**Michigan Technological University Bachelor of Science Degree Audit**
**Major Program: Robotics Engineering**
Program Code: ERE, Academic Year 2023-2024
Total credits required for the degree: 122

## Core Requirements: 53 credits

- CS 1111 (3)
- EE 2174 (4)
- EE 2180 (3)
- EE 3010 (3)
- EE 3160 (3) or MEEM 3750 (4)
- EE 3171 (4) or EET 4141 (4)
- EE 3261 (3)
- EE 3280 (3)
- EE 3373 (3) or EET 3373 (3)
- EE 3901 (2)
- EE 4235 (3)
- ENG 1101 (3) or ENG 1001 (2) *and* ENG 1100 (2)
- ENG 1102 (3)
- ENG 2120 (4)
- MEEM 2700 (3)
- MEEM 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

## Free Electives: 0 credits

Any coursework is allowable, excluding co-curricular and coursework below the 1000- level.

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

Choose one course (cannot double count with HASS)

- HF 2000 (3)
- HU 3710 (3)
- MEEM 4630 (3)
- PSY 3850 (3)
- PSY 3860 (3)
- PSY 4010 (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)
- MEEM 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)
- MEEM 4705 (4)
- MEEM 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*
- MEEM 4901 (3) and MEEM 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

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

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.