Civil Engineering Curriculum Flowchart

ENVIRONMENTAL ENGINEERING Emphasis

Beginning
Fall 2021

SEM 1
MA 16500 4 cr
Calculus I
CHM 11500 4 cr
General Chemistry I
ENGL 10600 4 cr
Written Comm. Core
ENGR 13100 2 cr
Ideas to Innovation I

SEM 2
MA 16600 4 cr
Calculus II
PHYS 17200 4 cr
Modern Mechanics
SCI SELECT 3 cr
(CHM 11600)
ENGR 13200 2 cr
Ideas to Innovation II
COM 11400 3 cr
Oral Comm. Core

SEM 3
MA 26100 4 cr
Multivariate Calculus
PHYS 24100 3 cr
Electricity and Optics
CE 29700 3 cr
Basic Mechanics: Statics

SEM 4
MA 26500 3 cr
Linear Algebra
CE 21101 3 cr
Thermal Energy & Sciences in CE

SEM 5
MA 26600 3 cr
Differential Equations
CE 335/497 4 cr
Materials in Civil Engineering
CE 35000 3 cr
Environmental Engineering

SEM 6
STAT 51100 3 cr
Statistical Methods
CE 39800 3 cr
Engineering System Design
CE 35500 3 cr
Environmental Sustainability

SEM 7
BASIC SCI 3 cr
(BIOL, EAPS, FNR)
also for STS
CE 40800 3 cr
Geographic Info Systems
CE 45600 3 cr
Wastewater Treatment Process

SEM 8
CE 49800 3 cr
Senior Design
TECH EL #8 3 cr
Air Pollution Control & Design
CE 54300 3 cr
Coastal Engineering

Legend:

Red
Required by First Year Engineering

Blue
Civil Engineering Core Course

Yellow
Technical Elective

Purple
General Education Course

Pre-requisite
Co-requisite

5See Foundational Core STS Requirement5

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

Purdue University Lyles School of Civil Engineering 130* cr. hrs.
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 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](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](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.

**Suggestions from Technical Elective Policy**

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

- CHM 25700: Organic Chemistry
- CE 35500/EEE 35500: Engineering Environmental Sustainability (ENV)
- CE 40800/59700: Geographic Information Systems (B; GEM)
- CE 44200 Introduction to Hydrology (HYD)
- CE 44300: Environmental Fluid Mechanics (HYD)
- CE 45600/49700: Wastewater Treatment Process (D; ENV)
- CE 45700: Air Pollution Control and Design (D; ENV)
- EEE 30000: Environmental And Ecological Systems Modeling (EEE, non CE)
- EEE 43000: Industrial Ecology And Life Cycle Analysis (EEE, non CE)
- CE 48300: Geotechnical Engineering II (D; GEO)
- CE 49700: Civil Engineering Projects - Water Treatment (ENV)
- CE 54300: Coastal Engineering (D; HYD)
- CE 55700: Air Quality Management (ENV)
- CE 55900: Water Quality Modeling (ENV)
- CE 59700: Civil Engineering Projects - Water Chemistry (D; ENV)