Civil Engineering Curriculum Flowchart

GENERAL \(^{1,2}\)

Beginning Fall 2014

SEM 1
- MA 16500 4 cr  Calculus I
- CHM 11500 4 cr  General Chemistry I
- ENGL 10600 4 cr  Composition
- ENGR 13100 2 cr  Ideas to Innovation I
- GEN ED #1 3 cr  Foundational Core – Hum.

SEM 2
- MA 16600 4 cr  Calculus II
- PHYS 17200 4 cr  Modern Mechanics
- SCI SELECT\(^{3}\) 4 cr  (CHM 11600)
- ENGR 13200 2 cr  Ideas to Innovation II
- COM 11400\(^{7}\) 3 cr  Speech Communications

SEM 3
- MA 26100 4 cr  Multivariate Calculus
- PHYS 24100 3 cr  Electricity and Optics
- CE 29700 3 cr  Basic Mechanics: Statics
- CE 20300 4 cr  Geomatics

SEM 4
- MA 26500 3 cr  Linear Algebra
- CE 23100 3 cr  Civil Engineering Materials I
- CE 27000 4 cr  Structural Mechanics
- CE 29800 3 cr  Basic Mechanics: Dynamics

SEM 5
- MA 26600 3 cr  Differential Equations
- CE 33100 3 cr  Civil Engineering Materials II
- CE 37100 3 cr  Structural Analysis I
- CE 34000 3 cr  Hydraulics
- GEN ED #2 3 cr  Foundational Core – SS

SEM 6
- STAT 51100 3 cr  Statistical Methods
- CE 39800 3 cr  Engineering System Design
- CE 47300 4 cr  Reinforced Concrete Design
- CE 38300 3 cr  Geotechnical Engineering I
- CE 39201 2 cr  Contemporary Issues in CE

SEM 7
- ME 20000 3 cr  Thermodynamics
- CEM 49700 3 cr  Legal Aspects in Construction Engr
- CE 36100 3 cr  Transportation Engineering
- CE 48300 3 cr  Geotechnical Engineering II
- CE 39201 2 cr  Technical Comm in CE

SEM 8
- CE 49800\(^{7}\) 3 cr  Senior Design
- CE 30300 3 cr  Engineering Surveying
- CE 22200 3 cr  Life Cycle Engr & Mgmt
- CE 35000 3 cr  Environmental Engineering

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

Pre-requisite

Co-requisite

See the other side of this document for Curriculum Notes and other information

Italics: suggested Technical Elective; others listed on next page; total of 30 cr. required

B = Breadth courses;  D = Design courses

Purdue University Lyles School of Civil Engineering
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 advisor 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 limitation on transfer credit: [https://engineering.purdue.edu/CE/Academics/Undergraduate/Current](https://engineering.purdue.edu/CE/Academics/Undergraduate/Current)

   Click on the "Technical Elective Policy", the "General Education Electives" or the “Transfer Credit Policy” on the right side bar to see the pdf documents. Students may also contact their faculty advisor or the CE Undergraduate Office for further information. In particular, it should be understood that the sequence shown for Technical Electives and General Education courses is a suggestion and can be modified as needed. Suggested Technical Electives are listed below.

3. COM 11400 satisfies the First Year Engineering general education requirement as well as the Oral Communication Foundational Outcome. The Lyles School of Civil Engineering, however, requires this course for graduation (subject to core policy rules) and does not consider it to be a general education course.

4. The Science Selective strongly recommended by the School of Civil Engineering is CHM 11600. Other choices for the Science Selective will be accepted for meeting graduation requirements, but students may find themselves at a disadvantage when choosing technical electives if they have not taken CHM 11600.

5. The Basic Science Requirement courses are chosen from an approved list. Examples include: BIOL 11000, 12100 & 28600, 14600, 23000 or EAPS 10000, 10400, 11100, 12000, 22100. See advisor for current approved list.

6. The School of Civil Engineering recommends ECON 25100 as a social science general education course.

7. CE 49800 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.

8. This course does not yet have a permanent course number assigned to it. Please consult with your advisor or the CE Undergraduate Office to determine the appropriate course number to use when registering.

Suggestions for Technical Electives (B=Breadth course; D=Design course):

- CE 22200: Life Cycle Engineering and Management of Constructed Facilities (B; CON)
- CE 30300: Engineering Surveying (D; GEM)
- CE 32201: Project Control and Life Cycle Execution of Construct Facilities (CON)
- CE 35000: Environmental Engineering (B; ENV)
- CE 35500: Environmental Sustainability (ENV)
- CE 36100: Transportation Engineering (B & D; TRA)
- CE 37100: Structural Analysis I (B; STR)
- CE 38300: Geotechnical Engineering I (B; GEO)
- CE 40800/59700: Geographic Information Systems (B; GEM)
- CE 44000: Urban Hydraulics (B & D; HYD)
- CE 45600/49700: Wastewater Treatment Process (D; ENV)
- CE 46100: Roadway and Pavement Design (D; TRA)
- CE 46300: Highway Transportation Characteristics (TRA)
- CE 47000: Structural Steel Design (D; STR)
- CE 47300: Reinforced Concrete Design (D; STR)
- CE 48300: Geotechnical Engineering II (D; GEO)
- CE 51200: The Comprehensive Urban Planning Process (TRA)
- CE 54100: Design of Hydraulic Structures (D; HYD)
- LS 49700: Cadastral Surveying
- CEM 49700: Legal Aspects in Construction Engineering (CON)