



# STUDENT HANDBOOK

DEPARTMENT OF CIVIL ENGINEERING



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**INTRODUCTION**

This handbook is intended to help students in the Department of Civil Engineering understand and make effective use of the educational opportunities available within the framework of the civil engineering curriculum. With these opportunities come responsibilities to plan carefully, and to use resources of the University to support development of the student's personal, academic, and professional objectives. The **faculty** in the Department is available to assist students in this endeavor.

The primary responsibility for meeting graduation requirements rests with the student. Although this handbook delineates many requirements of the University, the College of Engineering, and the Department, it should not be utilized as a sole source of information to the exclusion of other University publications. Students should obtain current copies of University publications that will describe the most recent policies.

Students should be aware that the educational process is constantly evolving. This may result in periodic changes in curriculum requirements. Students are advised that these changes may have an impact upon course prerequisites and course offerings that may affect their program of study. The Department will make every effort to accommodate students who would be adversely affected by such changes. However, students are responsible for informing themselves of changes and determining the impact the changes will have upon their course sequencing and ultimately their graduation date.

The program in civil engineering consists of a series of courses in mathematics, science, engineering science, engineering design, and humanities/social sciences.

**ACCREDITATION**

**The civil engineering program is fully accredited by the Accreditation Board for engineering and Technology (ABET).**

**DEGREE REQUIREMENTS**

Students entering as of the Fall 2008 semester are required to successfully complete 128 credit hours of required courses in the curriculum.

**TRANSFER**

The College of Engineering Student Services website on Academic Advising provide details on the procedures and standards of credit transfer: <http://www.engg.ksu.edu/student-services/transfer>

**QUIZ-OUT PROCEDURES**

The Department allows qualified students to avoid repeating course work in subject areas they have already mastered through non-academic or non-transfer credit means. Students should enroll in the course for which they seek credit by examination and contact the course instructor or department head during the first week of classes for details of the quiz-out procedure to be followed for the course.

**FACULTY ADVISOR**

Each student is assigned a faculty advisor to assist the student during the student's academic career. Students should consult regularly with their faculty advisor for academic planning, and students are encouraged to consult with them for career planning or personal matters. Every change in course enrollment requires approval by both the student's faculty advisor and the Engineering Dean's Office.

**iSIS**

K-State interactive Student Information System (iSIS) is a world wide web-based data base access program. The URL address is <http://isis.k-state.edu> and it also can be accessed directly from the University web page. In addition to students being able to access/read their Student Information System records, and update biographical information such as, addresses, name changes, etc., iSIS will allow the faculty and staff to release enrollment “flags” so students can electronically enroll, drop and add. Faculty will also be able to electronically issue “permission” to individual students for enrolling in their classes. However, the release of a student’s enrollment flag must be electronically processed.

**GENERAL  
EDUCATION  
REQUIREMENTS**

Each student must successfully complete credit-bearing courses/experiences to cover all of the K-State 8 areas. Some of the K-State 8 areas may be covered in the student's major. The eight areas are:

- [Aesthetic Experience and Interpretive Understanding](#)
- [Empirical and Quantitative Reasoning](#)
- [Ethical Reasoning and Responsibility](#)
- [Global Issues and Perspectives](#)
- [Historical Perspectives](#)
- [Human Diversity within the U.S.](#)
- [Natural and Physical Sciences](#)
- [Social Sciences](#)

A minimum of four different course prefixes (e.g., AGECE, MATH, FSHS, HIST) must be represented in the fulfillment of the K-State 8 requirements. That's because the intent of the K-State 8 is for students to explore the perspectives of disciplines that may be quite different from those of their own majors. Transfer students are required to meet all requirements. Go to <http://www.k-state.edu/kstate8/index.html> for more information.

**HUMANITIES AND  
SOCIAL SCIENCE  
ELECTIVES**

Students must plan their courses carefully to ensure that at least two humanities/social science elective courses are at an advanced level (normally at a 300 level or above) and selected from the **General education classes**. Consult your academic advisor before enrolling in H & SS classes.

