



Chemical engineering has grown out of a combination of chemistry and engineering associated with industrial processes. Today, it possesses a body of knowledge used in the synthesis, design testing, scale-up, operation, control, and optimization of processes that change the physical state or composition of materials. Chemical engineers have played central roles in the industrial development of materials that have had major social influence, such as the production of fuels and lubricants, fertilizer, synthetic fibers, and plastics. They will be centrally involved in reducing the polluting effects of certain byproducts and cleaning up unwanted residues from previous processes. Within Chemical Engineering, students may also choose to complete an emphasis: Biomedical, Environmental, Materials Science, Premedical, or Petroleum.

- Admission to The University of Kansas is required, along with the following, for admission to the KU School of Engineering as a transfer student:
 1. 2.5+ cumulative college GPA
 2. "C" or better in MATH 125 Calculus I, or its direct equivalent (MATH 241 Calculus I* at JCCC)
 3. "C" or better in all math, science and engineering coursework
- The School of Engineering recommends that students apply for transfer admission to KU by May 1 for summer and fall; December 1 for spring.
- Admission is selective. Meeting minimum requirements does not guarantee admission.
- Timely completion of prerequisite courses is imperative due to tight sequencing of major courses. Consult KU catalog and seek KU advising early.
- The B.S. in Chemical Engineering is an ABET accredited program.
- A minimum of 128 credit hours is required for the B.S. in Chemical Engineering. Students that are exempt from ENGL 101 based on ACT or SAT test score do not have to make up the 3 credit hours with another course. This exemption results in the total hours required for the B.S. degree in Chemical Engineering to be 125 credit hours.
- Sixty-four credits may be transferred to KU from community colleges. The last 30 hours of course work must be completed at KU. A minimum of 45 upper-level hours must be completed by KU.
- Transfer students will have their applications to the School of Engineering evaluated on a case-by-case basis and must have a minimum GPA of 2.5 to be considered.
- Transfer credits must have a grade of "C" or higher to be applied toward the degree.
- Pass/Fail policy: not allowed for any courses in Chemical Engineering.
- Credit/No Credit policy: only accepted for KU Core GE 2.1 Written Communication, GE 2.2 Oral Communication, GE 3H Arts & Humanities, GE 3S Social Sciences, AE 4.1 Human Diversity, AE 4.2 Cultural & Global Awareness, and AE 5.1 Social Responsibility & Ethics. If an Engineering department recommends that certain course work be used to fulfill any of these requirements, those courses shall not be eligible for Credit/No Credit. Please note: Credit/No Credit is not an option for any credits counting toward aerospace, chemical, civil, or architectural engineering degrees.
- Chemical Engineering student must attain a cumulative GPA of at least 2.0 in C&PE courses taken at KU for graduation with a B.S. degree in Chemical Engineering.
- **NOTE:** Classes may count for a major requirement and a core requirement but may **NOT** count for 2 different core requirements.

It is the STUDENT'S RESPONSIBILITY to check for updates to all transfer information. This transfer guide is provided as a service and is updated as needed. Degree requirements at the four-year colleges are subject to change by those institutions. To ensure you have the most accurate up to date information about the program, it is imperative you meet with an advisor at the transfer institution.

