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

**Sample Plan**

**Bachelor of Science – Electrical Engineering**

**2021-2022**

catalog term: 202108

**Photonic Concentration**

**Fall Year 1**

Co-hort courses

- MA1160/61 (4) Calculus I (C)
- MA2160 (4) Calculus II (C)
- ENG1101(3) Engrg Analysis
- ENG1102 (3) MODEL & DESGN
- CH1150/51 (4) Univ Chem I

Optional: Enterprise participation.

**Fall Year 2**

- MA2321 (2) Accel. Linear Alg
- MA3521/20 MA3521/20
- CS1111 (3) Intro C/C++ Programming
- EE2111 (3) Electric Circuits I
- **PH2100 (3) Physics I**
- **PH2200 (3) Univ. Physics 2**
- **PH2100 (2) Physics 1 Workshop**

**Spring**

- MA3160 (4) Calculus III
- EE2190 (3) Intro to Photonics
- **PH1100 (1) Physics I Lab**
- **PH1200 (1) Physics II Lab**
- **PH2000/PH2020**
- **PH2100 (2) Physics 1 Workshop**

**Fall Year 3**

- **EE3140 (3) Electromagnetics**
- EE3160 (3) Signals & Systems
- **EE4240 (3) Modern Comm. Sys.**
- EE3290 (4) Photonics II & Devices w/lab
- EE3190 (3) Optical Sensing and Imaging
- EE4490 (4) Laser Systems & Applas

**Spring**

- **EE3180 (3) Intro. Probability & Random Sign. Anal.**
- **EE3131 (2) Design Fund.**
- EE4390 (1) (2) EE Design 1
- EE4520 (3) Control Systems
- EE3261 (3) Photonics Elective (3)
- EE4590 (3) Photonics Elective (3)

**Fall Year 4**

- **EE3171 (3) Intro. Probability & Random Sign. Anal.**
- **EE3290 (4) Photonics II & Devices w/lab**
- **EE3180 (3) Intro. Probability & Random Sign. Anal.**
- **EE3261 (3) Photonics Elective (3)**
- **EE4520 (3) Control Systems**
- **EE4590 (3) Photonics Elective (3)**

**Electives:** Must have pre-reqs complete. Look up pre-reqs and semester offerings. See note below.

**Fall only**

- **ENT3950 (1)**
- **ENT1960 (1)**
- **ENT2960 (1)**

**Spring only**

- **ENT3960 (2)**
- **ENT4950 (2)**
- **ENT4960 (2)**

Total 128

plus 3 units co-curricular activities

- **Co-Curr. Unit (5)**
- **Co-Curr. Unit (1)**

**Recommended HASS elective:** EC3400

**Critical/creative thinking core**

**HASS Comm/Composition**

**HASS Social Behavioral Sci**

**Co-Curr. Unit (5)**

**Co-Curr. Unit (1)**

**Student Organization:**

Join the Optics & Photonics Society!
spie-officers-l@mtu.edu

**Study Abroad 101:**
https://www.mtu.edu/honors/study-abroad/program/

**Undergraduate advisor:**
Judy: EERC 131 jmburl@mtu.edu E-mail to schedule appt.

**Schedule a minimum of 14 credits if taking acclerated Linear Alg/Diff Eq MA2321/3521**

**Photonics electives:** fall: EE4240, EE4252, PH4510, PH4640 odd
spring: EE4253, EE4290, MSE4292, BE4250-Alt spg even, BE4410 spg odd

1) 2) 3) 4) 5) See page 2 for planning info and General Education worksheet.

14.5/15.5 14 17 17 16.5 16/17 18 16/17

Total 128

plus 3 units co-curricular activities

** MA2320 & MA3520, full semester courses, may replace MA2321 and MA3521. Delays EE2112 (1 sem.)**

**MA2321/3521, full semester courses, may replace MA2321 and MA3521. Delays EE2112 (1 sem.)**