

## Michigan Technological University Bachelor of Science Degree Audit

### Major Program: Materials Science and Engineering

Program Code: EMSE, Academic Year 2025-2026

Minimum credits required for the degree: 128

#### Required Courses: 53 credits

- ENG 1101 (3)
  - or ENG 1101T (3) and  
(UN 1013 or UN 2013 (1))
- ENG 1102 (3)
- ENG2120 (4)
- MSE 2100 (3)
- MSE 2110 (3)
- MSE 3100 (4)
- MSE 3110 (4)
- MSE 3120 (4) or
  - MSE 3121 (3) and MSE 3122 (1)
- MSE 3130 (4) or
  - MSE 3131 (3) and MSE 3132 (1)
- MSE 3140 (3)
- MSE 3160 (3)
- MSE 3170 (3)
- MSE 3190 (3)
- MSE 4100 (3)
- MSE 4110 (3) or CM 4610 (3)
- MSE 4130 (2)
- MSE 4140 (2)

#### Required Math and Science: 35 credits

- CH 1150 (3)
- CH 1151 (1)
- CH 1160 (3)
- CH 1161 (1)
- MA 1160 (4)
- 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)

#### Approved Electives: 15 credits

MSE4240, MSE4292, MSE4310, MSE4320,  
MSE4330, MSE4340, MSE4410, MSE4430,  
MSE4520, MSE4530, MSE4540, MSE4740,  
MSE4777, AF3010, BE4300, CH2410, CEE3101,  
CM3979, CM4620, ENT3959, ENT3966, MA3710,  
ME3601, ME4170, ME4405, ME4610, ME4635,  
MET3500, OSM4650, PH2400, PH4510

## 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](#)