

Michigan Technological University Bachelor of Science Degree Audit

Major Program: Civil Engineering

Program Code: ECE, Academic Year 2023-2024

Total credits required for the degree: 131

Civil Engineering Options: The options on page 2 represent 24 to 28 of the required credits for your degree. In consultation with your advisor, you will choose one of four options:

General (26 credits)

Water Resources (25 credits)

Transportation (24 to 25 credits)

Built Infrastructure (26 to 28 credits)

Core Requirements: 32 credits

- CEE 1000 (1)
- CEE 1001 (1)
- CEE 3101 (3)
- CEE 3200 (4)
- CEE 3331 (2)
- CEE 3810 (4)
- EC 3400 (3)
- ENG 1101 (3)
- ENG 1102 (3)
- MEEM 2110 (3)
- MEEM 2150 (3)
- SU 2000 (2)

Math and Science: 34 credits

- CH 1150 (3)
- CH 1151 (1)
- CEE 3710 (3) or MA 3710 (3)
- GE 2000 (3)
- MA 1160 (4) or MA 1161 (5)
- MA 2160 (4)
- MA 2320 (2) or MA 2321 (2)
- MA 3160 (4)
- MA 3520 (2) or MA 3521 (2)
- PH 1100 (1)
- PH 1200 (1)
- PH 2100 (3)
- PH 2200 (3)

Senior Design: 6 credits, choose one option

Option 1:

- CEE 4900 (3)
- CEE 4910 (3)

Option 2:

- CEE 4905 (3)
- Professional Elective (3)

Option 3:

- CEE 4915 (3)
- CEE 4916 (3)

Professional Electives: 3 credits

See your academic advisor for a list of eligible courses

Engineering Science Electives: 3 credits

- BE 2700 (3)
- CM 2110 (3)
- CM 2200 (3)
- EE 3010 (3)
- MEEM 2201 (3)
- MEEM 2700 (3)
- MSE 2100 (3)

Free Electives: 0 to 5 credits

Free elective credits may be required depending on the number of credits completed in major requirements. Any coursework is allowable, excluding co-curricular and coursework below the 1000- level.

OPTION 1: GENERAL (26 credits)

Required CEE Core Courses: 16 credits

- CEE 3202 (3)
- CEE 3332 (3)
- CEE 3401 (3)
- CEE 3503 (3)
- CEE 3620 (4)

Required Design Courses: 4 credits

- CEE 4213 (4)
- CEE 4223 (4)

Professional Electives: 6 credits

See your academic advisor for a list of eligible courses

OPTION 2: WATER RESOURCES (25 credits)

Required CEE Core Courses: 7 credits

- CEE 3503 (3)
- CEE 3620 (4)

Select one course from the following for 3 credits

- CEE 3202 (3)
- CEE 3332 (3)
- CEE 3401 (3)

Required Design Course: 3 credits

- CEE 4620 (3)
- CEE 4640 (3)
- CEE 4665 (3)

Water Resources Electives: 12 credits

- CEE 4502 (3)
- CEE 4503 (3)
- CEE 4505 (3)
- CEE 4507 (3)
- CEE 4610 (3)
- CEE 4620 (3)
- CEE 4640 (3)
- CEE 4650 (3)
- CEE 4665 (3)
- CEE 4993 (3)
- CEE 5620 (3)
- CEE 5666 (3)
- GE 3850 (3)
- GE 4800 (3)

OPTION 3: TRANSPORTATION: (24 to 25 credits)

Required CEE Core Courses: 6 credits

- CEE 3332 (3)
- CEE 3401 (3)

Select one course: 3 to 4 credits

- CEE 3202 (3)
- CEE 3503 (3)
- CEE 3620 (4)

Required Design Course: 3 credits

- CEE 4401 (3)
- CEE 4407 (3)

Transportation Electives: 12 credits

- CEE 4020 (3)
- CEE 4101 (3)
- CEE 4333 (3)
- CEE 4344 (3)
- CEE 4401 (3)
- CEE 4402 (3)
- CEE 4404 (3)
- CEE 4406 (3)
- CEE 4407 (3)
- CEE 4410 (3)
- CEE 4760 (3)
- CEE 5190 (3)
- CEE 5402 (3)

OPTION 4: BUILT INFRASTRUCTURE (26 to 28 credits)

Required CEE Core Courses: 10 credits

- CEE 3202 (3)
- CEE 3332 (3)
- CEE 3620 (4)

Required Design Course: 4 credits

- CEE 4213 (4)
- CEE 4223 (4)

Built Infrastructure Electives: 12 to 14 credits

- CEE 4020 (3)
- CEE 4201 (3)
- CEE 4213 (4)
- CEE 4223 (4)
- CEE 4233 (3)
- CEE 4244 (3)
- CEE 4333 (3)
- CEE 4344 (3) or CMG 4120 (3)
- CEE 4820 (3)
- CEE 4830 (3)
- CEE 4850 (3)
- CEE 5212 (3)
- CEE 5213 (3)

General Education Core, Humanities, Fine Arts, and Social Science (HASS) Requirements: 24 cr.

Courses used to complete Core and HASS requirements may not be used to complete other degree requirements. Students must complete 12 credits of Core coursework and 12 credits of Humanities, Fine Arts, and Social Science (HASS) coursework.

Repeatable courses may not be repeated for general education credit. Core and HASS courses can be found on the [General Education](#) page.

Core: 12 credits

- UN 1015 (3)
- UN 1025 or an upper level modern language (3)
- Critical and Creative Thinking (3)
- Social Responsibility and Ethical Reasoning (3)

HASS: 12 credits, six of the 12 credits must be at the 3000- or 4000- level

- Communication/Composition (minimum 3 credits)
- Humanities and Fine Arts (minimum 3 credits)
- Social and Behavioral Sciences (minimum 3 credits)
- Any course from the General Education Core, HASS, or Restricted HASS [course list](#) (0 to 3 credits)

Co-curricular Activities: 3 credits

Required for graduation, but not included in the GPA calculation or in the overall credits required for the degree. Only courses on the co-curricular course list are eligible. Half (0.5) credit courses may be repeated to a maximum of one time for co-curricular credit. Find eligible courses on the [General Education](#) page.