

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

CIVIL ENGINEERING FLOWCHART

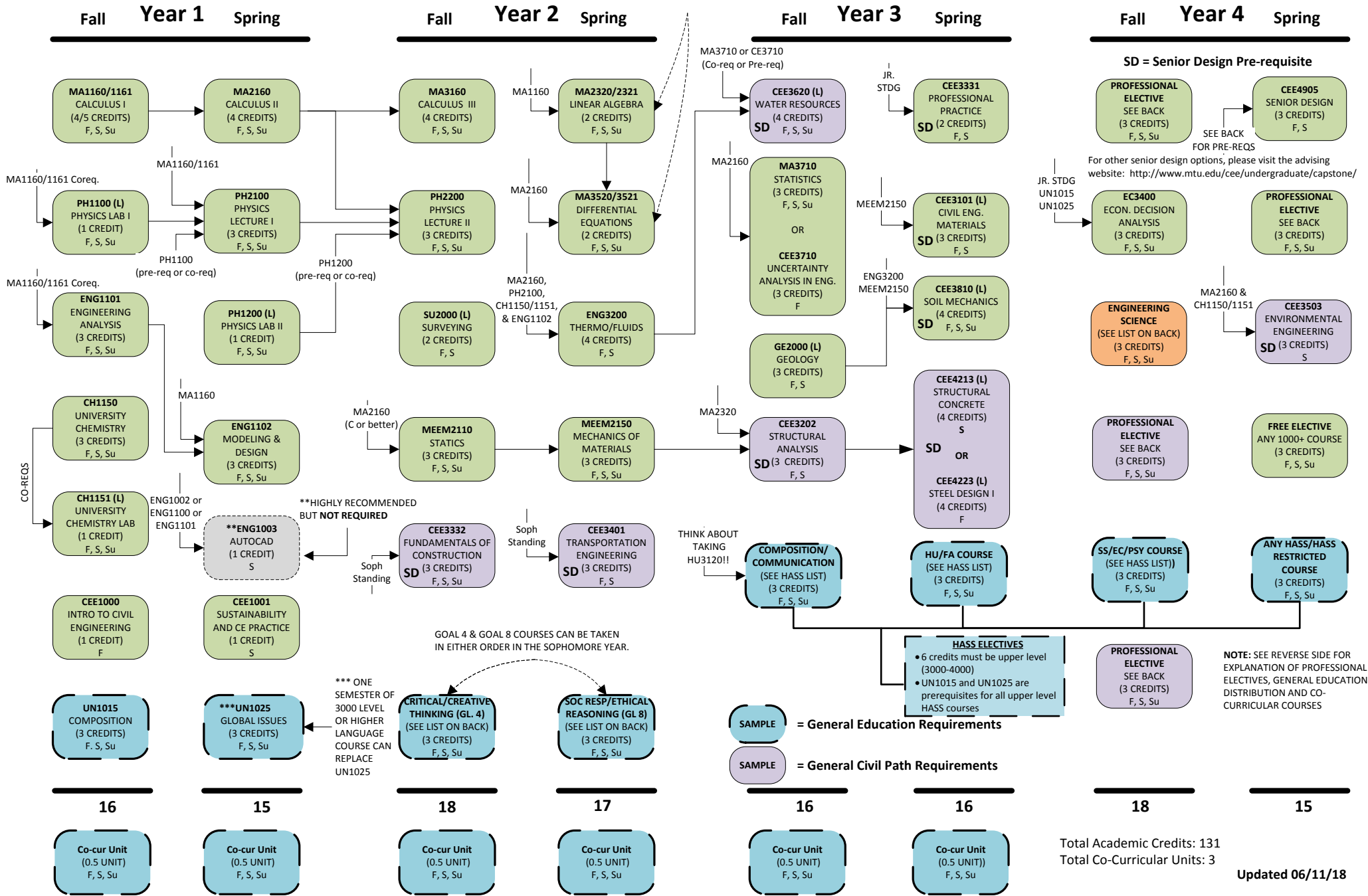
General

Academic Year 2018-19



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



Engineering Science Elective List (3 credits)

| | |
|----------|---------------------------------|
| BE2700 | BIOMEDICAL SIGNALS & SYSTEMS |
| CM2110 | FUND. OF CHEM ENGRG 1 |
| CM2200 | INTRO TO MINERALS AND MATERIALS |
| EE3010 | CIRCUITS AND INSTRUMENTATION |
| MSE2100 | INTRO TO MATERIALS SCI & ENGRG |
| MEEM2201 | THERMODYNAMICS |
| MEEM2700 | DYNAMICS |

