# Civil Engineering

**128 credit hours total**

**EFFECTIVE FALL 2024**

Flowchart is for advising purposes only. Students are responsible for complying with University Catalog requirements.

**YEAR 1**
- **FALL**
  - MATH 220 (4)
    - Analytic Geometry and Calculus I
    - KSC-3
    - PR: MATH 220 ≥ C
  - ENGL 100 (3)
    - Expository Writing I
    - KSC-1
  - CHM 210 (4)
    - Chemistry I
    - KSC-4
    - PR/CO: MATH 220
  - PKS 161 (1)
    - Engineering Problem Solving
    - PR/CO: MATH 150
  - DEN 160 (1)
    - College of Engineering Orientation
- **SPRING**
  - MATH 221 (4)
    - Analytic Geometry and Calculus II
    - PR: MATH 220, PHYS 213
  - ENGL 200 (3)
    - Expository Writing II
    - KSC-2
    - KSC-3
  - PHYS 213 (5)
    - Engineering Physics I
    - PR: MATH 221
  - CE 212 (3)
    - Elementary Surveying Engineering
    - PR: MATH 150
  - CE 202 (3)
    - Civil Engineering Graphics
- **YEAR 2**
- **FALL**
  - CE 333 (3)
    - Statics
    - PR: MATH 221, PHYS 213
  - MATH 240 (4)
    - Engineering Mathematics A
  - PHYS 213 (5)
    - Engineering Physics I
    - PR: MATH 221
  - CE 241 (3)
    - Introduction to Civil Engineering Materials
    - PR: MATH 221
  - CE 212 (3)
    - Introduction to Civil Engineering
- **SPRING**
  - MATH 340 (4)
    - Elementary Differential Equations
    - PR: MATH 221
  - ME 512 (3)
    - Dynamics
    - PR: MATH 333
  - ME 310 (2)
    - Elements of Thermodynamics
    - PR: PHYS 213, MATH 221
  - CE 334 (1)
    - Mechanics of Materials Laboratory
    - KSC-5
  - ELECTIVE (3)
  - ELECTIVE (4/5)
    - Arts and Humanities
    - Math/Science
  - ELECTIVE (3)
    - Social and Behavioral Sciences
    - KSC-5
- **YEAR 3**
- **FALL**
  - STAT 510 (3)
    - Introductory Probability and Statistics I
    - PR: MATH 221
  - CE 522 (3)
    - Soil Mechanics I
    - PR: CE 533 ≥ C
  - CE 501 (1)
    - Project Economic Evaluation
    - PR: JR Standing
- **SPRING**
  - ME 563 (3)
    - Environmental Engineering Fundamentals
    - PR: CHM 210, MATH 221
  - CE 502 (1)
    - Project Management
  - CE 550 (3)
    - Water Resources Engineering (or BAE 560)
  - CE 503 (1)
    - Project Delivery
  - CE 585 (3)
    - Civil Engineering Project
  - CE 534 (1)
    - Mechanics of Materials
    - PR: CE 333 ≥ C or CE 530 ≥ C
  - CE 537 (3)
    - Introduction to Structural Analysis
    - PR: CE 533 ≥ C
  - CE 538 (3)
    - Incompressible Fluid Mechanics
    - PR: MATH 330 ≥ C or MATH 512 ≥ C
  - ENGL 415 (3)
    - Written Communication for Engineers
    - PR: JR Standing
    - ENGL 101 ≥ B, or ENGL 201
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track
- **YEAR 4**
- **FALL**
  - CE 502 (1)
    - Project Management
    - PR: JR Standing
  - CE 550 (3)
    - Water Resources Engineering (or BAE 560)
  - CE 585 (3)
    - Civil Engineering Project
  - ME 563 (3)
    - Environmental Engineering Fundamentals
    - PR: CHM 210, MATH 221
  - CE 503 (1)
    - Project Delivery
  - CE 571 (3)
    - Introduction to Transportation Engineering
    - PR: CE 212 ≥ C, MATH 221
  - CE 502 (1)
    - Project Management
  - CE 550 (3)
    - Water Resources Engineering (or BAE 560)
  - CE 585 (3)
    - Civil Engineering Project
  - CE 534 (1)
    - Mechanics of Materials
    - PR: CE 333 ≥ C or CE 530 ≥ C
  - CE 537 (3)
    - Introduction to Structural Analysis
    - PR: CE 533 ≥ C
  - CE 538 (3)
    - Incompressible Fluid Mechanics
    - PR: MATH 330 ≥ C or MATH 512 ≥ C
  - ENGL 415 (3)
    - Written Communication for Engineers
    - PR: JR Standing
    - ENGL 101 ≥ B, or ENGL 201
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track
- **SPRING**
  - CE 502 (1)
    - Project Management
    - PR: JR Standing
  - CE 550 (3)
    - Water Resources Engineering (or BAE 560)
  - CE 585 (3)
    - Civil Engineering Project
  - ME 563 (3)
    - Environmental Engineering Fundamentals
    - PR: CHM 210, MATH 221
  - CE 503 (1)
    - Project Delivery
  - CE 571 (3)
    - Introduction to Transportation Engineering
    - PR: CE 212 ≥ C, MATH 221
  - CE 502 (1)
    - Project Management
  - CE 550 (3)
    - Water Resources Engineering (or BAE 560)
  - CE 585 (3)
    - Civil Engineering Project
  - CE 534 (1)
    - Mechanics of Materials
    - PR: CE 333 ≥ C or CE 530 ≥ C
  - CE 537 (3)
    - Introduction to Structural Analysis
    - PR: CE 533 ≥ C
  - CE 538 (3)
    - Incompressible Fluid Mechanics
    - PR: MATH 330 ≥ C or MATH 512 ≥ C
  - ENGL 415 (3)
    - Written Communication for Engineers
    - PR: JR Standing
    - ENGL 101 ≥ B, or ENGL 201
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Design
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track
  - ELECTIVE (3)
    - Track

