Civil Engineering Curriculum Flowchart
MATERIALS ENGINEERING Concentration

Semester 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
Foundation Core – Hum.

Semester 2

MA 16600 4 cr
Calculus II

PHYS 17200 4 cr
Modern Mechanics

SCI SELECT² 4 cr
(CHM 11600)

MA 16500

ENGR 13200 2 cr
Ideas to Innovation II

COM 11400 3 cr
Speech Communications

Semester 3

MA 26100 4 cr
Multivariate Calculus

PHYS 24100 4 cr
Electricity and Optics

CE 29700 3 cr
Basic Mechanics: Statics

CE 20300 2 cr
Geomatics

CGT 16400 2 cr
Computer Graphics

Semester 4

MA 26500 3 cr
Linear Algebra

PHYS 24100 3 cr
Modern Mechanics

CE 29700 4 cr
Basic Mechanics: Statics

CE 29800 3 cr
Geomatics

CE 29202 2 cr
Contemporary Issues in CE

Semester 5

MA 26600 3 cr
Differential Equations

CE 23100 3 cr
Civil Engineering Materials I

CE 27000 4 cr
Civil Engineering Materials I

CE 20300 2 cr
Geomatics

Semester 6

STAT 51100 3 cr
Statistical Methods

CE 39800 3 cr
Engineering System Design

CE 36100 3 cr
Transportation Engineering

CE 47300 3 cr
Reinforced Concrete Design

BASIC SCI⁵ 3 cr
(BIOL or EAPS)

CE 39201 2 cr
Technical Comm in CE

Semester 7

ME 20000 3 cr
Thermodynamics

TECH EL 3 cr

CE 46100 3 cr
Roadway & Pavement Design

CE 47000 3 cr
Structural Steel Design

CE 38300 3 cr
Geotechnical Engineering I

Gen ED #5 3 cr
(Humanities)

Semester 8

CE 49800 3 cr
Senior Design

CE 53500 3 cr
Bituminous Matls & Mixtures

CE 35000 3 cr
Environmental Engineering

CE 53000 3 cr
Prop & Prod of Concrete

GEN ED #6 3 cr

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 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 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 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 rightside 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. CS 15900 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 strongly 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 courses; D = Design courses):

- CE 35000: Environmental Engineering (B; ENV)
- CE 36100: Transportation Engineering (B & D; TRA)
- CE 37100: Structural Analysis I (B; STR)
- CE 44000: Urban Hydraulics (B & D; HYD)
- CE 47000: Structural Steel Design (D; STR)
- CE 47300: Reinforced Concrete Design (D; STR)
- CE 48300: Geotechnical Engineering II (D; GEO)
- CE 59700: Corrosion (MAT)
- CE 59700: Heterogeneous Materials (MAT)