Senior Design (SD) Pre-reqs (complete 7 of the following)

CEE3101, CEE3202, CEE3331,
CEE3332, CEE3401, CEE3503,
CEE3620, CEE3810, CEE4213 or
CEE4223

UNDERGRADUATE CATALOG:

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

GENERAL EDUCATION (CO-CURRICULAR & HASS LIST):

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

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- ANY 2000 OR HIGHER LEVEL COURSE IN SURVEYING
- HU3120 – TECHNICAL AND PROFESSIONAL COMMUNICATION

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

GENERAL EDUCATION REQUIREMENTS

A. CORE COURSES (12 CREDITS)

1. **UN1015** (COMPOSITION)
2. **UN1025** (GLOBAL ISSUES)
3. CRITICAL AND CREATIVE THINKING (**Goal 4**) *
4. SOCIAL RESPONSIBILITY & ETHICAL REASONING (**Goal 8**) **

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SS2100
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SS2400
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CIVIL ENGINEERING FLOWCHART

Water Resources

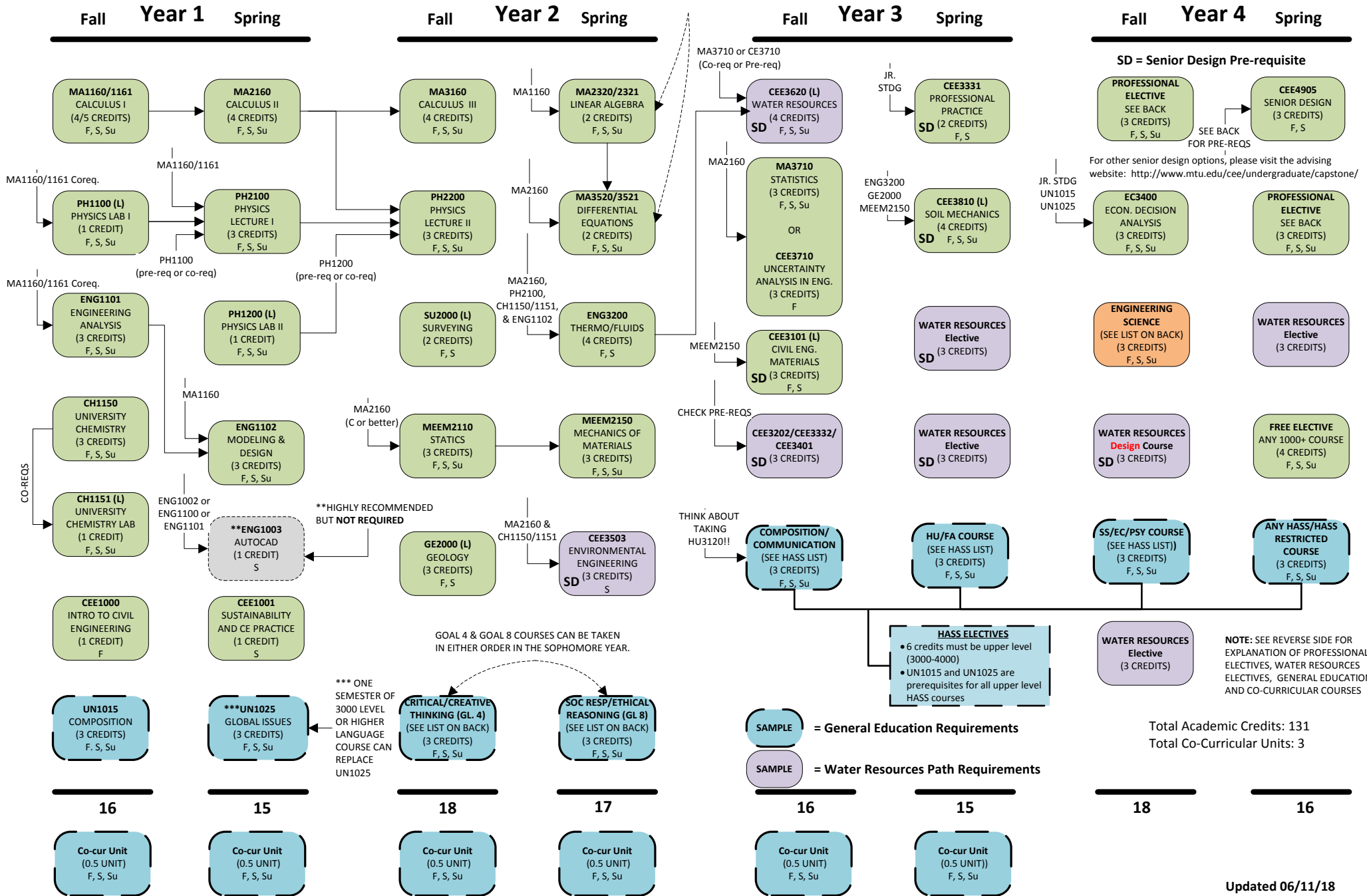
Academic Year 2018-19



Michigan Tech

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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. |
| CEE4620 | RIVER/FLOODPLAIN HYDRAULICS | Fall | 3 cr. |
| CEE4640 | STORMWATER MANAGE. & LID | Su | 3 cr. |
| CEE4665 | STREAM RESTORATION | Spring | 3 cr. |
| CEE5620 | STOCHASTIC HYDROLOGY | Spring | 3 cr. |
| CEE5666 | WR PLANNING & MANAGEMENT | Var. | 3 cr. |
| GE3850 | GEOHYDROLOGY | F, Sp | 3 cr. |
| GE4800 | GROUNDWATER ENGRG | Spring | 3 cr. |

Professional Electives

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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 List (3 credits)

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| CM2200 | INTRO TO MINERALS & MATERIALS |
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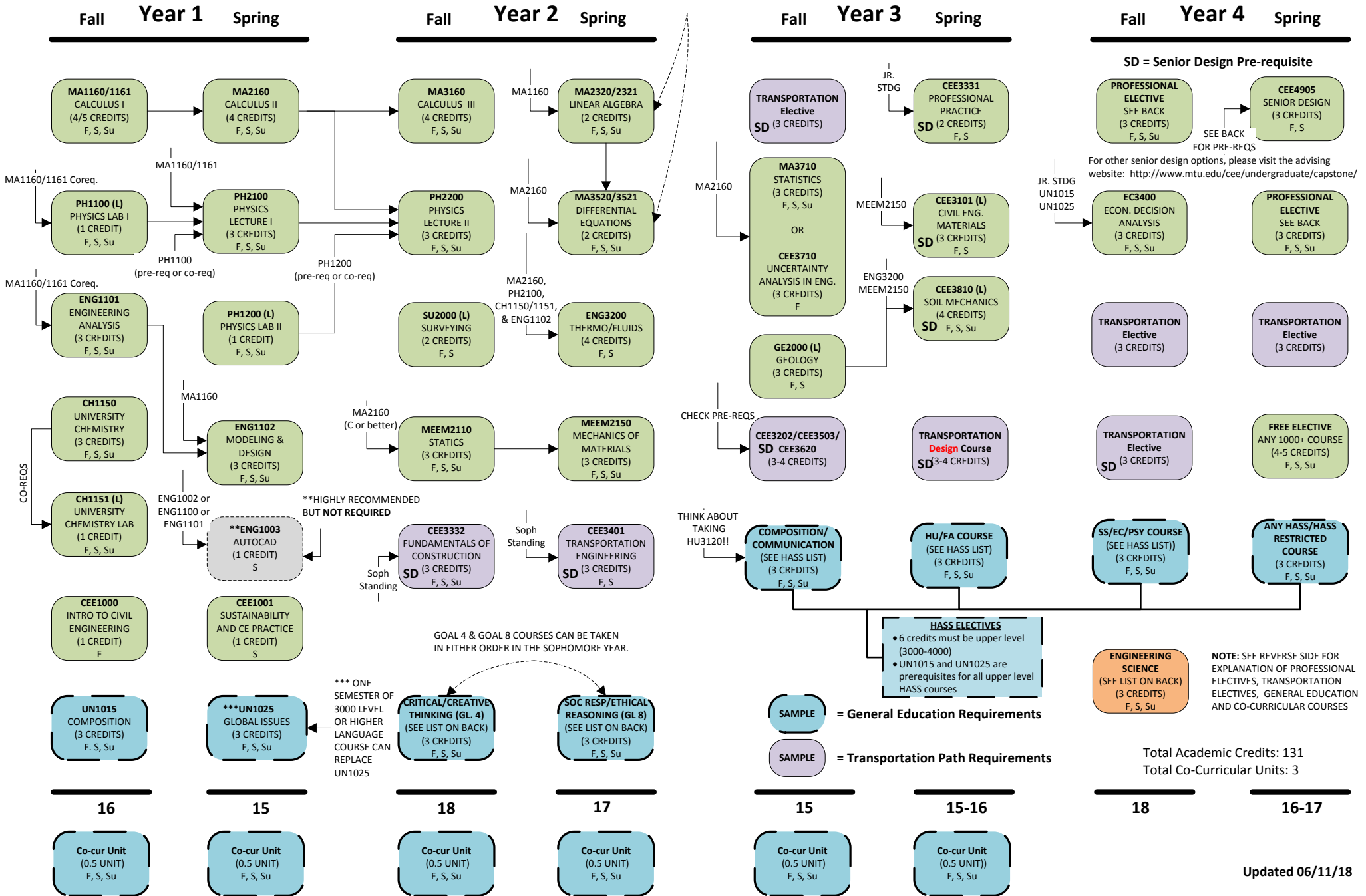
CIVIL ENGINEERING FLOWCHART



