Beginning Fall 2021

SEM 1
MA 16500 4 cr. Calculus I
CHM 11500 4 cr. General Chemistry I
ENGL 10600 4 cr. Written Comm. Core
ENGR 13100 2 cr. Ideas to Innovation I

SEM 2
MA 16600 4 cr. Calculus II
PHYS 17200 4 cr. Modern Mechanics
SCI Select 3 cr. (CHM 11600)
ENGR 13200 2 cr. Ideas to Innovation II
COM 11400 3 cr. Oral Comm. Core

SEM 3
MA 26100 4 cr. Multivariate Calculus
PHYS 24100 3 cr. Electricity & Optics
CE 29700 3 cr. Basic Mechanics: Statics
CE 20300 4 cr. Geomatics
CGT 16400 2 cr. Computer Graphics
CE 29202 2 cr. Contemporary Issues in CE

SEM 4
MA 26500 3 cr. Linear Algebra
CE 21101 3 cr. Thermal Energy & Sciences in CE
CE 27000 4 cr. Structural Mechanics
CE 34000 3 cr. Hydraulics
CE 39800 3 cr. Technical Elective

SEM 5
MA 26600 3 cr. Differential Equations
CE 33500 4 cr. Materials in Civil Engr
CE 31100 3 cr. Architectural Engineering
CE 34300 1 cr. Hydraulics Lab
CE 39201 2 cr. General Education Course

SEM 6
STAT 51100 3 cr. Statistical Methods
CE 39800 3 cr. Engineering System Design
TECH EL #2 3 cr. (Breadth)
CE 41400 3 cr. Bldg. Mech & Elect Syst Dsgn
TECH EL #4 3 cr. Technical Comm in CE

SEM 7
Basic Sci 3 cr. (BIOL, EAPS, FNR) also for STS
TECH EL #5 3 cr. See List for one of two 500+ level courses
TECH EL #6 3 cr. (Breadth)
CE 41300 3 cr. Bldg Envelope Design & Thermal Loads
GEN ED #3 3 cr. (Social Sciences)

SEM 8
CE 49800 3 cr. Senior Design
Pre-reqs CE 39201 & CE 39800
TECH EL #8 3 cr. See List for one of two 500+ level courses
TECH EL #9 3 cr. (Breadth)
TECH EL #10 3 cr. (Design)
GEN ED #4 3 cr. (Humanities)
GEN ED #5 3 cr. (Humanities or Social Science)

Legend:
- Red: Required by First Year Engineering
- Blue: Civil Engineering Core Course
- Yellow: Technical Elective
- Purple: General Education Course

See the other side of this document for Curriculum Notes & other information.

Legend:

Pre-reqs: CE 20300 & 21101 can be interchanged between semesters 3 & 4 of sophomore year
Italics: suggested Technical Electives listed on next page; total of 30 cr. Required
130 credit hours required for BSCE degree
Curriculum Notes:

1. This flowchart shows the standard CE course requirements and the typical sequencing of such courses. Some deviations, both in courses and sequencing, can occur; students should speak to their advisors or the CE Undergraduate Office for further information.

2. Students should consult the following CE website for guidance on the requirements for Technical Electives and General Education Elective courses, respectively and the limitations on transfer credits:
   https://engineering.purdue.edu/CE/Academics/Undergraduate/Policies
   Students may also contact their faculty advisor or the CE Undergraduate Office for further information. The student is ultimately responsible for knowing and completing all degree requirements.

3. Communication Courses - Written Communication (WCC) and Oral Communication (OCC) required for First Year engineering are Civil Engineering degree requirements that are separate from Civil Engineering general elective requirements.

4. The Science Selective strongly recommended by the School of Civil Engineering is CHM 11600. Either CHM 11600 or CS 15900 is accepted. However, we prefer CHM 11600, especially if you are interested in the environmental or water resources side of civil engineering, because CE 35000 Intro to Environmental & Ecological Engr., a technical elective, requires CHM 11600 as a pre-requisite. Students using another Science Selective such as BIOL 11000 to meet FYE requirements will still be required to take CHM 11600 or CS 15900 to graduate in Civil Engineering but can use BIOL 11000 for the Basic Science Elective.

5. The Basic Science Requirement courses are chosen from an approved list. Examples include: BIOL 11000, 12100*, 14600, 23000, & 28600 or EAPS 10000*, 10400*, 11100, 12000*, 12500* & 22100. See advisor for current approved list. Choose starred * courses to meet the Foundational Core STS (Science, Technology, & Society) if not satisfied by other general education courses. Also refer to:
   https://www.purdue.edu/provost/students/s-initiatives/curriculum/courses.html

6. The Lyles School of Civil Engineering faculty recommend ECON 25100 as a Foundational Behavioral/Social Science (BSS) general education course.

7. CE 49800 Senior Design must be taken in a student's final semester before graduation. The only exception to this rule is that students who plan to graduate during a summer session may take CE 49800 during the prior spring semester.

Required for the Concentration: (B=Breadth Courses; D=Design Courses)

Select two of the following choice:

- CE 31100: Architectural Engineering (B; ARC)
- CE 41300: Bldg Envelope Design & Thermal Loads (D; ARC)
- CE 41400: Bldg Mechanical & Electrical System Design (D; ARC)
- CE 51300: Lighting in Buildings (ARC)
- CE 51401: Building Controls (ARC)
- CE 51501: Bldg Energy Audits (ARC)

Other Suggested Technical Electives: (B = Breadth Courses; D = Design Courses)

- CE 22200: Life Cycle Engr and Mngt of Constructed Facilities (B; CON)
- CE/ECE 35500: Environmental Sustainability (ENV)
- CE 37100: Structural Analysis (B; STR)
- CE 38300: Geotechnical Engineering I (B; GEO)
- CE 44000: Urban Hydraulics (B & D; HYD)
- CE 47000: Structural Steel Design (D; STR)
- CE 47300: Reinforced Concrete Design (D; STR)
- CE 49700: CE Projects - Building Information Modeling (CON)
- CE 59700: CE Projects-Sustain Bldg Dsgn, Constr & Oper (ARC)
- ME 31500: Heat and Mass Transfer
- ME 41800: Engr of Environmental Systems & Equip (typically Spring)
- ME 50200: Indoor Environment
- ME 51800: Analysis of Thermal Systems
- ME 52900: Sustainable Energy Options and Analysis
- ME 59700: ME Projects - Solar Energy Engr
- ECE 48300: Digital Control Systems

Sequence Requirement: A sequence is defined as a minimum of two (2) technical elective courses from a given CE emphasis area. Each student must complete at least two (2) such sequences of technical electives. Note that completing four courses from a single CE area of emphasis does not meet this requirement; the emphasis areas must be distinct. Certain non-CE designated courses may be used in satisfying this requirement.