**CIVIL  
ENGINEERING  
AND TRACK  
ELECTIVES**

Students must declare a track to pursue by end of sophomore year. Twelve credit hours of **Civil Engineering electives** and 17 credit hours of Track electives are required in each of the four **Tracks**: 1) General Track, 2) Construction Track, 3) Environmental Track, and 4) Structural Track. To declare your track, go to the **Engineering Student Services Office** (Rathbone 1042) and have them process a **Change of Curriculum form**.

**CURRICULUM  
FLOWCHARTS**

Many courses require successful completion of prerequisite courses. The **flowcharts** are intended to assist students in quickly evaluating their ability to take advanced courses requiring such prerequisites. Care should be taken to verify course requirements that may require new prerequisite courses. See the latest updates at: <http://flowcharts.engg.ksu.edu/>

**COURSE  
SUBSTITUTIONS**

Occasionally, the faculty will consider a student’s request to substitute another University course for a required curriculum course. Students desiring to do so should consult their faculty advisor and department head.

**HONORS PROGRAM**

The **Honors Program** offers interested students an intellectual challenge consistent with their abilities and interests. Participation in the honors program will not add to the time required for graduation for most students, and should be a stimulating experience. For details see:

<http://www.engg.ksu.edu/current-students/honors-program>

<http://www.k-state.edu/honor/>

**DROPPING/ADDING COURSES**

Students should consider with care the consequences of dropping or adding courses. Students should review their academic plans to assess the impact of the proposed change on future semesters.

Students should not change courses agreed upon by their advisor, unless their advisor agrees to the change. It is okay to change sections without contacting your advisor.

You can add and drop courses through **iSIS** through the first week of classes. To add after the first week of classes, you must obtain permission from the class instructor (Instructors may issue permission online or complete a paper form) and have your advisor raise your flag. Once you have permission, and your flag is raised, you will be able to add the class on iSIS.

Dropping courses after a specific date (the 25<sup>th</sup> class day) will result in a W being recorded on the transcript, and courses cannot be dropped after another specific date (the 50<sup>th</sup> class day). Consult the Schedule of Classes for the exact dates applicable to each semester.

**COURSE RETAKE POLICY**

The University allows students to **retake** up to five courses to improve the grade. Consult the latest K-State Undergraduate Catalog for details: <http://catalog.k-state.edu>. Click on Enrollment then Retake Policy.

**COURSE PREREQUISITES**

The University faculty carefully considers the necessary prerequisite courses for any particular course. As such, students are required to complete successfully all prerequisite courses prior to attempting a course. Students who have not successfully completed prerequisite courses will be dropped from the course.

**INCOMPLETE GRADES POLICY**

The grade of Incomplete is normally given only for verifiable personal emergencies. A student's simple failure to complete work within the required time is not sufficient reason to be given an incomplete. *If an "INC" grade is assigned, the grade automatically becomes an "F" if work is not completed within the granted extension period.*

**ACADEMIC/ WARNING DISMISSAL POLICY**

The University has set specific policies for new and continuing students for academic warning/dismissal policies. See:

[http://www.engg.ksu.edu/student-services/files/ss/university\\_policies.pdf](http://www.engg.ksu.edu/student-services/files/ss/university_policies.pdf)

<http://www.engg.ksu.edu/student-services/files/ss/reinstatement.pdf>

**ENGINEERING  
ASSEMBLY  
POLICIES AND  
REQUIREMENTS**

Engineering Assembly (CE 015) is a required credit/no credit course for 0 hours credit. A student graduating in Civil Engineering must have credit for all semesters the student is enrolled in Civil Engineering at KSU. The Engineering Assembly is organized by the KSU student chapter of the American Society of Civil Engineers (ASCE) under the supervision of its Faculty Advisor. For attendance policy and other CE 015 course requirements see <http://www.engg.ksu.edu/ASCE>

The penalty for failure to complete the requirements of Engineering Assembly is the same as that of any other required course—the student cannot graduate until requirements are satisfied. If the student is short one meeting credit during a semester, then the student must make up the deficiency. In cases where students have failed to attend or enroll for a semester, the department head may require another course or an extensive written report on an appropriate topic.