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Transportation Academic Year 2018-19

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 MA3521) OR SEPARATE SEMESTERS (MA2320 & MA3520)



Transportation Requirements

Choose 1 course from the following

| | | | |
|----------------|----------------------------|------------------|--------------|
| CEE3202 | STRUCTURAL ANALYSIS | F, Sp | 3 cr. |
| CEE3503 | ENVIRONMENTAL ENG. | Sp | 3 cr. |
| CEE3620 | WATER RESOURCES ENG | F, Sp, Su | 3 cr. |

TRANSPORTATION DESIGN COURSE (Select 1)

| | | | |
|----------------|------------------------------|---------------|--------------|
| CEE4401 | PAVEMENT DESIGN | Fall | 3 cr. |
| CEE4407 | TRANSPORTATION DESIGN | Spring | 4 cr. |

TRANSPORTATION ELECTIVES (select 4)

| | | | |
|-----------------|----------------------------------|---------------|--------------|
| CEE4333 | ESTIMATING, PLAN., CONST. | Fall | 3 cr. |
| CEE4344 | CONSTRUCTION SCHEDULING | Spring | 3 cr. |
| CEE4401 | PAVEMENT DESIGN | Fall | 3 cr. |
| CEE4402 | TRAFFIC ENGINEERING | Fall | 3 cr. |
| *CEE4404 | RAILROAD ENGINEERING | Fall | 3 cr. |

(*pre-req is CEE3490 – 1 cr, Offered in the spring)

| | | | |
|----------------|--------------------------------|---------------|--------------|
| CEE4406 | AIRPORT PLANNING | Spring | 3 cr. |
| CEE4407 | TRANSPORTATION DESIGN | Spring | 4 cr. |
| CEE4410 | TRANSPORTATION PLANNING | Fall | 3 cr. |

Senior Design (SD) Pre-reqs (complete 7 of the following)

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

Engineering Science Elective List (3 credits)

