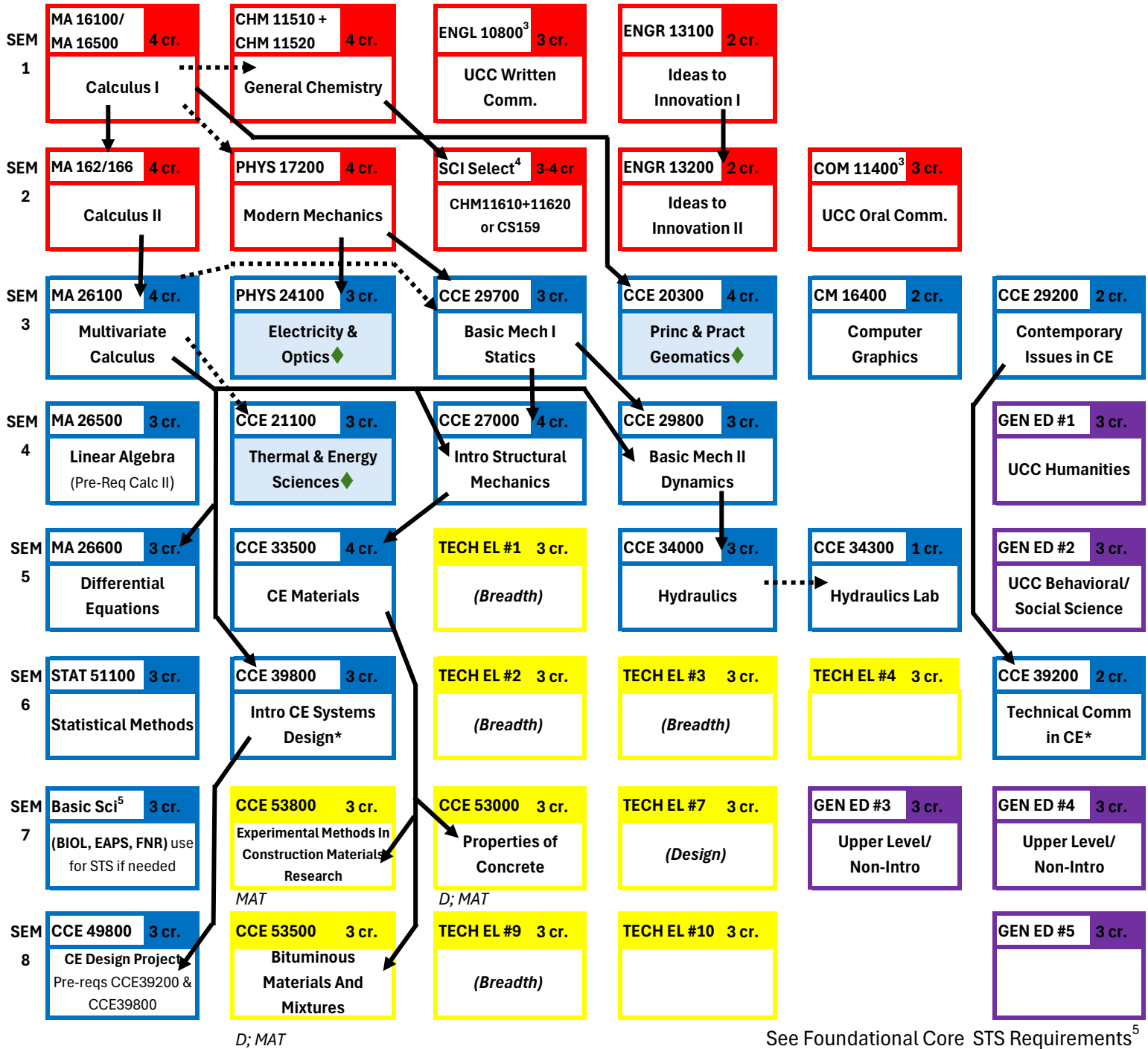


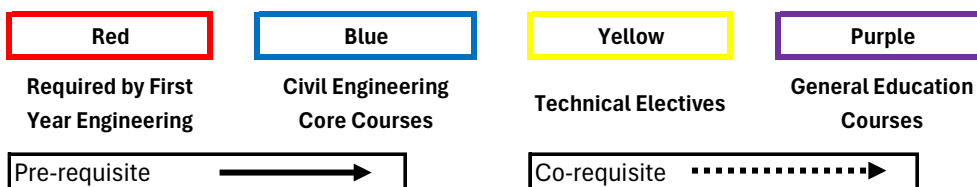
Civil Engineering Curriculum Flowchart^{1,2}

MATERIALS Engineering Concentration (BSCE)

Beginning
Fall 2026



Legend:



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

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

130 credit hours required for BSCE degree

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 Electives 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 elective, 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 elective sequences.
9. **Sequence Requirement:** A sequence is defined as a minimum of two (2) technical elective courses from a given BSCE emphasis area. Each student must complete at least two (2) such sequences of technical electives. 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: (6 cr.)

CCE 53000: Properties Concrete (D;MAT)

CCE 53500: Bituminous Materials And Mixtures (MAT)

CCE 53800: Experimental Methods In Construction Materials Research (MAT)

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

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

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

CCE 47000: Structural Steel Design (D; STR)

* CCE 37100: Structural Analysis I (B; STR)

CCE 47300: Reinforced Concrete Design (D; STR)

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

CCE 48300: Geotechnical Engineering II (D; GEO)

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

CCE 56300: Airport Design (D; TRA)

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

CCE 59700: Civil Engineering Projects - Corrosion (MAT)

CCE 59700: Civil Engineering Projects - Heterogeneous Materials (MAT)

*Suggested Breadth Courses