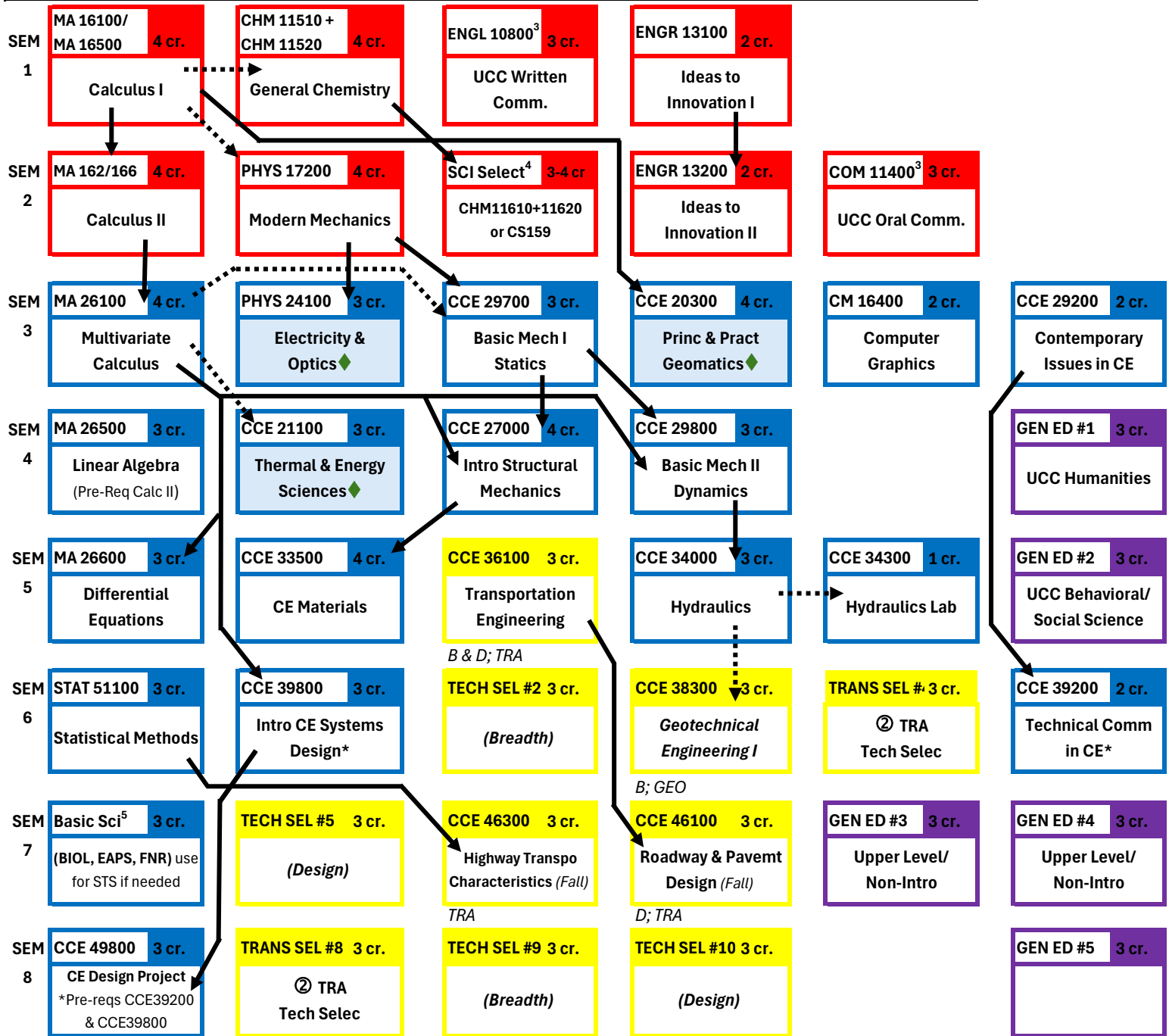


Civil Engineering Curriculum Flowchart^{1,2}

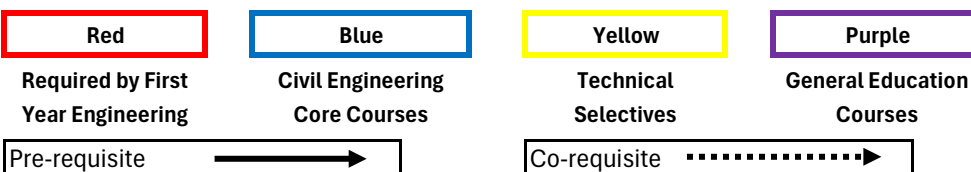
TRANSPORTATION & INFRASTRUCTURE SYSTEMS Engineering Concentration (BSCE)

Beginning
Fall 2026



See Foundational Core STS Requirements⁵

Legend:



♦ CE 20300/PHYS 24100 & 21100 can be interchanged between semesters 3 & 4 of sophomore year; PHYS 24100 available in summer
Italics: suggested Technical Selectives listed on next page; total of 30 cr. Required

130 credit hours required for BSCE degree

See the other side of this document for Curriculum Notes & other information.