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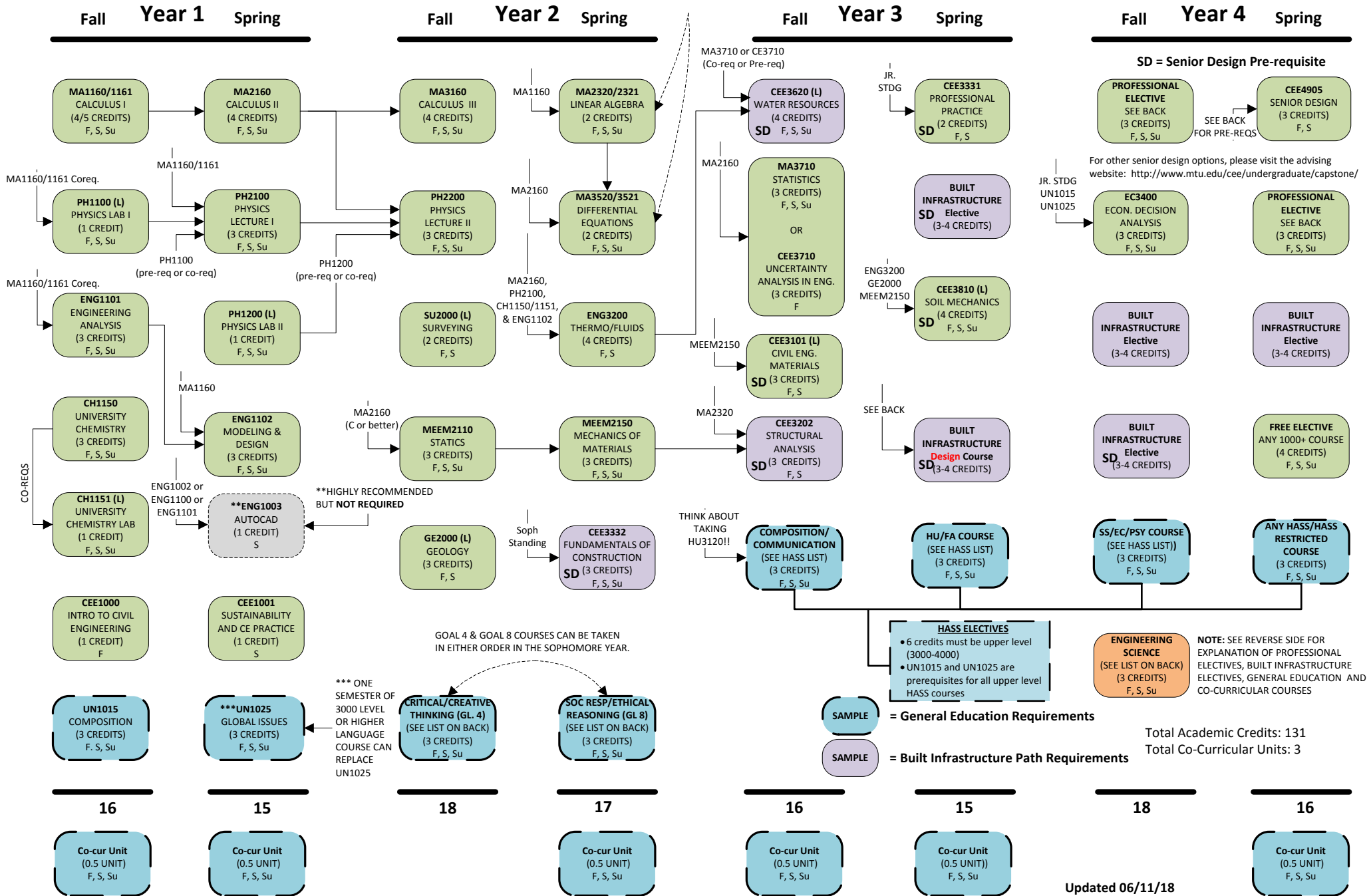
CIVIL ENGINEERING FLOWCHART



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Built Infrastructure Academic Year 2018-19

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Built Infrastructure Requirements

BUILT INFRASTRUCTURE DESIGN COURSE (select 1)

| | | | |
|---------|----------------------------|--------|-------|
| CEE4213 | STRUCTURAL CONCRETE DESIGN | Spring | 4 cr. |
| CEE4223 | STEEL DESIGN 1 | Fall | 4 cr. |
| CEE4820 | FOUNDATION ENGINEERING | Fall | 3 cr. |

BUILT INFRASTRUCTURE ELECTIVES (select 4)

| | | | |
|---------|------------------------------|--------|-------|
| CEE4020 | COMPUTER APPLICATIONS | Fall | 3 cr. |
| CEE4201 | MATRIX STRUCTURAL ANALYSIS | Fall | 3 cr. |
| CEE4213 | STRUCTURAL CONCRETE DESIGN | Spring | 4 cr. |
| CEE4223 | STEEL DESIGN 1 | Fall | 4 cr. |
| CEE4233 | STRUCTURAL TIMBER DESIGN | Spring | 3 cr. |
| CEE4244 | LOADS FOR CIVIL STRUCTURES | Spring | 3 cr. |
| CEE4333 | ESTIMATING, PLANNING, CONST. | Fall | 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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ELECTIVES

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