

F INDICATES COURSE IS OFFERED FALL SEMESTER  
 S INDICATES COURSE IS OFFERED SPRING SEMESTER  
 Su INDICATES COURSE IS OFFERED SUMMER SEMESTER

(L) INDICATES A COURSE WHICH INCLUDES A LAB  
 MUST BE SCHEDULED IN ADDITION TO THE LECTURE

(C) INDICATES THE COURSE CAN EITHER BE TAKEN AT THE SAME TIME (CO-REQ) OR  
 TAKEN PRIOR TO THE COURSE (PRE-REQ)

# CIVIL ENGINEERING FLOWCHART

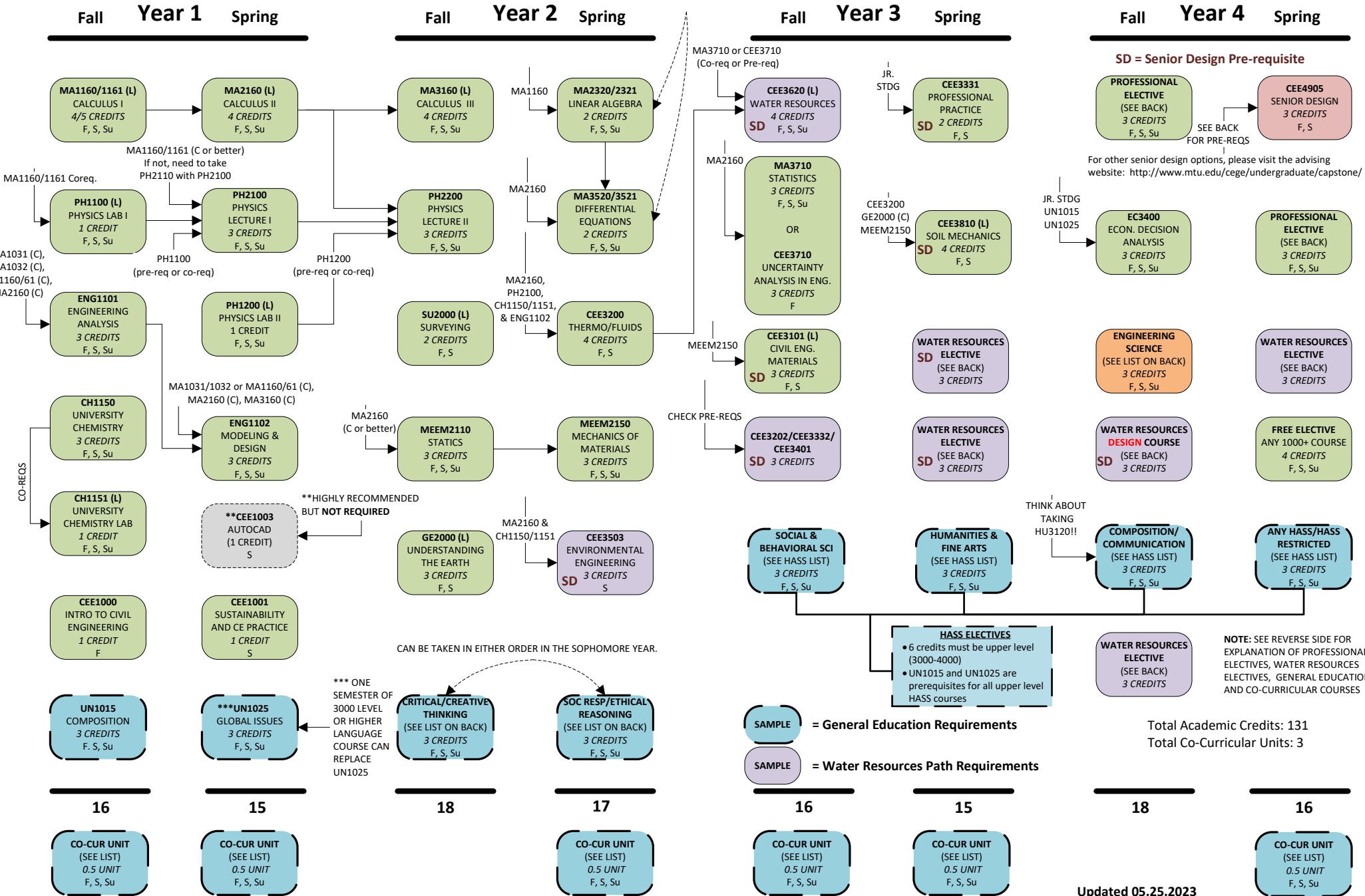
## Water Resources Path

### Academic Year 2023-24

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



This is not an official list of degree requirements.  
 Adjustments may be required due to curriculum changes.



