DRAFT Civil Engineering Curriculum Flowchart

Beginning
Fall 2020

SEM 1
MA 16500 4 cr
Calculus I

SEM 2
MA 16600 4 cr
Calculus II

SEM 3
MA 26100 4 cr
Multivariate Calculus

SEM 4
MA 26500 3 cr
Linear Algebra

SEM 5
MA 26600 3 cr
Differential Equations

SEM 6
STAT 51100 3 cr
Statistical Methods

SEM 7
BASIC SCI1 3 cr
(BIOL or EAPS)

SEM 8
CE 49800 3 cr
Senior Design

GEN ED #1 3 cr
UCC – Humanities

PHYS 17200 4 cr
Modern Mechanics

ENGR 13100 2 cr
Ideas to Innovation I

ENGR 13200 2 cr
Ideas to Innovation II

SCI SELECT5 3 cr
(CHM 11600)

COM 11400 3 cr
Oral Comm. Core

UCC – Humanities

MA 16600

PHYS 24100 3 cr
Electricity and Optics

ENGR 13200

ENGL 10600 3 cr
4 cr
Written Comm. Core

GEN ED #1

MA 16500

CE 29700 3 cr
Basic Mechanics: Statics

CE 20300 4 cr
Geomatics

CGT 16400 2 cr
Computer Graphics

MA 26500

CE 21101 3 cr
Thermal Energy Sciences in CE

PHY 17200

CE 27000 4 cr
Structural Mechanics

CE 29800 3 cr
Basic Mechanics: Dynamics

CE 29201

CE 29202 2 cr
Contemporary Issues in CE

CE 26100

CE 29700 3 cr
Geomatics

CGT 16400 2 cr
Computer Graphics

GEN ED #1

MA 26500

CE 21101 3 cr
Thermal Energy Sciences in CE

CE 27000 4 cr
Structural Mechanics

CE 29800 3 cr
Basic Mechanics: Dynamics

CE 39800 3 cr
Engineering System Design

TECH EL #1 3 cr
(Breadth)

CE 39800

TECH EL #2 3 cr
(Breadth)

TECH EL #3 3 cr
(Design)

TECH EL #4 3 cr

CE 39800

TECH EL #5 3 cr
(Breadth)

TECH EL #6 3 cr
(Design)

TECH EL #7 3 cr

CE 39800

TECH EL #8 3 cr
(Breadth)

TECH EL #9 3 cr
(Design)

TECH EL #10 3 cr

CE 39800

TECH EL #5 3 cr

CE 39800

TECH EL #5 3 cr

TECH EL #5 3 cr

CE 39800

TECH EL #5 3 cr

CE 39800

TECH EL #5 3 cr

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

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 Electives listed on next page; total of 30 cr. required

Purdue University Lyles School of Civil Engineering

130* cr. hrs.

5See Foundational Core STS Requirement
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. The student is ultimately responsible for knowing and completing all degree requirements.

3. Communication courses – For Written Communication (WC) ENGL 10600 or ENGL 10800 or SCLA 10100 or other from Written Communication Core list. For Oral Communication (OC) COM 11400 or SCLA 10200 or other from Oral Communication Core list 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.

   Also refer to http://www.purdue.edu/provost/students/s-initiatives/curriculum/courses.html

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. Choose starred * courses to meet the Foundational Core STS (Science Technology & Society) if not satisfied by other general education courses. Also refer to http://www.purdue.edu/provost/students/s-initiatives/curriculum/courses.html

6. The Lyles School of Civil Engineering faculty recommend ECON 25100 as a Foundational Behavioral/Social Science (BSS) 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.

*Excerpt from Technical Elective Policy

**Breadth requirement:** At least four (4) courses must be completed from the following list, guaranteeing sufficient breadth of study in at least four of the emphasis areas:

<table>
<thead>
<tr>
<th>ARC</th>
<th>CON</th>
<th>ENV</th>
<th>GEM</th>
<th>GEO</th>
<th>HYD</th>
<th>STR</th>
<th>TRA</th>
</tr>
</thead>
</table>

**Design content requirement:** At least three (3) courses must be completed from the following list, guaranteeing sufficient design content:

<table>
<thead>
<tr>
<th>ARC</th>
<th>CON</th>
<th>ENV</th>
<th>GEM</th>
<th>GEO</th>
<th>HYD</th>
<th>MAT</th>
<th>STR</th>
<th>TRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 41300, 41400</td>
<td>CE 52200, 52300, 52700</td>
<td>CE 35300, 45600, 45700</td>
<td>CE 30300, 30600</td>
<td>CE 48300, 58300, 58400, 58500</td>
<td>CE 44000, 54300, 54600, 54900</td>
<td>CE 53000, 53500</td>
<td>CE 47000, 47300, 47900</td>
<td>CE 36100, 46100, 56200, 56300, 56500, 56700</td>
</tr>
</tbody>
</table>

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