear Algebra and Differential Equations are offered as full semester courses for students taking these courses in separate semesters (MA2320 – Linear Algebra, MA3520 – Differential Equations). The Math department also teaches Linear Algebra and Differential Equations as accelerated courses. In the first half of a given semester MA2321 – Linear Algebra, and MA3521 – Differential Equations, in the second half of the same semester (registration must be for the same section number of both MA2321 and MA3521 in that semester). MA2320, MA2321, and MA2330 are all equivalent and are approved prerequisites for MA3520 or MA3521. MA3530 and 3560 are also equivalent to MA3520/3521. Students who have credit for MA2710, 2720, or MA3710 can use it toward their CEE3502 (Environmental Monitoring and Measurement Analysis) requirement.
8. ***A grade of 'C' or better in MA2160 is required as a prerequisite for ME2110.***
9. ***Free Electives*****:** Any credits that are 1000-level or above are acceptable towards free elective credits.
10. ***Transfer, Advanced Placement, or study abroad courses*** are not included in credit hours used for GPA calculations. Transfer credit is awarded for Michigan Tech equivalent course work only if a grade of 'C' or better (2.00/4.00) or equivalent is earned at a transfer institution. Study abroad credit will be awarded based on passing a course according to equivalent international standards. Advanced Placement credit is awarded according to published AP Exam score standards (also IB and CLEP).

This degree plan is not an official list of degree requirements. Adjustments may be required due to curriculum changes.