## WATER RESOURCES REQUIREMENTS

Choose 1 course from the following

CEE3202	STRUCTURAL ANALYSIS	F, Sp	3 cr.
CEE3332	FUND. OF CONSTRUCTION	F, Sp	3 cr.
CEE3401	TRANSPORTATION ENGRG	F, Sp	3 cr.

**WATER RESOURCES DESIGN COURSE** (select 1)

CEE4620	RIVER/FLOODPLAIN HYDRAULICS	Fall	3 cr.
CEE4640	STORMWATER MANAGE. & LID	Su	3 cr.
CEE4665	STREAM RESTORATION	Spring	3 cr.

**WATER RESOURCES ELECTIVES** (select 4)

CEE4502	WASTE TREATMENT	Fall	3 cr.
CEE4503	WATER TREATMENT	Spring	3 cr.
CEE4505	SURFACE WATER QUALITY	Fall	3 cr.
CEE4507	WATER DISTRIBUTION/COLLECT.	Spring	3 cr.
CEE4610	WATER RES. SYSTEM MODELING	Spring	3 cr.
CEE4620	RIVER/FLOODPLAIN HYDRAULICS	Fall	3 cr.
CEE4640	STORMWATER MANAGE. & LID	Su	3 cr.
CEE4650	HYDRAULIC STRUCTURES	Var.	3 cr.
CEE4665	STREAM RESTORATION	Spring	3 cr.
CEE4993	ENGRG W/ DEV COMM.	Fall	3 cr.
CEE5620	STOCHASTIC HYDROLOGY	Spring	3 cr.
CEE5666	WR PLANNING & MANAGEMENT	Var.	3 cr.
GE3850	GEOHYDROLOGY	Spring	3 cr.
GE4800	GROUNDWATER ENGRG	Spring	3 cr.

## SENIOR DESIGN (SD) PRE-REQS

(complete 7 of the following)

CEE3101, CEE3331, (CEE3202 or CEE3332 or CEE3401), CEE3620, CEE3810, CEE3503, WATER RESOURCES DESIGN COURSE, & 2 WATER RESOURCES ELECTIVES

## 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

**UNDERGRADUATE CATALOG:**  
(COURSE DESCRIPTIONS)

<https://www.mtu.edu/catalog/courses/>

**GENERAL EDUCATION:**  
(CO-CURRICULAR & HASS LIST)

<https://www.mtu.edu/registrar/faculty-staff/advisors/gen-ed/>

## PROFESSIONAL ELECTIVES

**UNDERGRADUATE CATALOG:** <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, ENVIRONMENTAL, AND GEOSPATIAL ENGINEERING ACADEMIC ADVISOR.

## GENERAL EDUCATION REQUIREMENTS

### A. CORE COURSES (12 CREDITS)

- UN1015** (COMPOSITION)
- UN1025** (GLOBAL ISSUES) or 3000+ level Modern Language Course
- CRITICAL AND CREATIVE THINKING**  
ART1000, HU2130, HU2324, HU2501, HU2503, HU2538, HU2700, HU2701, HU2820, HU2910, MUS1000, SND1000, SS2300, THEA1000
- SOCIAL RESP. & ETHICAL REASONING**  
EC2001, PSY2000, SS2100, SS2200, SS2400, SS2500, SS2501, SS2502, SS2503, SS2504, SS2505, SS2600, SS2610, SS2700

### B. HASS COURSES (12 CREDITS) (General Ed Website, left)

- COMM/COMP:  
\_\_\_\_\_
- HUMANITIES/FINE ARTS:  
\_\_\_\_\_
- SOCIAL & BEHAVIORAL SCIENCES:  
\_\_\_\_\_
- 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)

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
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- \_\_\_\_\_