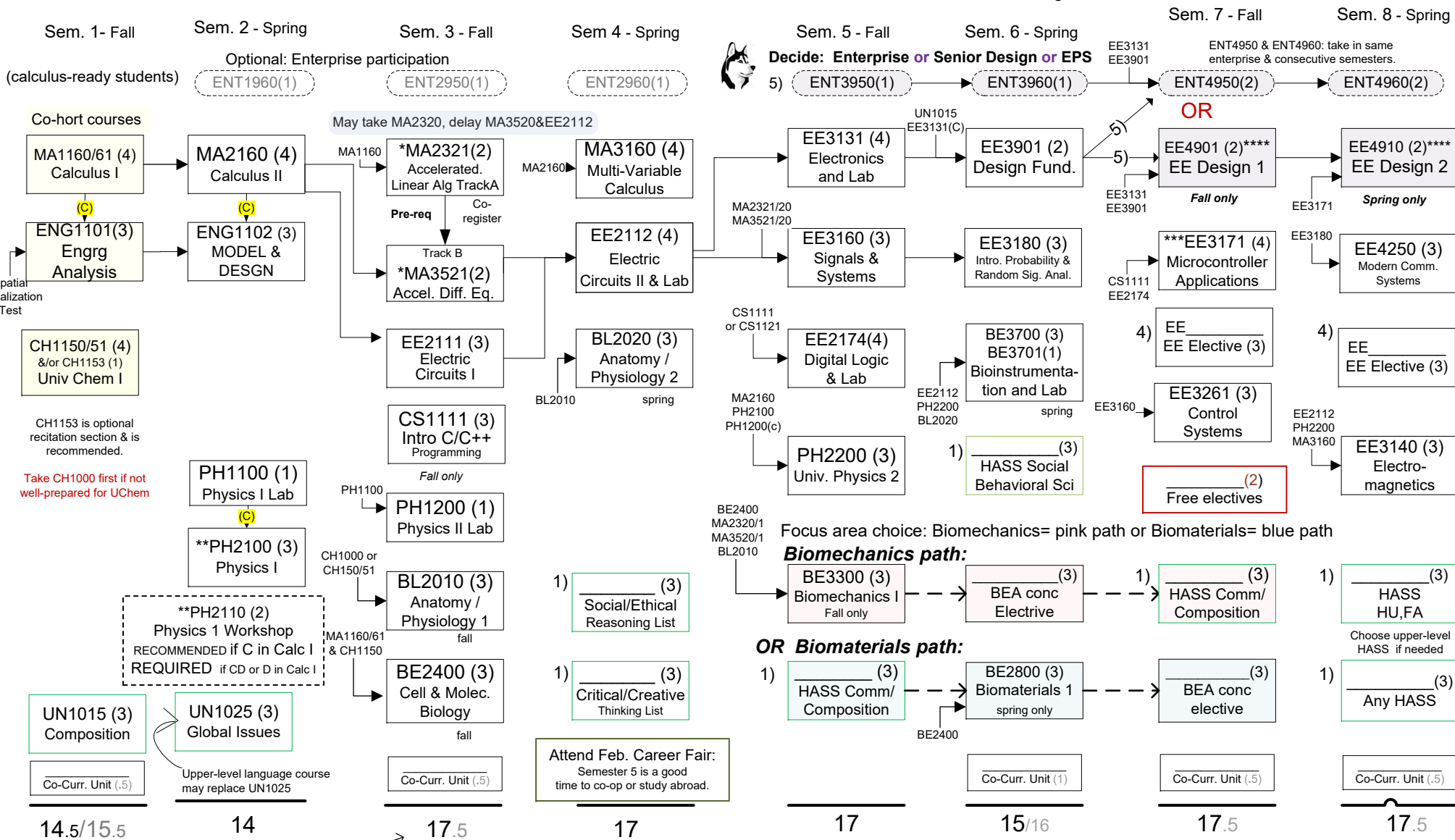


# BSEE Biomedical Applications Concentration 2020-2021

catalog term 202008

**SAMPLE PLAN**  
Calculus-ready students



\* Schedule a minimum of 14 credits if taking accelerated Linear Alg/Diff Eq  
 1) 4) 5) See reverse side for planning info and General Education details.  
 \*\* A grade of C or higher in Calc 1 is required for PH2100 and if CD or D in Calc I, then PH2110 is required with PH2100.  
 \*\*\* May use BE4770 plus one credit of 'free elective' in place of EE3171.

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

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

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

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

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

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

**Total 128 cr.**  
 plus 3 units co-curricular Activities  
**Total 130 cr. w/ Enterprise**

Footnotes – accompanies Visio BSEE flowcharts

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 5<sup>th</sup> 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/> A concentration is not required.

Concentrations: Biomedical Applications, Electric Power Engineering, Enterprise, Environmental Applications, Photonics.

✓ **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.