Civil Engineering (Transportation/Materials Track)

128 credit hours total

**YEAR 1**

**FALL**

- MATH 220 (4): Analytic Geometry and Calculus I
  - KSC-3
  - PR: MATH 220 ≥ C

- CHM 210 (4): Chemistry I
  - KSC-4
  - PR: MATH 220

- ENGL 100 (3): Expository Writing I
  - KSC-1
  - PR: ENGL 100

- CE 202 (3): Civil Engineering Graphics
  - KSC-2
  - PR: MATH 150

- CE 212 (3): Elementary Surveying Engineering
  - KSC-6
  - PR: MATH 150

- ELECTIVE (4/5): Arts and Humanities
  - KSC-5

- DEN 160 (1): College of Engineering Orientation
  - PR: MATH 150

- DEN 161 (1): Engineering Problem Solving
  - PR: MATH 150

- CE 015 (0)

**SPRING**

- MATH 221 (4): Analytic Geometry and Calculus II
  - KSC-3
  - PR: MATH 221, PHYS 213

- CE 241 (3): Introduction to Civil Engineering Materials
  - KSC-4
  - PR: MATH 221, PHYS 213

- CE 301 (1): CE Problem Solving
  - PR: MATH 150

- ELECTIVE (4/5): Math/Science
  - KSC-5

- CE 015 (0)

**YEAR 2**

**FALL**

- CE 333 (3): Statics
  - PR: MATH 221 ≥ C

- ME 512 (3): Dynamics
  - PR: CE 333
  - PR/CO: MATH 340

  - PR: CE 333 ≥ C or CE 530 ≥ C

- ELECTIVE (4/5): Social and Behavioral Sciences
  - KSC-5

- CE 015 (0)

**SPRING**

- MATH 340 (4): Elementary Differential Equations
  - PR: MATH 221 ≥ C

- CE 537 (3): Introduction to Structural Analysis
  - PR: CE 533 ≥ C

- ME 310 (2): Elements of Thermodynamics
  - PR: PHYS 213, MATH 221

- ELECTIVE (4/5): Social and Behavioral Sciences
  - KSC-5

- CE 015 (0)

**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 351 ≥ C

- ME 563 (3): Environmental Engineering Fundamentals
  - PR: PHYS 213, MATH 221

- ELECTIVE (4/5): Engineering Ethics
  - (or DEN 325)

- CE 015 (0)

**SPRING**

- CE 502 (1): Project Management
  - PR: JR Standing

- CE 550 (3): Water Resources Engineering
  - (or BAE 560)
  - PR: STAT 510, PHYS 213

- ELECTIVE (4/5): Pavement Design
  - (or CE 441)

- CE 015 (0)

**YEAR 4**

**FALL**

- CE 503 (1): Project Delivery
  - PR: JR Standing

- CE 550 (3): Civil Engineering Project
  - PR: ENGL 415, 6 hrs design elective ≥ C, complete last semester of BS program

- ELECTIVE (4/5): Institutional
  - (or KSC-7)

- CE 015 (0)

**SPRING**

- CE 552 (3): Foundation Engineering
  - PR: CE 522 ≥ C

- CE 572 (3): Highway Engineering Planning/Management
  - PR: CE 522, 571 both ≥ C

- ELECTIVE (4/5): Institutional
  - (or KSC-7)

- CE 015 (0)

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**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

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

Substitutions
BAE 560 can be substituted for CE 550.
DEN 325 can be substituted for PHILO 185.
CE 441 can be substituted for CE 775.
CE 441, CE 774 or CE 775 can be replaced with another acceptable CE Track Elective.

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.

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.

- The Design elective 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.
CE 441 can be substituted for CE 775.
CE 441, CE 774 or CE 775 can be replaced with another acceptable CE Track Elective.

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