**KEY**
- "\= Prerequisite for another course"
- "PR = Prerequisite requirement"
- "PR/CO = Prerequisite or concurrent requirement"
- "\= Class applies for tracks"
- "K-State Core (KSC) course"
- "= See department approved electives"
- "= Only offered in the semester shown"
Civil Engineering Curriculum Notes

A GPA of at least 2.25 in the four CE Design elective courses used to satisfy their 12 hours of CE design electives in four areas of civil engineering. If more than 12 hours of CE Design electives, the best 12 hours that meet the requirement of four different design areas and the track requirements will be used to compute the CE Design elective GPA.

A resident cumulative GPA of 2.30 or better is required for a change of major from any engineering program to civil engineering.

Electives
- Approved Civil Engineering electives and requirements are available at ce.k-state.edu/undergrad/student-handbooks.
- Math/Science electives are to be selected from the list approved by the department to satisfy the requirements.
- CE Design electives are to be selected from the list approved by the department to satisfy track requirements. Design elective courses include CE 441, CE 528, CE 542, CE 544, CE 552, CE 565 and CE 572. The courses selected should cover at least four different design areas: Environmental, Geotechnical, Structural, Transportation/Materials and Water Resources.
- CE Track electives are to be selected from the list approved by the department and in consultation with the student’s faculty advisor to satisfy track requirements.

Substitutions
BAE 560 can be substituted for CE 550.
DEN 325 can be substituted for PHILO 185.

K-State Core
The K-State Core (KSC) is the university’s version of the systemwide general education framework established by the Kansas Board of Regents.

KSC requirement 1 – English (6 hours)
KSC requirement 2 – Communications (3 hours)
KSC requirement 3 – Math and Statistics (3 hours)
KSC requirement 4 – Natural and Physical Sciences (4-5 hours)
KSC requirement 5* – Social and Behavioral Sciences (6 hours)
KSC requirement 6* – Arts and Humanities (6 hours)
KSC requirement 7 – Institutional Electives (6 hours)

To view course lists for each requirement, visit k-state.edu/provost/kstate-core.

*Requires two courses from two different subject areas.