



Matriculation Guide Into Industrial Engineering from Johnson County Community College

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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 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

Industrial Engineering at KSU

(127 credit hours for B.S. degree)

First Semester

MATH 220	Analytical Geometry/Calculus I	4
CHM 210	Chemistry I/Lab	4
ENGL 100	Expository Writing I**	3
SPCH 105	Public Speaking IA	2
IMSE 201	Intro. to Ind. Engg.	3

Second Semester

MATH 221	Analytical Geometry/Calculus II	4
CHM 230	Chemistry II	4
CIS 209	C Prog. for Engrs.	3
ME 212	Engineering Graphics I	2

Third Semester

MATH 222	Analytical Geometry/Calculus III	4
PHYS 213	Engineering Physics I	5
ACCTG 231	Actg. for Bus. Oper.	3
ECON 120	Principles of Microeconomics	3

JCCC Courses

First Semester

		<u>Credits Applied</u>
MATH 241	Calculus I	4 of 5
CHEM 124&125	Gen. Chem I Lect. & Lab.	4 of 5
ENGL 121	Composition I	3
SPD 121	Public Speaking	2 of 3
	none available***	

Second Semester

MATH 242	Ana Geo & Calc II	4 of 5
CHEM 131&132	Gen Chem II Lect & Lab	4 of 5
CIS 235	Int. Obj-Orien./C++	3 of 4
ENGR 131	Engg. Graphics I	2 of 3

Third Semester

MATH 243	Calculus III	4 of 5
PHYS 220	Engg. Physics I	5
ACCT 121	Accting I	3
ECON 231	Economics II	3

(Continued)

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

Industrial Engineering at KSU

<u>Fourth Semester</u>		
MATH 240	Elementary Differential Equations	4
PHYS 214	Engineering Physics II	5
IMSE 250	Mfg. Proc. & Sys.	2
IMSE 251	Mfg. Proc. & Sys. Lab	1
CHE 352	Structural Materials I ***	2
CHE 354	Structural Materials Lab	1
Humanities/Social Science Elective*		3

JCCC Courses

<u>Fourth Semester</u>		<u>Credits Applied</u>
MATH 244	Differential Equations	3
PHYS 221	Engg. Physic II	5
MFAB 152	Mfg. Mat. & Proc.	3
" "	"	
	none available	
" "	" "	
Humanities/Social Science Elective*		3

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

* Six credit hours of the 9 undesignated humanities & social sciences credits required for the IE 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 prerequisite course will apply toward degree requirements.

*** These courses can be taken after matriculating to KSU.

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