Civil Engineering Curriculum Flowchart
CONSTRUCTION ENGINEERING Concentration

Starting Fall 2014

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
  Foundational Core – Hum.

Semester 2
- MA 16600 4 cr
  Calculus II
- PHYS 17200 4 cr
  Modern Mechanics
- SCI SELECT\(^1\) 3 cr
  (CHM 11600)
- ENGR 13200 2 cr
  Ideas to Innovation II
- COM 11400 3 cr
  Speech Communications

Semester 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
- CGT 16400 2 cr
  Computer Graphics
- CE 29202 2 cr
  Contemporary Issues in CE

Semester 4
- MA 26500 3 cr
  Linear Algebra
- CE 23100 3 cr
  Civil Engineering Materials I
- ENGR 13200 2 cr
  Ideas to Innovation II
- COM 11400 3 cr
  Speech Communications
- GEN ED #2 3 cr
  Foundational Core - SS

Semester 5
- MA 26600 3 cr
  Differential Equations
- CE 27000 4 cr
  Structural Mechanics
- CE 29800 3 cr
  Basic Mechanics: Dynamics
- GEN ED #3 3 cr
  (Social Science\(^6\))

Semester 6
- STAT 51100 3 cr
  Statistical Methods
- CE 33100 3 cr
  Civil Engineering Materials II
- CE 34000 3 cr
  Hydraulics
- CE 34300 1 cr
  Geotechnical Engineering I
- GEN ED #4 3 cr
  Technical Comm in CE

Semester 7
- ME 20000 3 cr
  Thermodynamics
- CEM 49700 3 cr
  Legal Aspects in Construction Engr
- TECH EL 3 cr
  (Design)
- CE 37100 3 cr
  Structural Analysis I
- GEN ED #5 3 cr
  (Humanities)

Semester 8
- CE 49800\(^7\) 3 cr
  Senior Design
- CE 36100 3 cr
  Transportation Engineering
- CE 47300 4 cr
  Reinforced Concrete Design
- 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

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

   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. 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.

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

- CE 35000: Environmental Engineering (B; ENV)
- CE 36100: Transportation Engineering (B & D; TRA)
- CE 44000: Urban Hydraulics (B & D; HYD)
- CE 47000: Structural Steel Design (D; STR)
- CE 47900: Design of Building Components and Systems (D; STR)
- CE 52100: Construction Business Management (CON)
- CE 52200: Computer Applications in Construction (D; CON)
- CE 52300: Selection and Utilization of Construction Equipment (D; CON)
- CE 52700: Analytic Methods for the Design of Construction Operations (D; CON)
- CEM 32400: Human Resource Management in Construction
- MGMT 30400: Intro to Financial Management (prereq. MGMT 201 Managerial ACCT and ECON 25200)