Civil Engineering

128 credit hours total

YEAR 1

FALL

***MATH 220 (4)**
Analytic Geometry and Calculus I
KSC-3

CHM 210 (4)
Chemistry I

***ENGL 100 (3)**
Expository Writing I
KSC-1

CE 202 (3)
Civil Engineering Graphics

DEN 160 (1)
College of Engineering Orientation

DEN 161 (1)
Engineering Problem Solving

CE 015 (0)

(16 credit hours)

SPRING

MATH 221 (4)
Analytic Geometry and Calculus II
PR: MATH 220 ≥ C

***PHYS 213 (5)**
Engineering Physics I
KSC-4
PR/CO: MATH 220

***ENGL 200 (3)**
Expository Writing II
KSC-1
PR: ENGL 100

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

●CE 301 (1)
CE Problem Solving
PR: DEN 161 ≥ C

CE 015 (0)

(16 credit hours)

YEAR 2

FALL

CE 333 (3)
Statics
PR: MATH 221, PHYS 213

●CE 241 (3)
Introduction to Civil Engineering Materials

***COMM 106 (3)**
Public Speaking
KSC-2

***Elective (3)**
Arts and Humanities
KSC-6

▲Elective (4/5)
Math/Science

CE 015 (0)

(16/17 credit hours)

SPRING

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

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

CE 533 (3)
Mechanics of Materials
PR: CE 333 ≥ C or CE 530 ≥ C

CE 534 (1)
Mechanics of Materials Laboratory
PR/CO: CE 533

GEOL 100 (3)
Earth in Action

***Elective (3)**
Social and Behavioral Sciences
KSC-5

CE 015 (0)

(17 credit hours)

YEAR 3

FALL

STAT 510 (3)
Introductory Probability and Statistics I
PR: MATH 221

ME 310 (2)
Elements of Thermodynamics
PR: PHYS 213, MATH 221, CHM 210

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

CE 351 (3)
Incompressible Fluid Mechanics
PR: CE 530 ≥ C or ME 512 ≥ C

CE 501 (1)
Project Economic Evaluation
PR: JR Standing

***Elective (3)**
Arts and Humanities
KSC-6

CE 015 (0)

(15 credit hours)

SPRING

CE 522 (3)
Soil Mechanics I
PR: CE 351 ≥ C or ME 571 ≥ C, CE 533 ≥ C

CE 563 (3)
Environmental Engineering Fundamentals
PR: CHM 210, MATH 221

●CE 571 (3)
Introduction to Transportation Engineering
PR: CE 212 ≥ C, MATH 221, PHYS 213

ENGL 415 (3)
Written Communication for Engineers
PR: JR Standing
PR: ENGL 100 ≥ B or ENGL 200

PHILO 185 (3)
Engineering Ethics
(or DEN 325)

***Elective (3)**
Social and Behavioral Sciences
KSC-5

CE 015 (0)

(16/18 credit hours)

YEAR 4

FALL

CE 502 (1)
Project Management
PR: JR Standing

●CE 550 (3)
Water Resources Engineering
(or BAE 560)
PR: STAT 510 or BAE 460, PHYS 213

▲Elective (3)
Design

▲Elective (3)
Design

▲Elective (3)
Track

***Elective (3)**
Institutional
KSC-7

CE 015 (0)

(16 credit hours)

SPRING

CE 503 (1)
Project Delivery
PR: JR Standing

CE 585 (3)
Civil Engineering Project
PR: ENGL 415, 6 hrs design elective ≥ C, complete last semester of BS program

▲Elective (3)
Design

▲Elective (3)
Design

▲Elective (0/2/3)
Track

***Elective (3)**
Institutional
KSC-7

CE 015 (0)

(13/15/16 credit hours)

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

KANSAS STATE UNIVERSITY | Carl R. Ice College of Engineering

Degree map 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.

Electives

- Approved Civil Engineering electives and requirements are available at **ce.k-state.edu/academics/undergraduate** .
- 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 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/general-education** .

**Requires two courses from two different subject areas.*