**EARLY  
ENROLLMENT  
FOR CONTINUING  
STUDENTS**

Near the middle of each semester, the University starts the process of enrolling students in classes for the next semester. As a means for expediting and coordinating the advising process, the Department schedules times for students to meet with their faculty advisors before University enrollment begins. Students should sign up for an appointment with their faculty advisor, and follow the specific instructions provided. Online enrollment is not possible until students have met with their advisor and the electronic restriction (flag) has been lifted. Failure to meet with your advisor during the early enrollment period may result in difficulties in scheduling and could delay your graduation.

**COURSE  
PERMITS**

Some courses offered in the Department may require instructors' permission for enrolling.

**ACADEMIC  
HONESTY**

Plagiarism and cheating are serious offenses and will be dealt with as appropriate. For a full description of Academic Conduct, Academic Honesty, and Student Grievance Procedures see the Student Life Handbook that is printed in the Kansas State University Campus Phone Book.

**HONOR &  
INTEGRITY  
SYSTEM**

Beginning Fall semester 1999, Kansas State University initiated an honor system based on personal integrity, which is presumed to be a sufficient assurance that in academic matters one's work is performed honestly and without unauthorized assistance. For details, visit the web site: <http://www.k-state.edu/honor>.

**RETENTION OF  
STUDENT WORK**

Student projects, assignments, presentations and models may need to be retained by the faculty for display, use in teaching, course records, accreditation documentation, etc. Students may request photocopies or otherwise copy any work retained by the faculty.

**GRADUATION  
CHECK**

Two semesters before graduation, students should schedule a **graduation check** with the Assistant Dean in the Engineering Student Dean's Office, Rathbone 1042. This meeting is used to check that all graduation requirements will be properly fulfilled. If there are discrepancies or inadequacies, they may be addressed in the following semesters. Graduation checks can be scheduled online at: <https://gradcheck.engg.ksu.edu/student/>

**INTENT TO GRADUATE**

All students who expect to fulfill their graduation requirements by the end of a given semester must file a **Statement of Intention to Graduate** in the Engineering Student Dean's Office no later than a specific date during the semester. No student can graduate without filing this statement. Check with the Engineering Student Dean's Office for the filing deadline.

**DUAL DEGREE PROGRAMS**

Students who wish to pursue interdisciplinary interest in-depth may enroll in a dual-degree program. In general, the second undergraduate degree may be earned with an additional two or three semesters of study.

**GRADUATE PROGRAM**

Major work leading to the master of science and doctor of philosophy degrees is offered in the areas of specialization in structural analysis and design, geotechnical engineering, water resources and environmental engineering, and transportation and materials engineering.

Students interested in attending graduate school should identify the graduate study area as soon as possible. Undergraduate course selection may be affected by graduate school admission requirements. Students intending to go to graduate school may make very different elective choices than those who are not contemplating advanced degrees. Students considering graduate school should consult with their advisor to explore the possibilities and plan for the future.

**ENGINEERING LICENSE**

Students are strongly encouraged to become a licensed engineer. It is highly recommended that students take the FE exam in their senior year prior to graduation. Consult the College of Engineering Student Service website on Professional Development for information about the Engineering License (FE Exam). <http://www.engg.ksu.edu/student-services/ppd/fe>

**STUDENT SERVICES**

For further information and help, visit the College of Engineering Student Services website: <http://www.engg.ksu.edu/student-services/>

For more information, visit the College of Engineering website at: <http://www.engg.ksu.edu/>

To view Civil Engineering Curriculum Flow Charts, visit: <http://www.ce.ksu.edu/undergrad/advising>