Chemical Engineering General Option Requirements

KU Courses	Hrs	JCCC Courses	Hrs	KU Core
General Education Component				
ENGL 101 Composition	3	ENGL 121 Composition I*	3	GE 2.1
ENGL 102 Critical Reading and Writing	3	ENGL 122 Composition II*	3	GE 2.1
KU Core Goal GE 3H Arts & Humanities	3	See list for Goal GE 3H	3	GE 3H
KU Core Goal GE 3S Social Sciences	3	See list for Goal GE 3S	3	GE 3S
KU Core Goal AE 4.1 Human Diversity	3	See list for Goal AE 4.1	3	AE 4.1
KU Core Goal AE 4.2 Global Perspective	3	See list for Goal AE 4.2	3	AE 4.2
Basic Sciences				
CHEM 130 General Chemistry I	5	CHEM 124/125 General Chemistry I*/Lab*	4/1	GE 1.2, 3N
CHEM 135 General Chemistry II	5	CHEM 131/132 General Chemistry II*/Lab*	4/1	GE 1.2, 3N
PHSX 210 [^] /216 General Physics I/Lab	3/1	PHYS 220 Engineering Physics I* [^]	5	GE 1.1, 1.2, 3N
PHSX 212/ 236 General Physics II/Lab	3/1	PHYS 221 Engineering Physics II*	5	GE 3N
Advanced Chemistry				
CHEM 330/331 Organic Chemistry I/Lab	3/2	CHEM 220 Organic Chemistry I*	5	N/A
CHEM 525 Physical Chemistry for Engineers	4	No equivalent	--	--
Advanced Science Electives				
BIOL 150 Principles of Molecular and Cellular Biology	4	BIOL 135 Principles of Cell and Molecular Biology	4	GE 3N
GEOLOGY 101 The Way The Earth Works AND GEOLOGY 103 Geology Fundamentals Lab	5	GEOS 130 General Geology	5	N/A
Mathematics				
MATH 125 Calculus I	4	MATH 241 Calculus I*	5	GE 1.2
MATH 126 Calculus II	4	MATH 242 Calculus II*	5	N/A
MATH 127 Calculus III	4	MATH 243 Calculus III*	5	N/A
MATH 220 Applied Differential Equations	3	MATH 254 Differential Equations*	4	N/A
MATH 290 Elementary Linear Algebra	2	MATH 246 Elementary Linear Algebra*	3	N/A
Chemical Engineering Courses & Engineering Electives – 60 hours - will be taken at KU.				

*JCCC course has a prerequisite or corequisite.

[^]PHSX 211 (PHYS 220 at JCCC) satisfies the PHSX 210 requirement for Engineering at KU.

In order to graduate in four years, a student must transfer to KU after one year.

Within Chemical Engineering, students may also choose to complete an emphasis: Biomedical, Environmental, Materials Science, Premedical, or Petroleum. Students completing an emphasis are required to satisfy all the requirements for the Bachelor of Science degree in Chemical Engineering general option. In addition, each emphasis has specific requirements for some of the engineering and advanced science electives. The coursework required for each emphasis is described below.

Chemical Engineering Emphasis Requirements

KU Courses	Hrs	JCCC Courses	Hrs	KU Core
Biomedical Concentration				
BIOL 150 Principles of Molecular and Cellular Biology (<i>counts towards Advanced Science elective</i>)	4	BIOL 135 Principles of Cell and Molecular Biology	4	GE 3N
Additional required courses will be taken at KU.				
Environmental Concentration – required courses will be taken at KU.				
Material Science Concentration – required courses will be taken at KU.				
Petroleum Concentration				
GEOL 101 The Way The Earth Works AND GEOL 103 Geology Fundamentals Lab (<i>counts towards Advanced Science requirement</i>)	5	GEOS 130 General Geology	5	N/A
Additional required courses will be taken at KU.				
Premedical Concentration				
BIOL 150 Principles of Molecular and Cellular Biology (<i>counts towards Advanced Science elective</i>)	4	BIOL 135 Principles of Cell and Molecular Biology [^]	4	GE 3N
BIOL 152 Principles of Organismal Biology	4	BIOL 150 Biology of Organisms*	5	GE 3N
CHEM 335 Organic Chemistry II	3	CHEM 221 Organic Chemistry II*	5	N/A
BIOL 600 Introductory Biochemistry, Lectures	3	No equivalent	--	N/A
The following courses may be required for admission into specific medical schools or be recommended for the MCAT. These classes are recommended but not required:				
BIOL 154 Introductory Biology Lab for STEM Majors	2	BIOL 135 Principles of Cell and Molecular Biology [^]	4	GE 3N
PSYC 104 General Psychology	3	PSYC 130 Introduction to Psychology	3	GE 3S
SOC 104 Elements of Sociology	3	SOC 122 Introduction to Sociology	3	AE 4.1
BIOL 350, 416, and 546	10	No equivalents	--	N/A

*JCCC course has a prerequisite or corequisite.

[^]BIOL 135 can only satisfy one course, either BIOL 150 or BIOL 154 at KU.