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

EE1101(3) ENgrg Analysis
EE1102 (3) MODEL & DESIGN

MA2321(2) Accel. Linear Alg
MA2321(2) Accel. Diff. Eq.

CS1111 (3) Intro C/C++ Programming

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

PH1100 (1) Physics I Lab
MA2160 (4) Calculus II

EE2112 (4) Electric Circuits II & Lab
EE2190 (3) Intro to Photonics

EE3190 (3) Optical Sensing and Imaging

EE3290 (4) Photonic MII & Devices wLab
EE4490 (4) Laser Systems & Appl s
EE4950 & ENT4960: take in same enterprise & consecutive semesters.

EE3261 (3) Control Systems
EE4520 (3) Modern Comm. Systems

ENT1960(1)
ENT2960(1)

ENT3950(1)
ENT3960(1)

ENT2950(1)
ENT2960(1)

ENT4950(2)
ENT4960(2)

EE3131EE3901
EE3140 (3) Electromagnetics
EE3160 (3) Signals & Systems
EE3170 (3) Multi-Variable Calculus
EE3180 (3) Signals & Systems

MA2321/20 MA3521/20

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Choose from SELECT course list in your degree audit. Sugg. PH2300 or PH2400

Choose at least 6 credits of 3000-4999 HASS

EE3131 (4) Design Fund.
EE3180 (3) Electr. Logic & Lab
EE3190 (3) Optical Sensing and Imaging
EE4240 (3) Fiber Optics

HASS Comm/Composition
HASS Comm/Composition

HASS Social Behavioral Sci

Recommended HASS elective: EC3400

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

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

Undergraduate advisor: Judy: EERC 131 jm Burl@mtu.edu E-mail to schedule appt.
Choose correct courses each semester. Run and review your online Degree Audit each time you add, drop or switch courses and **before** each semester begins. Lists of electives and required courses are included in your online degree audit report. It is your responsibility to choose correct courses.

1) **Choose one course from each list for General Education requirements:** ALWAYS check for allowable course choices in your degree audit after registration adds and changes!

   **Gen Ed Core:** UN1015, UN1025, one Critical & Creative Thinking course, and one Social responsibility & Ethical Reasoning course

   **Gen Ed HASS lists:** at least 6 credits must be upper-level 3000-4999. UN1015 and UN1025 must be complete before taking upper-level HASS courses.

   - **HASS Composition/Communication:** View list of allowed courses in the degree audit or on the Registrar’s Office General Education webpage.
   - **HASS Social and Behavioral Science (EC/PSY/SS)**
   - **HASS Humanities and Fine Arts (HU/FA)**
   - **HASS any list:** A maximum of one course may be taken from the HASS Restricted list. Upper level if needed (3000+)

   **Co-curricular activities:** Choose 3 units of co-curricular activities (listed on Registrar’s General Education webpage). ½ or 1 credit courses are available.

2) **SELECT Approved Elective - choose one course:** BE2400, BL2010, CS1142, CEE3501, CEE3502 EE3373, ENG2120, ENG3200, ENG4510, MEEM2110, MEEM2150, MEEM2201, MEEM2700, MEEM3210, MEEM3220, MY2100, MY4292, PH2300, PH2400, PH3300

   (SELECT approved elective not required for biomedical or environmental applications concentrations)

3) Remaining Approved Electives: refer to your degree audit for list of valid courses. Ex: Engineering, Math, CS, Physics, Chem. **Pass/fail courses** do not count.

4) **EE Electives:** 15 credits (3-12 credits, varies w/ concentration) of EE lecture/lab coursework. Excludes research, pass/fail, project, co-op, or independent study credits. The purpose is to add skills and knowledge in new ECE topics, or more in-depth knowledge in an ECE area of specialization. May use for "Focus Area(s)". Look for semester offerings in the online Schedule of Classes. Look for pre-requisite and other course information by clicking the CRN, or in the online Course Descriptions.

   EE elective courses are offered once per year, or in alternating years (ex. EE4240, EE5223, EE5250). Check online Course Descriptions and the Schedule of Classes for the most up-to-date course information and semester offerings.

5) **Engineering Design Requirements:** 4 – 6 credits

   **Option 1:** “Senior Design”, 4 credits, is the year-long company sponsored project team. EE4901(2) and EE4910(2) (or BE4901/BE4910) taken in fall-spring, or MEEM4901(2) and MEEM4911(2) taken in spring-fall or fall-spring. May use EPS-European Project Semester for Design Option 1, which includes EE3901 credit.

   **Option 2:** “Enterprise” – 6 credits, 4 semesters of project work beginning at the point in time when you have 4 semesters left on campus: ENT3950(1), ENT3960(1), ENT4950(2) and ENT4960(2). Reduces “Approved Electives” by 2 credits if applicable.

6) **Free Elective:** a good use of Free Elective: CH1153, MA1161 5th credit, Enterprise 2000-level project work, or excess transfer credits. Cannot use co-curricular activities.

   **Concentration Electives:** See your Degree Audit Report (uAchieve) for the list(s) of valid electives with a concentration, or see the Degree Services .pdf audit for the BSEE with the concentration(s) you are interested in: [http://www.mtu.edu/registrar/students/major-degree/audit/engineering/](http://www.mtu.edu/registrar/students/major-degree/audit/engineering/) A concentration is not required.


   ✓ **GRADUATION**: Apply for graduation one semester before your last. Planned graduation semester/year: _______________.

   Final Audit Check: Register in the last semester’s courses, **review your degree audit**, then meet with the advisor to review your last set of scheduled courses **before** your last semester begins.