To view College of Engineering University General Education Work Sheets, visit: <http://www.engg.ksu.edu/student-services/enrollment/gened>

To view College of Engineering Humanities and Social Science Electives Course List, visit: <http://www.engg.ksu.edu/student-services/enrollment/gened>

To view K-State 8 Matrix for Engineering, visit: <http://www.engg.ksu.edu/student-services/advising>

**Curriculum for Bachelor of Science in Civil Engineering  
Number of hours required for graduation = 128**

<b>Fall Semester</b>			<b>Spring Semester</b>		
<b>Course</b>		<b>Sem. Hrs.</b>	<b>Course</b>		<b>Sem. Hrs.</b>
<b><u>FRESHMAN</u></b>					
CE 015	Engg. Assembly	0	CE 015	Engg. Assembly	0
CE 101	Intro to Civil Engg	1	CHM 230	Chemistry II	4
CHM 210	Chemistry I	4	CIS 209	C Programming for Engrs.	3
ECON 110	Prin. Macroecon. I	3	GEOL 100	Earth in Action	3
ENGL 100	Expo. Writing I*	3	MATH 221	Anal. Geom. & Calc. II	4
MATH 220	Anal. Geom. & Calc. I	4	Track Elective***		3
CE 202	Civil Engineering Graphics	2			
	<b>TOTAL</b>	<b>17</b>		<b>TOTAL</b>	<b>17</b>
<b><u>SOPHOMORE</u></b>					
CE 015	Engg. Assembly	0	CE 015	Engg. Assembly	0
CE 212	Elementary Surveying	3	CE 333	Statics	3
COMM 105	Public Speaking IA	2	MATH 240	Elem. Diff. Equations	4
MATH 222	Anal. Geom. & Calc. III	4	PHYS 214	Engg. Physics II	5
PHYS 213	Engg. Physics I	5	STAT 490	Statistics for Engg.	1
Track Elective***		3	Track Elective***		3
	<b>TOTAL</b>	<b>17</b>		<b>TOTAL</b>	<b>16</b>
<b><u>JUNIOR</u></b>					
CE 015	Engg. Assembly	0	CE 015	Engg. Assembly	0
CE 533	Mechanics of Materials	3	CE 522	Soil Mechanics I	3
CE 534	Mech. of Materials Lab	1	CE 537	Intro. Struct. Anal.	3
ME 512	Dynamics	3	CE 563	Environ. Engg. Fund.	3
ME 513	Thermodynamics I	3	ENGL 415	Written Com. For Engrs.*	3
Track Elective***		6	ME 571	Fluid Mechanics	3
	<b>TOTAL</b>	<b>16</b>		<b>TOTAL</b>	<b>15</b>
<b><u>SENIOR</u></b>					
CE 015	Engg. Assembly	0	CE 015	Engg. Assembly	0
CE 550	Water Resources Engrg I	3	CE 585	Civil Engineering Project	3
Civil Engineering Elective****		6	Civil Engineering Elective****		6
Track Elective***		3	General Ed Humanities or Social Sci Elective**		6
General Ed Humanities or Social Sci Elective**		3			
	<b>TOTAL</b>	<b>15</b>		<b>TOTAL</b>	<b>15</b>

\* Students must complete the appropriate prerequisite credits for ENGL 415, but may apply only 3 hours of ENGL 415 prerequisite credits towards degree requirements.

\*\* General Education humanities and general education social sciences electives are to be selected from general education courses/ K-State 8 that are also on the engineering humanities and social sciences elective list and need not be taken in the order listed in the curriculum.

\*\*\* Track Electives are to be selected in consultation with the student's faculty advisor to satisfy the requirements of the Track the student has chosen. One course from either the Engineering Materials or the Circuits, Fields and Electronics Engineering Science group is required in the General Track.

\*\*\*\* CE Electives are to be selected from the list approved by the department to satisfy Track requirements.

