Computer Engineering at Michigan Tech

BS CpE

catalog year: 2019-2020

Updt: 10/2019
Removed EE1110,1111
Added 2 cr. in Free Elect.

SAMPLE PLAN
Calculus-ready students

MA2320 & MA3520, full semester courses, may replace MA2321 & MA3521. Diff Eq is p-req to EE2112. Delays EE2112.

A good time to co-op

Fall[1]	Year 1	Spring	Fall	Year 2	Spring	Fall	Year 3	Spring	Fall	Year 4	Spring
14			13/14			17.5		17	16.5		17/18		17		17

Optional: Enterprise participation. Try it if desired. — ENT1960(1)

Optional — ENT2960(1)

[A]*Decide*: Enterprise or Senior Design or EPS — ENT3950(1) Enterprise route → ENT3960(1) → ENT4950(2) → ENT4960(2)

EE3131, EE3901, EE3173(C) → ENT4950(2)

Co-hort courses

MA1160 (4) or MA1161 (5) CALC I → MA2160 (4) CALC II

MA1160/61 → MA2321(2) Accel.Linear Alg

Pre-req / Co-register → MA3521(2) Accel Diff Eq

CS1121/31, MA1160/61 → CS2311 (3) Discrete Structures

EE2112, MA2320/21, MA3520/21 or CS2321, CS2311, CS1142 → [3]EE3160 (3) -----OR------ CS3331 (3)

UN1015, EE3131(C) → EE3901 (2) Design Fund.

OR

[A]EE4901 (2) ECE Design 1 — **Fall Only** Senior Design route

EE3173 → [A]EE4910 (2) ECE Design 2 — **Spring Only**

EE3901, EE3131, EE3173(C)

Spatial Visualization Test; Co-reqs → ENG1101(3) Engrg Analysis

EE2111 (3) Electrical Circuits I

EE2112 (4) Circuits II & Lab

EE3131 (4) Electronics & Lab

EE2174, MA3710, CS1142 → EE3173(4) H/S Integration

EE4173(3) Comp Systems Engg & Performance

May take MEEM4901 and MEEM4911 for Spring-Fall Design project in lieu of EE4901 and EE4910.

Take ENG1102 If uncertain of major or If Double major w/EE

CS1121 → EE2174 (4) Digital Logic & Lab

CS1122 → CS2321 (3) Data Structures

CS1142 → CS3421(3) Comp. Org.

CS3411(3) Systems Prog.

EE4272/ CS4461(3) Computer Networks

[2]Technical Elective (3)

Will accept CS1131(5) plus 1 cr tech elective in lieu of CS1121 & CS1122

Look up pre-reqs and semester offerings of Technical Elective courses.

CS1121(3) Intro to Programming I → CS1122(3) Intro to Programming II → CS1142 (3) Programming at H/S Interface

MA2160, PH2100 → ***PH2200(3) Univ. Physics 2

CS2311, CS2321 → CS4321(3) Introduction to Algorithms

[2]Technical Elective (3)

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MA1160/1(C) → PH1100 (1) Physics Lab I

MA2160 Co-req/ Pre-req (C) → PH2100 (3) Univ. Physics I

PH1100 → PH1200 (1) Physics Lab 2

MA2160 → MA3710(3) Engg. Statistics

[1]Math/Sci STEM 2nd discipline(3)

[4]Math/Sci Elective(3)

May use: ENT3950,ENT3960

[2]Technical Elective (3)

RECOMMENDED: If C grade in Calc I REQUIRED if CD or D grade in Calc I

PH2110(2) Phys 1 Workshop

CH1150/1151 (recommended) or BL1040 or GE2000

UN1015 (3) Composition

UN1025 (3) Global Issues

May use upper level language course in place of UN1025.

_____(3) Critical/Creative Thinking List

_____(3) Social / Ethical Reasoning List

_____(3) HASS Comm./ Composition

_____(2) Free electives

HASS(3) Social Behavioral Sci

HASS Elect (3) HU, FA

Choose at least 6 credits of 3000-4999 HASS

Recommended HASS: EC3400

May schedule a PE course if available

Co-Curr. Unit (1)

Co-Curr. Unit (.5)

Co-Curr. Unit (.5)

Co-Curr. Unit (1)

[5]Lower/Upper HASS (3)

Study Abroad 101: 722 M & M T 11am, R 2pm

A) Enterprise for Design: May take 4 sem. Enterprise in lieu of EE4901 and EE4910
ENT3950, ENT3960, ENT4950, & ENT4960
**(reduces technical electives by 2 credits)

ENT4950 & ENT4960 must be consecutive & same enterprise.
ENT3950 & ENT3960 may apply toward Technical Electives.
EPS = European Project Semester; fulfills EE3901, 4901 & 4910.

Total 128
plus 3 units co-curricular activities

1) If considering BSEE or another Engineering major.
Consider taking U.Chem or Intro Chem in 1st yr. CH1150/51 = Math/Sci ElectiveSTEM 2nd discipline
2) Technical Electives: Choose 12 cr Technical Electives from approved list of CpE Technical Electives w/ Senior Design or 10 cr. with Enterprise for Design option.
3) Sem 5: Choose either CS3331 or EE3160. The other may be used for technical elective credits if desired.
4) Eligible Math/Sci electives: **MA**2600, MA2910, MA3000 or higher; **BL**1010 or higher; **CH**1150 or higher; **PH**2300 or higher (some exclusions-see degree audit for complete list)
5) HASS electives: 6 credits must be upper division 3000-4000; UN1015 & UN1025 are prerequisites for upper division HASS courses.

Undergraduate advisor: EERC 131. Call 487-2550 to schedule appt. eceadvise@mtu.edu

(C) Concurrent prerequisite (a prerequisite course that can be taken concurrently)