CIVIL ENGINEERING FLOWCHART
Built Infrastructure Path
Academic Year 2021-22

NOTE: LINEAR ALGEBRA & DIFFERENTIAL EQUATIONS CAN BE TAKEN DURING THE SAME SEMESTER (MA2321 & MA3521) OR SEPARATE SEMESTERS (MA2320 & MA3520)

For other senior design options, please visit the advising website: http://www.mtu.edu/cee/undegraduate/capstone/
## Built Infrastructure Requirements

**BUILT INFRASTRUCTURE DESIGN COURSE**
- CEE4213 STRUCTURAL CONCRETE DESIGN  
  Spring  
  4 cr.  
- CEE4223 STEEL DESIGN  
  Fall  
  4 cr.

**BUILT INFRASTRUCTURE ELECTIVES**
- CEE4020 DIGITAL PROJECT DELIVERY  
  Fall  
  3 cr.  
- CEE4201 MATRIX STRUCTURAL ANALYSIS  
  Fall  
  3 cr.  
- CEE4233 STRUCTURAL TIMBER DESIGN  
  Spring  
  3 cr.  
- CEE4244 LOADS FOR CIVIL STRUCTURES  
  Spring  
  3 cr.  
- CEE4333 ESTIMATING, PLANNING, CONST.  
  Spring  
  3 cr.  
- CEE4344 CONSTRUCTION SCHEDULING  
  Spring  
  3 cr.  
- CEE4820 FOUNDATION ENGINEERING  
  Fall  
  3 cr.  
- CEE4830 GEOSYNTHETICS  
  Spring  
  3 cr.  
- CEE4850 ROCK ENGINEERING  
  Spring  
  3 cr.  
- CEE5212 PRESTRESSED CONCRETE DESIGN  
  Fall  
  3 cr.  
- CEE5213 CONCRETE/MASONRY BLDG SYS  
  Fall  
  3 cr.

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## Senior Design (SD) Pre-reqs

(complete 7 of the following)

- CEE3101, CEE3331, CEE3332, CEE3202, CEE3620, CEE3810, BUILT INFRASTRUCTURE DESIGN COURSE, & 2 BUILT INFRASTRUCTURE ELECTIVES

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## Engineering Science Elective

(select 1)

- BE2700 BIOMEDICAL SIGNALS & SYSTEMS
- CM2110 MATERIAL AND ENERGY BALANCES
- CM2200 INTRO TO MINERALS & MATERIALS
- EE3010 CIRCUITS AND INSTRUMENTATION
- MSE2100 INTRO TO MATERIALS SCI & ENGRG
- MEEM2201 INTRODUCTORY THERMODYNAMICS
- MEEM2700 DYNAMICS

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## Professional Electives

### UNDERGRADUATE CATALOG: [https://www.mtu.edu/catalog/courses/](https://www.mtu.edu/catalog/courses/)

- Any **1000** or higher level course in Computer Science, Fine Arts or Forestry. (CS, ART, FW, MUS, SND, THEA)
- Any **2000** or higher level course in Biological Sciences, Chemistry, Construction Management, Geology, Physics or Geospatial Engineering. (BL, CH, CMG, GE, PH, SU)
- Any **2000** or higher level course in Business or Economics (ACC, BUS, EC, FIN, MGT, MIS, MKT, OSM).
- Any **3000** or higher level course in Mathematics, Humanities, Psychology, Social Sciences or University Wide (MA, HU, PSY, SS, UN).
- Any **3000** or higher level course in Civil and Environmental Engineering (CEE) or any other Engineering Dept.

**NOTE:** OTHER COURSES MAY BE USED TO SATISFY THE PROFESSIONAL ELECTIVES REQUIREMENT IF APPROVED BY THE DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING ACADEMIC ADVISOR.

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## General Education Requirements

### A. Core Courses (12 Credits)

1. **UN1015** (Composition)
2. **UN1025** (Global Issues) or 3000+ level Modern Language Course

### B. HASS Courses (12 Credits)

[General Ed Website, left]

1. COMM/COMP:
   
2. HUMANITIES/FINE ARTS:
   
3. SOCIAL & BEHAVIORAL SCIENCES:
   
4. ANY HASS OR HASS RESTRICTED COURSE:

   - 6 credits must be upper division 3000-4000 level courses
   - No more than 3 credits from the HASS Restricted list can be used to satisfy HASS requirements.
   - Each course can satisfy only one requirement.

### C. Co-Curricular Activities (3 Units)

[General Ed Website, left]