Michigan Technological University Bachelor of Science Degree Audit
Major Program: Chemical Engineering, Concentration: Engineering Enterprise
Program Code: ECME, Academic Year 2026-2027
Minimum credits required for the degree: 131

Required Engineering Courses: 46 credits

- CM 2110 (3)
- CM 3110 (3)
- CM 3120 (3)
- CM 3215 (3)
- CM 3230 (4)
- CM 3240 (3)
- CM 3310 (4)
- CM 3510 (3)
- CM 3980 (1)
- CM 4110 (3)
- CM 4120 (3)
- CM 4320 (2)
- CM 4855 (3)
- CM 4860 (2)
- ENG 1101 (3)
  - or ENG 1101T (3) *and*
    (UN 1013 or UN 2013 (1))
- ENG 1102 (3)

Required Math and Science: 40 credits

- CH 1150 (3)
- CH 1151 (1)
- CH 1153 (1)
- CH 1160 (3)
- CH 1161 (1)
- CH 2410 (3)
- CH 2411 (1)
- CH 3510 (3)
- MA 1121 (4) or MA 1160 (4) or MA 1161 (5)
- MA 2160 (4)
- MA 2320 (2) or MA 2321 (2) or MA 2330 (3)
- MA 3160 (4)
- MA 3520 (2) or MA 3521 (2) or
  MA 3530 (3) or MA 3560 (3)
- PH 1100 (1)
- PH 1200 (1)
- PH 2100 (3)
- PH 2200 (3)

Technical Elective Courses: 9 credits

Choose courses from the following list:
BL 1100, BL 1110, BL 1200, BL 1210, BL 1400,
BL 1410, CM 1000, CS 1111, CS 1121, CS 1122,
CS 1131, CS 1142, EET 1121, EET 1122, EET 1411,
FW 1035, MA 1600, PH 1090, PH 1091, PH 1600,
PH 1610
Or choose from any regularly graded 2000-level or higher
undergraduate course from the following departments
(Pass/fail courses are ineligible.):

- Biomedical Engineering (BE)
- Biological Sciences (BL)
- Civil and Environmental Engineering (CEE)
- Chemistry (CH)
- Chemical Engineering (CM)
- Computer Science (CS)
- Electrical Engineering (EE)
- Electrical Engineering Technology (EET)
- Engineering Fundamentals (ENG)
- Enterprise (ENT)
- Forest Resources and Environmental Sciences (FW)
- Geological and Mining Engineering and Sciences (GE)
- Mathematical Sciences (MA)
- Mechanical Engineering (ME or MEEM)
- Management Information Systems (MIS)
- Materials Science and Engineering (MSE)
- Operation and Supply Chain Management (OSM)
- Physics (PH)
- System Administration Technology (SAT)
- University Wide (UN)

Concentration Requirements: 9 credits

6 credits of Enterprise Project work

- ENT 3950 (1)
- ENT 3960 (1)
- ENT 4950 (2)
- ENT 4960 (2)

2 credits of Enterprise Teaming and Communication

- ENT 2961 (2)

1 credit of Enterprise Instructional Modules:
ENT 3953, 3954, 3958, 3959, 3961, 3963, 3964, 3966,
3967, 3971, 3979, 3982, 3983

Essential Education Requirements

- Students must complete three main components of Essential Education (First-Year Experience, Distribution or Minor Pathway, and Activities for Well-being and Success) with the credit distributions as shown below. A minimum of 37 credits is required to complete these requirements.
- Up to five Essential Education requirements and the Michigan Tech Seminar may be shared (double-counted) with major requirements. Work with your advisor to determine which major requirements may satisfy Essential Education requirements.
- Some courses are on more than one list, but each course can satisfy only one Essential Education requirement.
- Students may choose between an Essential Education minor or the Distribution Pathway. The list of Essential Education minors can be found here.
- Lists of courses for each requirement can be found on the Essential Education page.

First-Year Experience (16 credits)

- Michigan Tech Seminar (1)
- Math (3)
- Natural and Physical Science (3)
- STEM (3)
- Composition (3)
- Foundations of the Human World (3)

Distribution Pathway (18 credits)

- Communication Intensive (3)
- Intercultural Competency (3)
- Arts and Culture (3)
- STEM (3)
- SHAPE (3)
- Essential Education Experience (3)

Activities for Well-being and Success (3 credits)

Free Electives

- Any coursework is allowable, excluding coursework below the 1000-level.
- The number of free elective credits required is dependent on how many additional credits are required beyond Major requirements and Essential Education requirements to reach the total credits required for the degree as indicated on the audit.

Additional Graduation Requirements

- Satisfy the 2.0 departmental and cumulative Grade Point Average
- Earn 30 upper-level credits at Michigan Tech
- Apply for Graduation