



Matriculation Guide Into Mechanical Engineering from Johnson County Community College

www.engg.ksu.edu

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

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 defined using only K-State courses, 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

Mechanical 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
ME 101	Introduction to Mechanical Engineering	2
Humanities/Social Science Elective*		3

Second Semester

MATH 221	Analytical Geometry/Calculus II	4
PHYS 213	Engineering Physics I	5
ECON 110	Principles of Macroeconomics	3
SPCH 105	Public Speaking IA	2
ME 212	Engineering Graphics I	2

Third Semester

MATH 222	Analytical Geometry/Calculus III	4
PHYS 214	Engineering Physics II	5
CHE 352	Structural Materials	2
CE 333	Statics	3
IMSE 250	Mfg. Proc. & Sys.	2

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
	none available	
Humanities/Social Science Elective*		3

Second Semester

MATH 242	Calculus II	4 of 5
PHYS 220	Engineering Physics I	5
ECON 230	Economics I	3
SPD 121	Public Speaking	2 of 3
ENGR 131	Engineering Graphics I	2 of 4

Third Semester

MATH 243	Calculus III	4 of 5
PHYS 221	Engineering Physic II	5
	none available	
ENGR 251	Statics	3
MFAB 152	Mfg. Materials & Processes	2 or 3

(Continued)

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

Mechanical Engineering at KSU

<u>Fourth Semester</u>		
ME 512	Dynamics	3
ME 513	Thermodynamics I	3
NE 495	Elem. of Nuc. Engg.	3
MATH 240	Elementary Differential Equations	4
Humanities/Social Science Elective*		3

JCCC Courses

<u>Fourth Semester</u>		<u>Credits Applied</u>
ENGR 254	Dynamics	3
ENGR 231	Thermodynamics	3
	none available	
MATH 244	Differential Equations	3
Humanities/Social Science Elective*		3

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

* Humanities and social science electives are to be selected from the approved lists and the College of Engineering University General Education requirements must also be met. The College of Engineering General Education worksheet should be used to insure that the UGE requirements are met.

** 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.

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, 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