Electrical Engineering at Michigan Tech

Look up pre-requisite, co-requisite, semester offerings, course requirements and restrictions in the course catalog and Schedule of Classes.

BSEE Biomedical Applications Concentration

2018-2019
catalog term 201808

SAMPLE PLAN
Caculus-ready students

Sem. 1- Fall	Sem. 2 - Spring	Sem. 3 - Fall	Sem 4 - Spring	Sem. 5 - Fall	Sem. 6 - Spring	Sem. 7 - Fall	Sem. 8 - Spring
(calculus-ready students)	Optional: Enterprise participation ENT1960(1)	ENT2950(1)	ENT2960(1)	**Decide: Enterprise or Senior Design or EPS** 5) ENT3950(1)	ENT3960(1)	EE3131 EE3901 ENT4950(2)	ENT4950 & ENT4960: take in same enterprise & consecutive semesters. ENT4960(2)

Co-hort courses

May take MA2320, delay MA3520&EE2112

MA1160/61 (4) Calculus I → (C) → ENG1101(3) Engrg Analysis → ENG1102 (3) MODEL & DESGN

Spatial Visualization Test

MA2160 (4) Calculus II

MA1160 → *MA2321(2) Accelerated. Linear Alg TrackA
Pre-req / Co-register
Track B *MA3521(2) Accel. Diff. Eq.

MA2160 → MA3160 (4) Multi-Variable Calculus

EE1110 → EE2112 (4) Electric Circuits II & Lab

MA1160/61 → EE1110 (1) Essential Math (track A)

EE1111 (1) Intro to ECE (Track B)

(c) → EE2111 (3) Electric Circuits I

BL2010 → BL2020 (3) Anatomy / Physiology 2 spring

CH1150/51 (4) &/or CH1153 (1) Univ Chem I

CH1153 is optional recitation section & is recommended.

Take CH1000 first if not well-prepared for UChem

CS1111 (3) Intro C/C++ Programming
Fall only

PH1100 (1) Physics I Lab → (C) → PH2100 (3) Physics I

PH1100 → PH1200 (1) Physics II Lab

RECOMMENDED:
** Physics 1 booster:
PH2110(2) with PH2100
If C or lower in Calc I

PH2110(2) Phys 1 Workshop

CH1000 or CH150/51 → BL2010 (3) Anatomy / Physiology 1 fall

MA1160/61 & CH1150 → BE2400 (3) Cell & Molec. Biology fall

HU_____ or:
UN1025 (3) Global Issues
Upper-level language course may replace UN1025

UN1015 (3) Composition

1) _____ (3) Social/Ethical List

1) _____ (3) Critical/Creat Thinking List

Attend Feb. Career Fair:
Semester 5 is a good time to co-op or study abroad.

_____ Co-Curr. Unit (.5)

14.5/15.5 | 16 | 17.5 | 17

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

EE3131 (4) Electronics and Lab

MA2321/20 MA3521/20 → EE3160 (3) Signals & Systems → EE3180 (3) Intro. Probability & Random Sig. Anal.

CS1111 or CS1121 → EE2174(4) Digital Logic & Lab

MA2160 PH2100 PH1200(c) → PH2200 (3) Univ. Physics 2

EE2112 PH2200 BL2020 → BE3700 (3) BE3701(1) Bioinstrumenta-tion and Lab spring

1) _____(3) HASS EC,PSY,SS

5) 5) EE3131 EE3901 → EE4901 (2)**** EE Design 1 *Fall only*

OR

EE4901 (2)**** EE Design 1 → EE4910 (2)**** EE Design 2 *Spring only*

EE3171

CS1111 EE2174 → ***EE3171 (4) Microcontroller Applications

EE3180 → EE4250 (3) Modern Comm. Systems
Replaces EE3250

4) EE_____ EE Elective (3)

4) EE_____ EE Elective (3)

EE3160 → EE3261 (3) Control Systems

EE2112 PH2200 MA3160 → EE3140 (3) Electro-magnetics

Focus area choice: Biomechanics= pink path or Biomaterials= blue path

Biomechanics path:

BE2400 MA2320/1 MA3520/1 BL2010 → BE3300 (3) Biomechanics I Fall only → _____(3) BEA conc Electrive → _____ (3) HASS Comm/ Composition

1) _____(3) HASS HU,FA
Choose upper-level HASS if needed

OR Biomaterials path:

_____ (3) HASS Comm/ Composition → BE2800 (3) Biomaterials 1 spring only (BE2400) → _____(3) BEA conc elective

1) _____(3) Any HASS

_____ Co-Curr. Unit (1)

_____ Co-Curr. Unit (.5)

_____ Co-Curr. Unit (.5)

17 | 15/16 | 15.5 | 17.5

(C) → Concurrent prerequisite (a prereq. that can be taken concurrently)

Choose at least 6 credits of 3000-4999 HASS list
Recommended HASS: EC3400

Total 128
plus 3 units co-curricular activities

* Schedule a minimum of 14 credits if taking acclerated Linear Alg/Diff Eq

** beginning academic year 2019-20, a grade of C or higher in Calc 1 is required for PH2100 and if CD or D in Calc I, PH2110 is required with PH2100.
*** May use BE4770 plus one credit of 'free elective' in place of EE3171.

1) 4) 5) See reverse side for planning info and General Education details.

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

Biomechanics focus – follow pink path
Biomaterials focus – follow blue path

BEA electives: fall - BE3300, 3800, 4755 Alt fall- BE4700 odd
spring – BE2800, BE3350 Alt spg-BE4250 odd