



**Mechanical engineering** is a broad profession that traditionally comprises three primary sub-fields: energy, mechanisms and machinery, and controls. The work done by mechanical engineers includes the design, construction and use of systems for the conversion of energy available from natural sources (water, fossil fuels, nuclear fuels and solar radiation) to other forms of useful energy. These systems are used for transportation, heat, light, power; design and production of machines to lighten the burden of servile human work and to do work otherwise beyond human capability; processing of materials into useful products; and manufacturing. Mechanical engineers use creative panning, development and operation of systems using energy, machines and resources. A nuclear engineering option is available as an option within the Bachelor of Science in Mechanical Engineering degree program.

- **Admissions** - Applicants must first be admitted to Kansas State University either as an incoming freshman or a transfer student. To apply for admission to Kansas State University, complete an application online at <https://www.k-state.edu/admissions/> and have official transcripts from all previous colleges sent directly to the Office of Admissions, Kansas State University, 119 Anderson Hall, Manhattan, KS, 66505-0102, or faxed to 785-532-6393 or emailed via electronic transcript service to [k-state@k-state.edu](mailto:k-state@k-state.edu). For students transferring to K-State with fewer than 24 credit hours, please also send final high school transcript and ACT or SAT scores.  
Admission to the College of Engineering is selective. Declaration of the desired curriculum in the College of Engineering does not guarantee admission into the degree program selected. For current admission criteria please refer to the College of Engineering website at <https://engg.k-state.edu/academics/admissions/>
- Students not admitted to the College of Engineering can enter the university Open Option program or another available college/degree program. These students can still apply to enter the College of Engineering at a later date after they have completed one full-time semester at K-State as an internal transfer student.
- **Grade requirements** - In addition to the university standards and policies for grades, the College of Engineering has the following standards:
- **Curricula grades** - See the individual engineering department sections of the K-State Undergraduate Catalog for the grade requirements for their curriculum and degree. All courses applied to degree requirements require a letter grade except for 0-credit hour assembly courses.
- **DirectLink** - an initiative between Kansas community colleges and Kansas State University to provide future transfer students with support as they prepare to make the transition to K-State. Click [here](#) to sign up for DirectLink.
- **Transferability of Courses** - Many of the fundamental courses required for a degree in engineering may be obtained through pre-engineering programs at other four-year institutions or at community colleges. However, there are differences among the curricula; students electing this route should work closely with their pre-engineering advisors. **Students should be aware that only half of the total Bachelor of Science degree credits may be earned at a two-year school, at least 30 credit hours must be K-State credit hours, and 20 of the last 30 must be K-State credit hours.** Only courses with a grade of A, B or C will be applicable toward engineering degree requirements. *The Cr and D grades are not acceptable for transfer into College of Engineering programs.*
- Some K-State courses in the curriculum do not have an equivalent course at all other institutions. Please see the [K-State Undergraduate Catalog](#) for details and lists of courses. To learn more about academic credit for prior learning and advanced credit, please see K-State [Advanced Standing](#).
- To determine which courses at a particular college or university will substitute for courses at K-State, access [Transfer Equivalency](#) on the K-State website.
- Effective Fall 2024: Students transferring to K-State, with an AA, AFA or AS degree from JCCC will be considered to have satisfied K-State Core general education curriculum.
- Effective Fall 2024: Students who transfer to K-State, without completing AA, AFA or AS degree will have courses evaluated on a course-by-course basis toward meeting K-State requirements. To learn more about courses that satisfy K-State Core requirements visit: <https://www.k-state.edu/provost/kstate-core/index.html> and <https://www.k-state.edu/admissions/undergrad/manhattan/apply/transfer/course-search.html>
- K-State Core General Education guide can be found [here](#).

**Mechanical Engineering (ME) (B.S.) 125 hours required for the K-State B.S. degree**

(No more than half can be completed at JCCC - See Transferability of Courses on page 1)

Recommended JCCC Courses:

KSU Courses	Hrs	JCCC Courses	Hrs
<b>K-State Core</b>			
English (two courses)	6	See <a href="#">KSU Core General Education guide</a>	3
Communications COMM 106 Public Speaking	3	COMS 121 Public Speaking	3
Math and Statistics MATH 220 Analytic Geometry and Calculus I	4	MATH 241 Calculus I*	5
Natural and Physical Sciences PHYS 213 Engineering Physics I	5	PHYS 220 Engineering Physics I*	5
Social and Behavioral Sciences (Select two courses in two subject areas)	6	See <a href="#">KSU Core General Education guide</a>	6
Arts and Humanities (Select two courses in two subject areas)	6	See <a href="#">KSU Core General Education guide</a>	6
Free Electives (Any 100 or 200 level courses may apply)	6	See <a href="#">KSU Core General Education guide</a>	6
<b>Program Requirements</b>			
CHM 210 Chemistry I	4	CHEM 124/125 General Chemistry I*/Lab*	4/1
DEN 160 College of Engineering Orientation <b>AND</b> DEN 161 Engineering Problem Solving	1 1	ENGR 121 Engineering Orientation	2
ME 212 Engineering Graphics	2	ENGR 131 Engineering Graphics I: AutoCAD*	4
CE 333 Statics	3	ENGR 251 Statics*	3
ME 512 Dynamics	3	ENGR 254 Dynamics*	3
MATH 221 Analytic Geometry and Calculus II	4	MATH 242 Calculus II*	5
MATH 222 Analytic Geometry & Calculus III	4	MATH 243 Calculus III*	5
MATH 340 Elementary Differential Equations	4	MATH 254 Differential Equations*	4
PHYS 214 Engineering Physics II	5	PHYS 221 Engineering Physics II*	5

\* JCCC course has a prerequisite or corequisite.

**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.**