

Industrial Engineering, BS

Kansas State University

| | |
|--|--|
| Johnson County Community College Transfer Program to the Kansas State University | College of Engineering Student Services |
| College of Engineering | 785-532-5592 |
| Industrial Engineering, BS | engineering@k-state.edu |
| Academic Year 2025-2026 | engg.ksu.edu/academics/undergraduate/ |

Program Description

Industrial engineers improve the way goods and services are produced and delivered. They improve product quality, individual and system productivity, and design safe work environments while working to eliminate the waste of time, money, materials, energy and other commodities. Industrial engineers are business and people-oriented and are employed in both service and manufacturing industries. Industrial engineers are concerned with the effective utilization of all organizational resources to maximize system productivity. They design, analyze and improve integrated systems of people, equipment and material to produce goods and services.

Admission Requirements

- **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 (<https://www.k-state.edu/admissions/>) online 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. (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. Visit the College of Engineering (<https://engg.k-state.edu/academics/admissions/>) for current admission information.
- Students not admitted to the College of Engineering can enter the university Exploratory Studies 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 (<https://catalog.k-state.edu/>) 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. Visit DirectLink (<https://apply2.ksu.edu/register/directlink/>) to register.
- **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 no more than seventy-five hours may be transferred as credit from a community college,, at least 30 credit hours must be K-State credit hours, and 15 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. Visit the K-State Undergraduate Catalog (<https://catalog.k-state.edu/>) for details and lists of courses. To learn more about academic credit for prior learning and advanced credit, please visit K-State Advanced Standing (<https://www.k-state.edu/admissions/undergrad/manhattan/apply/policies-requirements/advanced-standing-credit/>) credit options.
- To determine which courses at a particular college or university will substitute for courses at K-State, visit Transfer Equivalency (<https://go.k-state.edu/equiv/>) on the K-State website.
- Students transferring to KSU, that complete the General Education requirements required for the Associate of Arts (AA) (<https://catalog.jccc.edu/degreerequirements/associate-arts/>), Associate of Fine Arts (AFA) (<https://catalog.jccc.edu/degreerequirements/associate-fine-arts/>) or Associate of Science (AS) (<https://catalog.jccc.edu/degreerequirements/associate-science/>) degree from JCCC will be considered to have satisfied KSU's core general education curriculum.
- Students who transfer to KSU, without completing the General Education requirements required for the Associate of Arts (AA) (<https://catalog.jccc.edu/degreerequirements/associate-arts/>), Associate of Fine Arts (AFA) (<https://catalog.jccc.edu/degreerequirements/associate-fine-arts/>) or Associate of Science (AS) (<https://catalog.jccc.edu/degreerequirements/associate-science/>) degree will have courses evaluated on a course-by-course basis toward meeting KSU requirements. To learn more about courses that satisfy KSU Core Requirements (<https://catalog.k-state.edu/content.php?catoid=60&navoid=12133>) and KSU Transfer Equivalency Tool (<https://www.k-state.edu/admissions/undergrad/manhattan/apply/transfer/tools/course-search.html>).
- Visit the KSU Core General Education Guide (<https://nam12.safelinks.protection.outlook.com/?url=http%3A%2F%2Fnextcatalog.jccc.edu%2Ftransfer-guides%2Fk-state%2Fk-state-general-education&data=05%7C02%7Cskhalif2%40jccc.edu%7C3bbbe8fc84564328cf7008de1320415e%7C15244239dcf245e7aefd127b69fc5438%7C1%7C0%7C638969226426376370%7CUnknown%7CTWfPbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIslIAiOiJXaW4zMilslkFoljoiTWfPbCislldUljoyfQ%3D%3D%7C0%7C%7C%7C&sdata=p6L6HF0HBpB3aL3uFUWnztw8qzBp%2FiSMV2qIS%2FvLwxE%3D&reserved=0>) for JCCC equivalents.

Industrial Engineering (IE) (B.S) (https://catalog.k-state.edu/preview_program.php?catoid=62&poid=23496&returnto=12540) **120 hours required for the K-State B.S. degree**

The curriculum for this major assumes students enter college prepared to take Calculus.

| Course Code Code | Course Title Title | Course Hours | Transfer Code Hours | Transfer Title | Transfer Hours |
|---|------------------------|--------------|------------------------|--------------------------|----------------|
| K-State Core | | | | | |
| English (two courses) Visit the KSU Core General Education guide for JCCC equivalents. | | | | | |
| Communications Visit the KSU Core General Education guide for JCCC equivalents. | | | | | |
| Math and Statistics | | | | | |
| MATH 241 | Calculus I* | 5 | MATH 220 | Analytic Geometry Calc I | 4 |
| Natural and Physical Sciences | | | | | |
| PHYS 220 | Engineering Physics I* | 5 | PHYS 213 | Engineering Physics I | 5 |
| Social and Behavioral Sciences (Select two courses in two subject areas) Visit the KSU Core General Education guide for JCCC equivalents. | | | | | |
| Arts and Humanities (Select two courses in two subject areas) Visit the KSU Core General Education guide for JCCC equivalents. | | | | | |
| Free Electives (Any 100 or 200 level courses may apply) Visit the KSU Core General Education guide for JCCC equivalents. | | | | | |

| Course Code Code | Course Title Title | Course Hours | Transfer Code Hours | Transfer Title | Transfer Hours |
|-------------------------------------|--|--------------|--|------------------------------------|----------------|
| Program Requirements | | | | | |
| ACCT 222 | Managerial Accounting* | 3 | ACCTG 231 | Intro to Managerial Accounting | 3 |
| CHEM 124 & CHEM 125 | General Chemistry I Lecture* and General Chemistry I Lab* | 4 | CHM 210 & CHM 220 | Chemistry I and Honors Chemistry I | 5 |
| Select one of the following: | | | | | |
| CS 200 | Concepts of Programming Algorithms Using C++* (Computer Programming Elective***) | 4 | CIS 200 Programming Fundamentals | | |
| CS 201 | Concepts of Programming Algorithms using C#* | 4 | CIS 200 Programming Fundamentals | | |
| CS 202 | Concepts of Programming Algorithms using Python* | 4 | CIS 200 Programming Fundamentals | | |
| CS 205 | Concepts of Programming Algorithms using Java* | 4 | CIS 200 Programming Fundamentals | | |
| ENGR 121 | Engineering Orientation | 2 | DEN 160 College of Engineering Orientation | | |
| ENGR 131 | Engineering Graphics I:AutoCAD* | 4 | ME 212 | Basic Engr Thermody | 3 |
| ENGR 251 | Statics* | 3 | CE 333 | Statics | 3 |
| ENGR 254 | Dynamics* | 3 | ME 512 | Dynamics | 3 |



| | | | | | |
|----------|-------------------------|---|----------|----------------------------|---|
| MATH 242 | Calculus II* | 5 | MATH 221 | Analytic Geometry Calc II | 4 |
| MATH 243 | Calculus III* | 5 | MATH 222 | Analytic Geometry Calc III | 4 |
| PHYS 221 | Engineering Physics II* | 5 | PHYS 214 | Engineering Physics II | 5 |

* JCCC course has a prerequisite or corequisite.

** 6 hours total for Engineering Electives

Last Approved Thu Nov 6 18:17:11 2025