Robotics Engineering at Michigan Tech

Bachelor of Science – Robotics Engineering 2024-2025

SAMPLE PLAN
Caculus-ready students

Follow this plan to avoid time conflicts between required classes.

Fall Year 1 Spring

Co-hort courses

- MA1160 (4) or MA1161 (5) Calculus I → MA2160 (4) Calculus II
- Spatial Vis.Test; Calc 1 or higher pre or co req → ENG1101 (3) Engrg Analysis & Prob. Solving → ENG1102 (3) Engrg Modeling & Design
- CH1150 (3) Univ Chem I (C) → CH1151 (1) Univ Chem Lab I
- CS1111 (3) Intro to Programming In C / C++ *FALL ONLY*
- PH1100 (1) Physics 1 Lab — Req: Calc 1 (C)
- MA2160 Co-req/Pre-req → PH2100 (3) Univ. Physics I [Take PH2110 (2) Workshop if <C In Calc I]
- 1) UN1015 (3) Composition
- 1) UN1025 (3) Global Issues
- Co-Curr .5 unit

14 | 17.5

Fall Year 2 Spring

Optional: Enterprise participation. Try it if desired.

- ENT1960(1)
- ENT2950(1)
- MA 1160/61 → * MA2321(2) Accel.Linear Alg (C); * MA3521(2) Accel Diff Eq
- EE2111 (3) Circuits 1
- PH2100, ENG1102, MA2160 → ENG2120 (4) Statics – Strenths of Materials
- CS1111 (C) → SAT2711 (3) Linux Fundamentals *FALL ONLY*
- PH1100 → PH1200 (1) Physics 2 Lab
- MA2160, PH2100, PH1200(C) → PH2200 (3) Univ. Physics 2

18
* Take 14 cr. min. w/ MA2321/3521

Fall Year 3 Spring

Optional

- ENT2960(1)
- * 2) MA3160 (4) Multi-variable Calculus
- EE2112 (4) Circuits 2
- PH2100, ENG2120, MA3160(C) → MEEM2700 (3) Dynamics
- MA2320/21(C), EE3010(C) → EE2180 (3) Intro. to Robotics *SPRING ONLY*
- EE3010, MA2320/21, MA3520/21; MEEM2700, MA3520/21 → EE3160 (3) Signals & Sys OR MEEM3750(4) Dynamic Systems
- CS1111 or CS1121 → EE2174 (4) Digital Logic & Lab
- ____ Math & Science Elective (3)
- SAT2711 3) → EE3280 (3) Robot Operating Systems *FALL ONLY*
- 1) ____(3) Critical & Creative Thinking core
- Co-Curr .5 unit

17.5

Fall Year 4 Spring

Enterprise Design Option:

- 7) ENT3950(1) → ENT3960(1) → ENT4950(2) → ENT4960(2)
- UN1015, EE3280(C) → EE3901 (2) Design Fund.
- EE3160 or MEEM3750 → EE3261 (3) Control Systems
- ENG2120, MEEM2700 → MEEM3400 (3) Mech. Syst. Design & Anal.
- EE2174 or EE2141 → EE3174(4) or EE4141(4) Micro-controllers
- 1) ____(3) Social Resp / Ethical Reas.
- Co-Curr .5 unit

16.5-17.5
ENT 17.5-18.5

Fall Year 5 Spring

OR Sr. Design option:

- EE3901 & EE3280 & (EE3261 or MEEM3750) → 7) EE4901 (2) or MEEM4901 (2) Sr. Design Sem. 1 → EE4910 (2) or MEEM4911 (2) Sr. Design Sem. 2
- EE3901 & EE3280 & EE3261(c) → EE4235 (3) Sensing & Processing in Robotic Appls *FALL ONLY*
- EE2180, ENG1101 → EE3373 (3)/ EET3373 (3) Intro to PLCs *FALL ONLY*
- 4) ____ (3) RE Approved Elective
- 1) ____(3) HASS Social Behavioral Sci
- 1) ____(3) HASS Comm./ Composition
- Co-Curr .5 unit

15.5
ENT 16.5

Fall Year 6 Spring

- EE3171 or EET4141 → ENT4960(2)
- 5) ____(4) Directed Technical Elective
- 6) ____(3) RE Technical Elective
- Choose at least 6 credits of 3000-4999 HASS
- 1) ____(3) HASS HU/FA
- 1) ____(3) HASS any
- Co-Curr .5 unit

14.5 | 15.5

TOTAL
SD: 127-128 cr.
ENT: 129-130 cr
Includes +3 co-curricular

(C) → concurrent prerequisite

Undergraduate advisor: Kailee Laplander
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EERC 131