

## Michigan Technological University Bachelor of Science Degree Audit

### Major Program: Robotics Engineering

Program Code: ERE, Academic Year 2025-2026

Minimum credits required for the degree: 122

#### Core Requirements: 58 to 60 credits

- CS 1121 (3)
- EE 2112 (4)
- EE 2174 (4)
- EE 2180 (3)
- EE 3160 (3) or ME 3750 (4)
- EE 3174 (4)
- EE 3261 (3)
- EE 3280 (3)
- EE 3373 (3) or EET 3373 (3)
- EE 3901 (2)
- EE 4235 (3)
- EET 4141 (4)
- ENG 1101 (3)
  - or ENG 1101T (3) and UN 2013 (1)
  - or ENG 1001 (2) and ENG 1100 (2)
- ENG 1102 (3)
- ENG 2120 (4)
- ME 2700 (3)
- ME 3400 (3)
- SAT 2711 (3)

#### Math and Science: 28 credits

- CH 1150 (3)
- CH 1151 (1)
- MA 1121 (4) or MA 1160 (4) or MA 1161 (5)
- MA 2160 (4)
- MA 2321 (2) or MA 2320 (2)
- MA 3160 (4)
- MA 3521 (2) or MA 3520 (2)
- PH 1100 (1)
- PH 1200 (1)
- PH 2100 (3)
- PH 2200 (3)

#### Math and Science Elective: 3 credits

MA2600, 2710, 2720, 2910, MA3XXX or higher (excluding MA3750, 3810, 3811, 3990, 4810, 4820, 4905, 4945), BL 1010 or higher (excluding BL1580, 1590, 1710, 1800, 3970, 3990), CH 1160 or higher, PH1090, 1091, 1600, 1610, 2300 or higher, EE3180

#### Robotic Engineering (RE) Approved Electives: 3 cr.

Choose one course (cannot double count with HASS)

- HF 2000 (3)
- HU 3710 (3)
- ME 4630 (3)
- PSY 3850 (3)
- PSY 3860 (3)
- PSY 4160 (3)

#### Robotic Engineering Technical Electives: 7 cr.

##### 4 credits of Directed RE Technical Electives

- EE 4219 (3) and EE 4220 (1)
- EE 4375 (4)
- EE 4737 (4)
- EE/EET 4373 (4)
- ME 4705 (4)

##### 3 credits of Remaining RE Technical Elective

Take at least one course, or set of courses, not already completed above, for a minimum of 3 credits

- EE 4219 (3) and EE 4220 (1)
- EE 4262 (3)
- EE 4375 (4)
- EE 4737 (4)
- EET 4373 (4)
- ME 4705 (4)
- ME 4707 (3)

#### Senior Design Path or Enterprise Design Path

Choose one Option: 4 to 6 credits

##### Option 1: Senior Design Path: 4 credits

- EE 4901 (2) and EE 4910 (2), or
- ME 4901 (3) and ME 4911 (2)

##### Option 2: Enterprise Design Path: 6 credits

- ENT3950, ENT3960, ENT4950 and ENT4960, or
- ENT 3960, ENT4950, ENT4960 and ENT Module from the following: ENT2961, ENT2962, ENT3959, ENT3963, ENT3966, ENT3967, ENT3971, ENT4951

## 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](#)