

# Civil Engineering *(Transportation/Materials Track)*

128 credit hours total

YEAR 1		YEAR 2		YEAR 3		YEAR 4	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
<b>*MATH 220 (4)</b> Analytic Geometry and Calculus I KSC-3	<b>MATH 221 (4)</b> Analytic Geometry and Calculus II PR: MATH 220 ≥ C	<b>CE 333 (3)</b> Statics PR: MATH 221, PHYS 213	<b>MATH 340 (4)</b> Elementary Differential Equations PR: MATH 221 ≥ C	<b>STAT 510 (3)</b> Introductory Probability and Statistics I PR: MATH 221	<b>CE 522 (3)</b> Soil Mechanics I PR: CE 533 ≥ C, CE 351 ≥ C	<b>CE 502 (1)</b> Project Management PR: JR Standing	<b>CE 503 (1)</b> Project Delivery PR: JR Standing
<b>CHM 210 (4)</b> Chemistry I	<b>*PHYS 213 (5)</b> Engineering Physics I KSC-4 PR/CO: MATH 220	<b>CE 241 (3)</b> Introduction to Civil Engineering Materials	<b>ME 512 (3)</b> Dynamics PR: CE 333 PR/CO: MATH 340	<b>ME 310 (2)</b> Elements of Thermodynamics PR: PHYS 213, MATH 221, CHM 210	<b>CE 563 (3)</b> Environmental Engineering Fundamentals PR: CHM 210, MATH 221	<b>CE 550 (3)</b> Water Resources Engineering (or BAE 560) PR: STAT 510, PHYS 213	<b>CE 585 (3)</b> Civil Engineering Project PR: ENGL 415, 6 hrs design elective ≥ C, complete last semester of BS program
<b>*ENGL 100 (3)</b> Expository Writing I KSC-1	<b>*ENGL 200 (3)</b> Expository Writing II KSC-1 PR: ENGL 100	<b>*COMM 106 (3)</b> Public Speaking KSC-2	<b>CE 533 (3)</b> Mechanics of Materials PR: CE 333 ≥ C or CE 530 ≥ C	<b>CE 537 (3)</b> Introduction to Structural Analysis PR: CE 533 ≥ C	<b>CE 571 (3)</b> Introduction to Transportation Engineering PR: CE 212 ≥ C, MATH 221, PHYS 213	<b>CE 528 (3)</b> Foundation Engineering PR: CE 522 ≥ C	<b>CE 552 (3)</b> Hydraulic Engineering PR: CE 351 or ME 571, CE 550 or BAE 560 both ≥ C
<b>CE 202 (3)</b> Civil Engineering Graphics	<b>CE 212 (3)</b> Elementary Surveying Engineering PR: MATH 150	<b>*Elective (3)</b> Arts and Humanities KSC-6	<b>CE 534 (1)</b> Mechanics of Materials Laboratory PR/CO: CE 533	<b>CE 351 (3)</b> Incompressible Fluid Mechanics PR: CE 530 ≥ C or ME 512 ≥ C	<b>ENGL 415 (3)</b> Written Communication for Engineers PR: JR Standing PR: ENGL 100 ≥ B, or ENGL 200	<b>CE 572 (3)</b> Highway Engineering Planning/Management PR: CE 522, 571 both ≥ C	<b>CE 775 (3)</b> Traffic Engineering (or CE 441) PR: CE 572
<b>DEN 160 (1)</b> College of Engineering Orientation	<b>CE 301 (1)</b> CE Problem Solving PR: DEN 161 ≥ C	<b>▲ Elective (4/5)</b> Math/Science	<b>GEOL 100 (3)</b> Earth in Action	<b>CE 501 (1)</b> Project Economic Evaluation PR: JR Standing	<b>PHILO 185 (3)</b> Engineering Ethics (or DEN 325)	<b>CE 544 (3)</b> Structural Engineering in Concrete PR: CE 537 ≥ C	<b>*Elective (3)</b> Institutional KSC-7
<b>DEN 161 (1)</b> Engineering Problem Solving			<b>*Elective (3)</b> Social and Behavioral Sciences KSC-5	<b>*Elective (3)</b> Arts and Humanities KSC-6	<b>*Elective (3)</b> Social and Behavioral Sciences KSC-5	<b>CE 774 (3)</b> Pavement Design PR: CE 522 ≥ C	<b>*Elective (3)</b> Institutional KSC-7
<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>	<b>CE 015 (0)</b>
(16 credit hours)	(16 credit hours)	(16/17 credit hours)	(17 credit hours)	(15 credit hours)	(16/18 credit hours)	(16 credit hours)	(16 credit hours)

**KEY**

- = Prerequisite for another course
- = Prerequisite requirement
- = 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/academics/undergraduate](http://ce.k-state.edu/academics/undergraduate).
- 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 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.

## 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](http://k-state.edu/general-education).

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