Civil Engineering Curriculum Flowchart^{1,2}

TRANSPORTATION & INFRASTRUCTURE SYSTEMS Engineering Concentration (BSCE)

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Curriculum Notes:

1. This flowchart shows the standard BSCE course requirements and the typical sequencing of such courses, with area-specific guidance. **Some deviations, both in courses and sequencing, can occur; students should speak to their advisors in the CE Undergraduate Office for further information.**
2. Students should consult the following LSCCE website for guidance on the requirements for Technical Selectives and General Education Elective courses, respectively and the limitations on transfer credits:
<https://engineering.purdue.edu/CCE/Academics/Undergraduate/Policies>. **The student is ultimately responsible for knowing and completing all BSCE degree requirements.**
3. **Communication Courses** - Written Communication (WCC) and Oral Communication (OCC) required for First Year engineering are BSCE degree requirements that are separate from BSCE general education elective requirements.
4. The **Science Selective** strongly recommended by Civil Engr faculty is **CHM 11610 plus lab. Either CHM 11610 and 11620/30 or CS 15900 is accepted.** However, we prefer **CHM 11610 and 11620/30**, especially if you are interested in the environmental or water resources side of civil engineering, because CCE 35000 Intro to Environmental & Ecological Engr., a technical selective, requires CHM 11610 and lab as a pre-requisite. Students using another Science Selective such as BIOL 11000 to meet FYE requirements will still be required to take CHM 11610 and 11620/30 or CS 15900 to graduate in BSCE, but can use BIOL 11000 for the Basic Science Elective.
5. The **Basic Science Requirement** courses are chosen from an approved list. Examples include: BIOL 11000 or EAPS 10000*, 10400*, 11100, 12000*, 12500* & 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.
<https://www.purdue.edu/provost/students/s-initiatives/curriculum/courses.html>
6. The Civil Engr faculty recommend ECON 25100 as a Foundational Behavioral/Social Science (BSS) general education course.
7. **CCE 49800 CE Design Project** must be taken in a student's final semester before graduation. The only exception to this rule are students who plan to graduate during a summer session may take CCE 49800 during the prior spring semester.
8. To graduate, all students are required to complete thirty (30) technical credits, including four (4) breadth and three (3) design, a minimum of twenty-one (21) credits in Civil Engineering, and at least a minimum of two (2) technical selective sequences.
9. **Sequence Requirement:** A sequence is defined as a minimum of two (2) technical selective courses from a given BSCE emphasis area. Each student must complete at least two (2) such sequences of technical selectives. Note that completing four (4) courses from a single BSCE area of emphasis does not meet this requirement; the emphasis areas must be distinct. Certain non-BSCE designated courses may be used in satisfying this requirement.

Required for the Concentration: (B=Breadth Courses; D=Design Courses)

CCE 36100: Transportation Engineering (B & D; TRA)

CCE 46300: Highway Transportation Characteristics (TRA)

CCE 46100: Roadway And Pavement Design (D; TRA)

② TRA Tech Selective Choose Two (6 cr.):

CCE 56000: Public Mass Transportation (TRA)

CCE 56500: Traffic Engineering: Operations And Controls (D; TRA)

CCE 56100: Transportation Systems Evaluation (TRA)

CCE 56600: Transportation Planning (TRA)

CCE 56200: Geometric Design Of Highways (D; TRA)

CCE 56601: Network Models For Connected & Autonomous Vehicles (TRA)

CCE 56201: Vehicular Cyber-Physical Systems (TRA)

CCE 56700: Highway Traffic And Safety Analysis (D; TRA)

CCE 56300: Airport Design (D; TRA)

CCE 56800: Highway Infrastructure Management Systems (TRA)

CCE 56400: Data Science For Smart Cities (TRA)

CCE 56900: Smart Logistics (TRA)

Additional Suggests for Technical Selectives: (B = Breadth Courses; D = Design Courses)

CCE/EEE 35000: Introduction To Environmental And Ecological Engineering (B; ENV)

★ CCE 38300: Geotechnical Engineering I (B; GEO)

CCE 44000: Urban Hydraulics (B & D; HYD)

★ Preferred Course