Civil Engineering Curriculum Flowchart
ARCHITECTURAL ENGINEERING Concentration

Beginning Fall 2011

SEM 1
MA 16500 4 cr
Calculus I

CHM 11500 4 cr
General Chemistry I

ENGL 10600 4 cr
Composition

ENG 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 SELECT 4 cr
(CHM 11600)

ENG 13200 2 cr
Ideas to Innovation II

COM 11400 3 cr
Speech Communications

SEM 3
MA 26100 4 cr
Multivariate Calculus

ENGR 13200 2 cr

PHYS 17200 4 cr

SEM 4
MA 26500 3 cr
Linear Algebra

PHYS 17200 4 cr

SEM 5
MA 26600 3 cr
Differential Equations

PHYS 24100 3 cr
Electricity and Optics

CE 23100 3 cr
Civil Engineering Materials I

CE 29800 3 cr
Basic Mechanics: Statics

CE 29700 3 cr
Thermodynamics

CE 27000 4 cr
Mechanics

CE 20300 4 cr

SEM 6
MA 29200 1 cr

CE 31100 3 cr
Civil Engineering Materials II

CE 31000 3 cr

CE 34000 3 cr

SEM 7
MA 29300 1 cr

Phys 17200 4 cr

CE 39800 3 cr
Engineering System Design

CE 31100 3 cr

CE 34300 1 cr

SEM 8
MA 29400 1 cr

Phys 17200 4 cr

CE 47000 3 cr
Structural Steel Design

CE 49800 3 cr
Senior Design

CE 49800 3 cr

CE 34300 3 cr

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

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

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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 EAS 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 22200: Life Cycle Engineering and Management of Constructed Facilities (B; CON)
- CE 35500: Environmental Sustainability (ENV)
- CE 37100: Structural Analysis I (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 497008: Building Information Modeling (CON)
- CE 51300: Lighting in Buildings (ARC)
- CE 51401: Building Controls (ARC)
- CE 51501: Building Energy Audits (ARC)
- CE 597008: Sustainable Building Design, Construction and Operation (ARC)
- ME 31500: Heat and Mass Transfer
- ME 41300: Noise Control (typically Spring)
- ME 41800: Engineering of Environmental Systems & Equipment (typically Spring)
- ME 50200: Indoor Environment
- ME 597008: Sustainable Energy Options and Analysis
- ME 597008: Solar Energy Engineering
- ECE 48300: Digital Control Systems
- ECE 58000: Optimization Methods for Systems and Controls
- EAS 59100: Solar and Thermal Radiation

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