**PROGRAM OF STUDY ORGANIZER FOR A BS IN CIVIL ENGINEERING AT KSU  
(ALL Tracks)**

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b><u>College of Engineering Requirements</u></b>				
MATH	220	Anal Geom & Calc I	4	See university catalog
MATH	221	Anal Geom & Calc II	4	C or better in MATH 220
MATH	222	Anal Geom & Calc III	4	C or better in MATH 221
MATH	240	Elem Diff Equations	4	C or better in MATH 222
CHM	210	Chemistry I	4	See university catalog
CHM	230	Chemistry II	4	CHM 210
PHYS	213	Engineering Physics I	5	Pr. or conc. MATH 221
PHYS	214	Engg Physics II	5	PHYS 213, MATH 221
ECON	110	Economics I	3	See university catalog
ENGL	415	Writ Comm for Engrs	3	See university catalog
<b><u>Civil Engineering Requirements (ALL Tracks)</u></b>				
ENGL	100	Expository Writing I	3	None
COMM	105	Public Speaking IA	2	None
GEOL	100	Earth in Action	3	None
CIS	209	C. Programming for Engrs.	3	MATH 220
STAT	490	Statistics for Engrs	1	See university catalog
ME	512	Dynamics	3	CE 333, Pr. or conc.: MATH 240
ME	513	Thermodynamics I	3	PHYS 213 & MATH 222
ME	571	Fluid Mechanics	3	ME 512, Pr. or conc. ME 513
CE	202	Civil Engg Graphics	2	Plane Geometry
CE	212	Elementary Surveying	3	Plane Trigonometry
CE	333	Statics	3	MATH 221 & PHYS 213
CE	533	Mechanics of Materials	3	CE 333, Pr. or conc. MATH 222
CE	534	Mech of Matls Lab	1	Pr. or conc. CE 533
CE	522	Soil Mechanics I	3	CE 533
CE	537	Intro Structural Analy	3	CE 533, Pr. or conc. CE 380
CE	550	Water Resources Engrg I [F] or	3	STAT 490 & PHYS 213
BAE	560	Natural Resource Engrg		
CE	563	Env Engg Fund	3	CHM 230, MATH 222
CE	585	CE Project	3	ENGL 415, 6 hrs, CE Electives, Pr. or conc. 6 more hrs. of CE electives
CE	015	Engg Assembly	0	

\*\*\*\* A Track must be declared by the time you have completed 60 credit hours toward a CE degree. Tracks are GENERAL, CONSTRUCTION, STRUCTURAL and ENVIRONMENTAL. Consult the General Catalog, the Student Advising Handbook, or your advisor about these tracks. To declare your track, go to the Engineering Student Services Office (Rathbone 1042) and have them process a Change of Curriculum form.

\*\*\*\* To finish your Program of Study obtain the lists of the College-approved General Education Classes, Hum. and Social Science Electives and the Track you have chosen and complete them.



**Program of Study for a BS in Civil Engineering at KSU  
(General Track)**

Approved by CE Faculty 9/04

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b>CIVIL ENGINEERING ELECTIVES FOR GENERAL TRACK (12 hours required)</b>				
CE	528	Foundation Engg [F]	3	CE 522, Pr. or conc. CE 544
CE	542	Struct Engg Steel [S]	3	CE 537
or				
CE	544	Str Engg Con [F]	3	CE 537
CE	552	Hydraulic Engg [S]	3	ME 571, pr. or conc. CE 550
CE	565	Water/Waste Engineer [S]	3	CE 550, CE 563, PHYS 214 and ME 571
CE	572	Highway Engg/Plan/Mgnt [F]	3	CE 411, CE 522 or Consent of instructor

**REQUIRED GENERAL TRACK COURSE (3 hours required)**

CE	411	Route Location/Des [S]	3	CE 212, MATH 221 and PHYS 213
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**GENERAL TRACK ELECTIVES (15 hours required)**Choose **AT LEAST ONE OF THE THREE COURSES** listed (CHE 354 & 355 are treated as one)

