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## Matriculation Guide Into Chemical Engineering from Johnson County Community College

Advising and Transfer Course Analysis  
Asst. Dean Larry Satzler  
Student Services  
(785)532-5592 larryv@ksu.edu

Engineering Program Information  
Asst. Dean Tom C. Roberts  
Recruitment and Leadership Development  
(785)532-5455 tcr@ksu.edu

Engineering is a profession in which knowledge of mathematics and natural science is applied to develop ways to utilize the materials and forces of nature for the benefit of mankind. The curricula for the KSU College of Engineering are designed to meet the Accreditation Board of Engineering and Technology (ABET) degree program criteria. The overall curriculum provides an integrated educational experience that is practiced orientated while firmly rooted in fundamentals, learning-based, and integrative and holistic. Coursework in the following areas are included:

- Communications
- Engineering Sciences
- Humanities and Social Sciences
- Discipline specific courses and technical electives
- Physical Sciences and Mathematics

### General Information Including Grade Requirements

Approximately 30% of the KSU/Engineering graduating seniors are transfer students, many earning credits from several two and four year schools. However, students should be aware that only one half of the total B.S. degree credits may be earned at a two year school, at least 30 credit hours must be KSU credit hours, and 20 of the last 30 must be KSU credit hours. Only courses with a grade of A, B, or C will be applicable towards engineering degree requirements.

### Admission

For admission into the College of Engineering, a transfer student with 12 or more transfer hours must have a 2.75 cumulative GPA or higher. Given extenuating circumstances, exceptions to this policy may be granted with the recommendation of the pre-engineering advisor at the transfer institution. If students with less than a 2.75 GPA are allowed an exception, they will be admitted on a conditional basis into General Engineering (ENUN). The advisor should send a letter of recommendation with the student application and fee to the Office of Admissions with a copy of the letter to the College of Engineering. Students are strongly encouraged to retake their mathematics and science courses until they have earned a 2.75 GPA before applying to K-State.

To apply for Admission to Kansas State University complete an application from the Admissions Office or online at [www.ksu.edu/admit/application.html](http://www.ksu.edu/admit/application.html) and have complete official transcripts from all previous college sent directly to the Office of Admissions, Kansas State University, 119 Anderson Hall, Manhattan, KS 66506-0102.

### Kansas State University General Education Requirements

The University General Education (UGE) requirements are <u>defined using only K-State courses</u> , and students must complete a minimum number of K-State UGE credit hours based on the total number of completed transfer and advanced placement credit hours (AP, IB, CLEP, etc.) accepted by K-State.	<u>Number of Completed Transfer or Advanced Credit Accepted by K-State</u>	<u>Minimum University General Education Credit Hours to be Taken at K-State</u>
	0-7	18*
	8-29	12*
	30-44	9*
	45 or more	6*

### Pre-engineering Program for Students Matriculating from Johnson County Community College

#### Chemical Engineering at KSU (128 credit hours for B.S. degree)

##### First Semester

MATH 220	Analytical Geometry/Calculus I	4
CHM 210	Chemistry I w/lab	4
ENGL 100	Expository Writing I**	3
ECON 110	Prin. of Macroeconomics	3

##### Second Semester

MATH 221	Anal. Geom. & Calc. II	4
CHM 230	Chemistry II w/Lab.	4
SPCH 105	Public Speaking IA	2
Humanities & Social Sciences Elect.*		3

##### Third Semester

MATH 222	Anal. Geom. & Calc. III	4
PHYS 213	Engg. Physics I	5
CHM 531	Org. Chem. I	3
CHE416	CHE Cmp. Tech. I	3

#### JCCC Courses

##### First Semester

MATH 241	Calculus I	4 of 5
CHEM 124&125	Gen. Chem I Lect. & Lab.	4 of 5
ENGL 121	Composition I	3
ECON 230	Economics I	3

##### Second Semester

MATH 242	Ana Geo & Calc II	4 of 5
CHEM 131&132	Gen Chem II Lect & Lab	4 of 5
SPD 121	Public Speaking	2 of 3
Humanities & Social Sciences Elect.*		3

##### Third Semester

MATH 243	Calculus III	4 of 5
PHYS 220	Engg. Physics I	5
CHEM 220	Organic Chem I	3 of 5
ENGR 171	Prog. Engr. & Sci. (Fortran)	3

(Continued)

**Pre-engineering Program for Students Matriculating from Johnson County Community College (cont')**

**Chemical Engineering at KSU**

Fourth Semester

MATH 240	Elem. Diff. Eq.	4
PHYS 214	Engg. Physics II	5
CHM 550	Org. Chem. II	3
CHM 532	Org. Chem. Lab.	2
CHE 320	Intro. Proc. Anal.***	3

**JCCC Courses**

Fourth Semester

MATH 244	Differential Equations	3
PHYS 221	Engg. Physic II	5
CHEM 221	Organic Chem II	5
"	"	"
"	"	"
	<i>none available</i>	

Credits Applied

(A more complete list of transferrable courses at [http://www.ksu.edu/admit/tran\\_info.html](http://www.ksu.edu/admit/tran_info.html))

\*Six credit hours of the 15 undesignated humanities & social sciences credits required for the CHE degree must be at or above the 300 level, from the College of Engineering humanities and social sciences UGE courses (must be completed at KSU).

\*\*A grade of A or B in ENGL 100 or a grade C or higher in both ENGL 100 and ENGL 200 is the prerequisite for the junior level course ENGL 415, Written Communication for Engineers, which is required for all degrees. However only one course will apply toward degree requirements.

\*\*\*CHE 320 is required prerequisite for fifth semester courses and the CHE courses beginning with the fifth semester are offered only once a year.

**Humanities and Social Sciences \***

- ANTH - 125, 130, 134, 140, 210 (any cultural anthropology including archaeology)
- ARCH - 240 and 241 ( any course in history or appreciation of architecture)
- ART - Any course
- ECON - 230, 231 (macroeconomics, microeconomics, and any economics course with these as prerequisites)
- ENGL - 130, 230, 231, 232, 235, 241, 243, 250, 256 (any course in literature)
- GEOS - 145
- HIST - Any course
- HUM - Any course
- JOUR - 120 (mass communication)
- (Modern) Foreign Language - any course with FL prefix except English and student's native language
- MUS - 121, 123, 125, 141, 142, 143, 144 (any course in theory, history, or appreciation of music)
- PHIL - Any course except 124, and 161 (cannot use logic or symbolic logic courses)
- POLS - Any course
- PSYC - 130, 205, 215, 218, 220, 225, 250
- SOC - 122, 125, 131, 146, 152, 160, 165