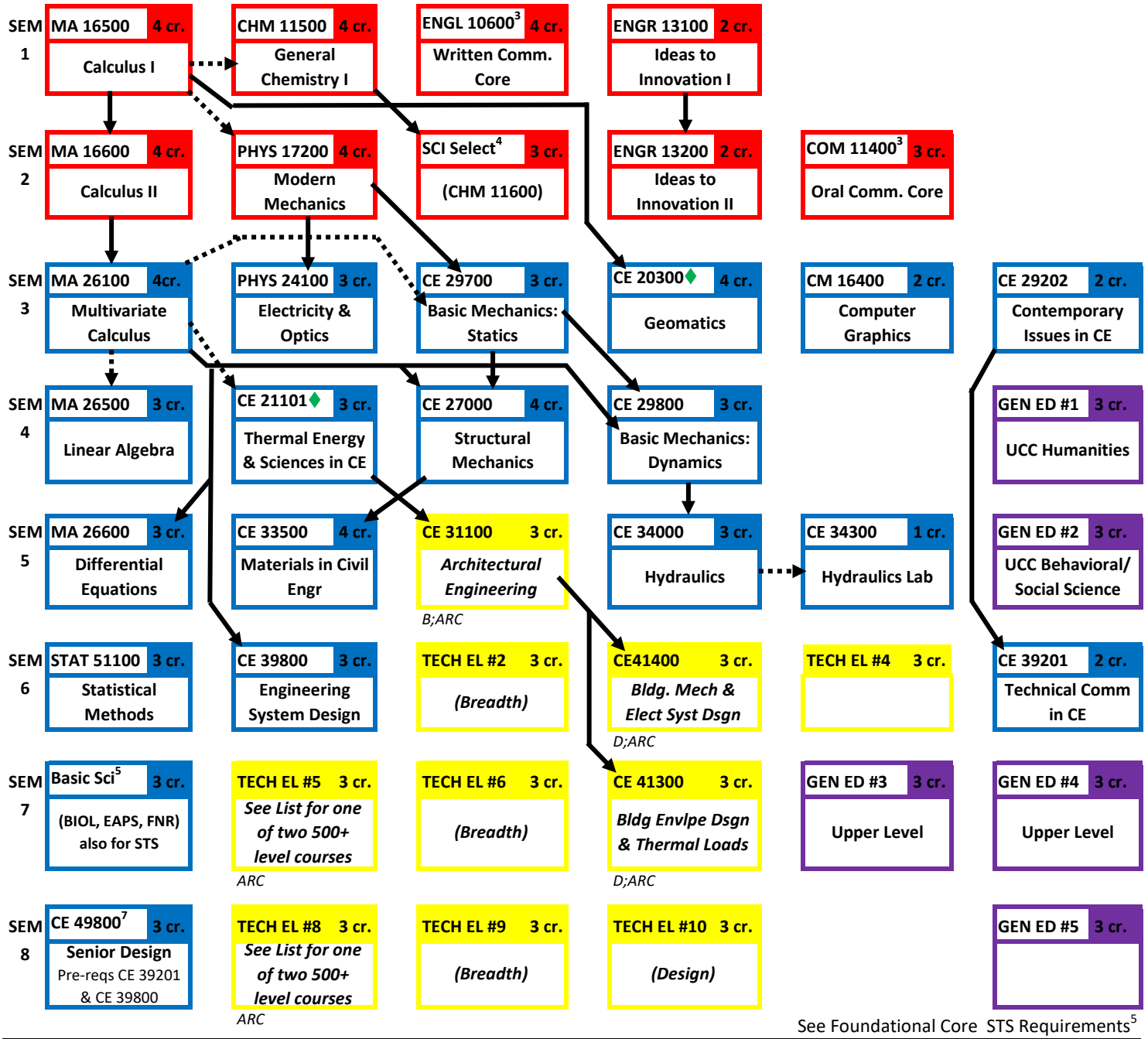
Civil Engineering Curriculum Flowchart[1,2]

Architectural Engineering Concentration

Beginning Fall 2023



See Foundational Core STS Requirements[5]

Legend:

Red	Blue	Yellow	Purple
Required by First Year Engineering	Civil Engineering Core Course	Technical Elective	General Education Course

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

Pre-requisite →

Co-requisite ⇢

♦ CE 20300 & 21101 can be interchanged between semesters 3 & 4 of sophomore year

Italics: suggested Technical Electives listed on next page; total of 30 cr. Required

130 credit hours required for BSCE degree

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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 limitations on transfer credits:

   https://engineering.purdue.edu/CE/Academics/Undergraduate/Policies

   Students may also contact their faculty advisor or the CE Undergraduate Office for further information. **The student is ultimately responsible for knowing and completing all degree requirements.**
3. **Communication Courses** - Written Communication (WCC) and Oral Communication (OCC) required for First Year engineering are Civil Engineering degree requirements that are separate from Civil Engineering general elective requirements.
4. The **Science Selective** strongly recommended by the School of Civil Engineering is CHM 11600. **Either CHM 11600 or CS 15900 is accepted.** However, we prefer CHM 11600, especially if you are interested in the environmental or water resources side of civil engineering, because CE 35000 Intro to Environmental & Ecological Engr., a technical elective, requires CHM 11600 as a pre-requisite. Students using another Science Selective such as BIOL 11000 to meet FYE requirements will still be required to take CHM 11600 or CS 15900 to graduate in Civil Engineering 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. Also refer to:
   https://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 Senior Design** 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.

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

CE 31100: Architectural Engineering (B; *ARC)*

CE 41300: Bldg Envelope Design & Thermal Loads (D; *ARC)*

CE 41400: Bldg Mechanical & Electrical System Design (D; *ARC)*

Select two of the following choices

CE 51300: Lighting in Buildings *(ARC)*

CE 51401: Building Controls *(ARC)*

CE 51501: Bldg Energy Audits *(ARC)*

Other Suggested Technical Electives: *(B = Breadth Courses; D = Design Courses)*

CE 22200: Life Cycle Engr and Mngt of Constructed Facilities (B; *CON)*

CE/EEE 35500: Environmental Sustainability *(ENV)*

CE 37100: Structural Analysis (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 49700: CE Projects - Building Information Modeling *(CON)*

CE 59700: CE Projects-Sustain Bldg Dsgn, Constr & Oper *(ARC)*

ME 31500: Heat and Mass Transfer

ME 41800: Engr of Environmental Systems & Equip (typically Spring)

ME 50200: Indoor Environment

ME 51800 - Analysis of Thermal Systems

ME 52900: Sustainable Energy Options and Analysis

ME 59700: ME Projects - Solar Energy Engr

ECE 48300: Digital Control Systems

Sequence Requirement: A sequence is defined as a minimum of two (2) technical elective courses from a given CE emphasis area. Each student must complete at least two (2) such sequences of technical electives. Note that completing four courses from a single CE area of emphasis does not meet this requirement; the emphasis areas must be distinct. Certain non-CE designated courses may be used in satisfying this requirement.