CE	641	CE Materials [F]	3	CE 534 and ENGL 415, Pr. or conc. either CE 528 or CE 542 or CE 544
CHE and CHE	354	Basic Concepts Materials & Eng	1	CHM 210
	355	Fund of Mechanical Properties	1	
EECE	519	Elec Cir/Control	4	PHYS 214

Choose additional General Track Electives from CE Electives not selected above and from CE courses listed below:

CE	654	Groundwater Flow Systems [F]	3	ME 571
CE	663	Unit Op & Proc Env [S alt. even yrs]	2	Pr. or conc. CE 552 and 565
CE	680	Econ Des Con [S]	3	Senior standing

One 700-level CE course may be chosen with consent of your advisor (See General Catalog for specific course)

Other General Track Electives may be chosen from courses in Math, Science, Engineering or Business as approved by your advisor. Suggestions include:

ARE	522	Loading & Load Paths in Bldgs	2	CNS 200, Pr. or Conc: CE 537
ARE	723	Timber Structures	3	CE 537 and ARE 522
BIOL	198	Principles of Biology	4	
CHM	531	Organic Chemistry I	3	CHM 230 or 250
MATH	551	Applied Matrix Theory	3	MATH 205 or 220
STAT	510	Intro Probability & Statistics I	3	MATH 221
STAT	703	Stat Meth for Natural Scientists	3	Junior standing and equiv of college algebra

Engineering courses in other departments for which the prerequisites are at least MATH 221 or PHYS 213 or Junior standing.

Geology courses for which GEOL 100 is a prerequisite.

Chemistry courses for which CHM 210 or 230 are prerequisites.

Physics courses for which PHYS 213 or 214 are prerequisites.

Biology courses for which BIOL 198 is a prerequisite.

Statistics courses for which STAT 510 is a prerequisite.

**TOTAL CREDIT HOURS REQUIRED FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING = 128**

**Program of Study for a BS in Civil Engineering at KSU  
(Construction Track)**

Approved by CE Faculty 9/04

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b>CIVIL ENGINEERING ELECTIVES FOR CONSTRUCTION TRACK (12 hours required)</b>				
CE	528	Foundation Engg [F]	3	CE 522, Pr. or conc. CE 544
CE	544	Str Engg Conc [F]	3	CE 537
CE	552	Hydraulic Engg [S]	3	ME 571, Pr. or conc. CE 550
		<i>or</i>		
CE	565	Water/Waste Engineer [S]	3	CE 550, CE 563, PHYS 214 and ME 571
CE	572	Highway Engg/Plan/Mgmt [F]	3	CE 411 (if needed), CE 522, or consent of instructor

**REQUIRED CONSTRUCTION TRACK COURSES (12 hours required)**

CE	411	Route Location/Des	3	CE 212, MATH 221 and PHYS 213
CE	542	Struct Engg Steel [S]	3	CE 537
CE	641	CE Materials [F]	3	CE 534 and ENGL 415, Pr. or conc. either CE 528 or CE 542 or CE 544
CE	680	Econ Des Con [S]	3	Senior standing

**CONSTRUCTION TRACK ELECTIVES (6 hours required)**

ACCTG	231	Acctg for Bus Ops	3	Sophomore standing and MATH 100
ACCTG	241	Acct for Inv & Fin	3	ACCTG 231
DEN	550	Engineering Law [F]	3	Junior standing
MANGT	420	Management Concepts	3	Junior standing

*Other Construction Track Electives may be chosen from courses in Math, Science, Engineering or Business as approved by your advisor.*

Engineering courses in other departments for which the prerequisites are at least MATH 221 or PHYS 213 or Junior standing.

Geology courses for which GEOL 100 is a prerequisite.

Chemistry courses for which CHM 210 or 230 are prerequisite.

Physics courses for which PHYS 213 or 214 are prerequisites.

Statistics courses for which STAT 510 is a prerequisite.

