Civil Engineering Curriculum Flowchart
TRANSPORTATION & INFRASTRUCTURE SYSTEM ENGINEERING Concentration1,2

Beginning
Fall 2011

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

SEM 2
MA 16600 4 cr
Calculus II

PHYS 17200 4 cr
Modern Mechanics

SCI SELECT2 4 cr
(CHM 11600)

ENGR 13200 2 cr
Ideas to Innovation II

COM 114003 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

GEN ED #2 3 cr

SEM 4
MA 26500 3 cr
Linear Algebra

CE 23100 3 cr
Civil Engineering Materials I

CE 27000 4 cr
Structural Mechanics

SEM 5
MA 26600 3 cr
Differential Equations

CE 29800 3 cr
Basic Mechanics: Dynamics

CE 20300 4 cr
Computer Graphics

SEM 6
STAT 51100 3 cr
Statistical Methods

CE 32900 3 cr
Transportation Engineering

GEN ED #3 3 cr
(Humanities)

SEM 7
ME 20000 3 cr
Thermodynamics

TECH EL 3 cr
Roadway & Pavement Design

GEN ED #4 3 cr
(BIOI or EAPS)

SEM 8
CE 498007 3 cr
Senior Design

CE 48300 3 cr
Geotechnical Engineering II

BASIC SCI5 3 cr

GEN ED #5 3 cr
(Social Science)

Legend:
Red
Required by First Year Engineering

Blue
Civil Engineering Core Course

Yellow
Technical Elective

Purple
General Education Course

Pre-requisite

Co-requisite

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

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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 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 requirement for a general education course. The School of Civil Engineering, however, requires this course for graduation 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 courses.

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 30300: Engineering Surveying (D; GEM)
- CE 32201: Project Control and Life Cycle Execution of Constructed Facilities (CON)
- CE 35000: Environmental Engineering (B; ENV)
- CE 37100: Structural Analysis I (B; STR)
- CE 44000: Urban Hydraulics (B & D; HYD)
- CE 46100: Roadway and Pavement Design (D; TRA)
- CE 46300: Highway Transportation Characteristics (TRA)
- CE 47300: Reinforced Concrete Design (D; STR)
- CE 48300: Geotechnical Engineering II (D; GEO)
- CE 51200: The Comprehensive Urban Planning Process (TRA)
- CE 56000: Public Mass Transportation (TRA)
- CE 56200: Geometric Design of Highways (D; TRA)
- CE 56500: Traffic Engineering (D; TRA)
- CE 56600: Transportation Planning (TRA)
- CE 59400: Transportation Systems Analysis (TRA)