**TOTAL CREDIT HOURS REQUIRED FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING = 128**

**Program of Study for a BS in Civil Engineering at KSU**  
**(Environmental Track)**

Approved by CE Faculty 9/04

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b>CIVIL ENGINEERING ELECTIVES FOR ENVIRONMENTAL TRACK (12 hours required)</b>				
CE	528	Foundation Engg [F]	3	CE 522, Pr. or conc. CE 544
CE	544	Str Engg Conc [F]	3	CE 537
CE	552	Hydraulic Engg [S]	3	ME 571, pr. or conc. CE 550
CE	565	Water/Waste Engineer [S]	3	CE 550, CE 563, PHYS 214 and ME 571
<b>REQUIRED ENVIRONMENTAL TRACK COURSES (7 hours required)</b>				
BIOL	198	Principles of Biology	4	
CHM	531	Organic Chemistry I	3	CHM 230 or 250
<u>or</u>				
CHM	350	General Organic Chemistry	3	CHM 230 or 250
<b>ENVIRONMENTAL TRACK ELECTIVES (11 hours required)</b>				
AGRON	335	Environ Quality [F]	3	CHM 110 or CHM 210
BIOL	303	Ecol of Environ Prob [S]	3	Two courses in natural science
BIOL	330	Public Health Biol [F]	3	BIOL 198
CHE	320	Chm Process Analysis [F]	3	CHM 230 or CHM 250 and MATH 222
CHE	354	Concepts in Materials Sci & Eng	1	CHM 210
CHE	356	Fund of Electrical Properties	1	
CHM	315	Envir Sci/Chm [F]	3	CHM 230 or 250
AGRON	605	Soil/Environment Chm [S]	3	AGRON 375 or AGRON 305 and CHM 230
AGRON	645	Soil Microbiology [F]	3	AGRON 305 or BIOL 455
BIOCH	521	General Biochemistry	3	CHM 350
BIOL	455	General Microbiology	4	BIOL 198 and 1 chemistry course
BIOL	529	Fundamentals Ecology [F]	3	BIOL 198, CHM 210
BIOL	687	Microbial Ecol [S, odd yrs]	3	BIOL 455
GEOL	506	Environmental Studies	3	GEOL 100
GEOG	508	Geog Info Systems I [S]	3	GEOG 302 or instructor permission
BAE	651	Air Pollution Engg [S]	3	ME 513, 571
BAE	665	Ecological Engg Design [F]	3	See university catalog
CE	625	Principles of Geoenv Engg [S]	3	CE 522
CE	654	Grndwtr Flow Systems [F]	3	ME 571
CE	751	Hyd Open Channels I [F]	3	CE 552
CE	752	Advanced Hydrology [S]	3	CE 550
CE	762	Water Treatment Processes [S]	3	CE 565
CE	766	Wastewater Engg [F]	3	CE 565
CE	768	Geoenvir Engg Dsgn [S]	3	See university catalog
CHE	530	Transpt Phenomena I [F]	3	CHE 320, MATH 240
CHE	650	Hazardous Waste Engg Sem	1	CHM 230
CHE	750	Air Quality Seminar [F]	1	CHM 230

*Other Environmental Track Electives may be chosen from courses in Math, Science, Engineering or Business as approved by your advisor.*

**TOTAL CREDIT HOURS REQUIRED FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING = 128**

**Program of Study for a BS in Civil Engineering at KSU  
(Structural Track)**

Approved by CE Faculty 9/04

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b>CIVIL ENGINEERING ELECTIVES FOR STRUCTURAL TRACK (12 hours required)</b>				
CE	528	Foundation Engg [F]	3	CE 522, Pr. or conc. CE 544
CE	544	Str Engg Conc [F]	3	CE 537
CE	552	Hydraulic Engg [S]	3	ME 571, pr. or conc. CE 550
CE	572	Highway Engg/Plan/Mgmt [F]	3	CE 411, CE 522, or consent of instructor

**REQUIRED STRUCTURAL TRACK COURSES (9 hours required)**

CE	411	Route Location/Des [S]	3	CE 212, MATH 221 and PHYS 213
CE	542	Struct Engg Steel [S]	3	CE 537
CE	732	Adv. Struct. Analys I [F]	3	CE 537

**STRUCTURAL TRACK ELECTIVES (9 hours required)**

ARE	522	Loading & Load Paths in Bldgs	2	CNS 200, Pr. or Conc: CE 537
ARE	723	Timber Structures [S]	3	CE 537 and ARE 522
ARE	760	Masonry Struct Dsgn [F]	3	ARE 528 or equiv. first course in reinforced concrete design
CE	641	CE Materials I [F]	3	CE 534, ENGL 415 Pr. or conc. either CE 528 or CE 542 or CE 544
CE	742	Adv Steel Design [F]	3	CE 542
CE	743	Ad Rein Conc Thry [S]	3	CE 544
CE	844	Prestressed Conc Des [S]	3	Instructor and Grad School Permission

*Other Structures Track Electives may be chosen from courses in Math, Science, Engineering or Business as approved by your advisor.*

Engineering courses in other departments for which the prerequisites are at least MATH 221 or PHYS 213 or Junior standing.

Geology courses for which GEOL 100 is a prerequisite.

Chemistry courses for which CHM 210 or 230 are prerequisites.

Physics courses for which PHYS 213 or 214 are prerequisites.

Statistics courses for which STAT 510 is a prerequisite.

**TOTAL CREDIT HOURS REQUIRED FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING = 128**

**Program of Study for a BS in Civil Engineering at KSU  
(Transportation/Materials Track)**

Approved by CE Faculty 2010

<u>Dept.</u>	<u>No.</u>	<u>Course Name</u> <u>[Semester, if not both]</u>	<u>Credit</u> <u>Hour</u>	<u>Prerequisites</u>
<b>CIVIL ENGINEERING ELECTIVES FOR TRANSPORTATION/MATERIALS TRACK (12 hours required)</b>				
CE	528	Foundation Engg [F]	3	CE 522, Pr. or conc. CE 544
CE	544	Str Engg Conc [F]	3	CE 537
CE	552	Hydraulic Engg [S]	3	ME 571, Pr. or conc. CE 550
CE	572	Highway Engg/Plan/Mgnt [F]	3	CE 411, CE 522, or consent of instructor

**REQUIRED TRANSPORTATION/MATERIALS TRACK COURSES (9 hours required)**

CE	411	Route Location/Des [S]	3	CE 212, MATH 221 and PHYS 213
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**And two of the following**

CE	641	CE Materials [F]	3	CE 534 and ENGL 415, Pr. or conc. either CE 528 or CE 542 or CE 544
CE	774	Pavement Des [F]	3	CE 522
CE	775	Traffic Engg [F]	3	CE 572

**TRANSPORTATION/MATERIALS TRACK ELECTIVES (9 hours required)**

CE	542	Str Engg Steel [S]	3	CE 537
CE	680	Econ Des Con [S]	3	Senior Standing
CE	741	CE Materials II [S]	3	CE 641 or CHE 350
CE	786	Land Devt [F]	3	CE 572 or Consent of Instructor
ECON	631	Principles of Transportation [F,S]	3	ECON 120 or AGECE 120
STAT	510	Intro Prob Stats I [F,S]	3	MATH 221

*Other Transportation/Materials Track Electives may be chosen from courses in Math, Science, Engineering or Business as approved by your advisor.*

Engineering courses in other departments for which the prerequisites are at least MATH 221 or PHYS 213 or Junior standing.

Geology courses for which GEOL 100 is a prerequisite.

Chemistry courses for which CHM 210 or 230 are prerequisites.

Physics courses for which PHYS 213 or 214 are prerequisites.

Statistics courses for which STAT 510 is a prerequisite.

**TOTAL CREDIT HOURS REQUIRED FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING = 128**