Johnson County Community College
Transfer Program to University of Missouri
Civil Engineering, BSCiE
2024-25 Catalog

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Civil engineers are responsible for design, construction, and operation of our public and private infrastructure, for protecting our natural resources, and for preserving the health and safety of the general public. Civil engineers are vital to our nation's economic vitality as they provide infrastructure for safe, efficient, and sustainable transportation of people and goods. The curriculum includes fundamental coursework in math and basic sciences, specialized coursework covering the subdisciplines of structural engineering, transportation engineering, geotechnical engineering, environmental engineering, and water resources engineering, as well as general education courses in the humanities and social sciences. Graduates are well prepared to become licensed Professional Engineers. Graduates are commonly employed by private firms that provide design and consulting services, by construction contractors that build our infrastructure, and by government agencies responsible for specific components of the nation's infrastructure. Some graduates opt to further specialize within the civil engineering profession by pursuing graduate degrees.

Civil engineering, considered one of the oldest engineering disciplines, encompasses many specialties. The specialties include construction, environmental, geotechnical, structural, transportation, and water resources engineering. Many civil engineers hold supervisory or administrative positions, from supervisor of a construction site to city engineer. Others may work in design, construction, regulatory, research, or teaching.

Major Program Requirements - Students are introduced to Civil Engineering and professional engineering design practices in the CV_ENG 1000 course. Additional engineering topics also include basic computer and graphics courses. These are followed with basic engineering science courses, which ground the students in the fundamentals necessary for future course work and a sophomore design experience.

Students are also required to complete one 3-hour cultural awareness course which is selected from an approved cultural awareness course list, created and maintained by the College of Engineering or which meets the Arts and Science (A&S) diversity intensive (DI) requirement.

Students earning a Bachelor of Science in Civil Engineering are required to complete all University general education, University undergraduate requirements, degree, and major requirements, including selected foundational courses, which may fulfill some University general education requirements. Over one-half of the course work for the degree is completed in engineering or professionally related courses.

Refer to JCCC/MU General Education guide for equivalent courses.

Transfer Students - Students wishing to transfer to MU from an accredited college or university are subject to University regulations described in this catalog. The College of Engineering cooperates with many colleges through articulation agreements that help students transfer to MU with maximum ease and minimum loss of credits. A student may contact the College of Engineering Admissions Office to determine if their home institution participates in an agreement with the College of Engineering. Students who have completed all courses specified in the articulation agreement will be admitted into their desired degree program. All other transfer students are admitted on program discretion. Typically, transfer students with freshmen status must satisfy the same requirements as students entering college for the first time. Other students are admitted only after review of their transcript.

To be recommended for a BS degree from the College of Engineering, a student transferring from an accredited institution must complete at least 30 upper-level credits in the degree program at a UM System campus. At least 21 of the 30 credits must be upper-level engineering courses approved by the department awarding the degree.
A student transferring with senior standing from another UM System campus must complete the last 15 credits in residence on the campus where the degree program is located. Twelve of these 15 credits must be in engineering and approved by the department awarding the degree.

Any student whose enrollment in any college-level academic program resulted in dismissal, departure or who is on probation will not be admitted to the College of Engineering.

International Admission - International undergraduate students interested in studying in the College of Engineering can find information on academic and English language admission requirements on the website of the MU Office of International Admissions. Any questions regarding international student admissions can be directed to that office at inter@missouri.edu.

GPA Requirements for Graduation from the College of Engineering:

- GPA of record of at least 2.0
- GPA of at least 2.0 in all engineering courses offered by one of the four campuses of the UM System. "Engineering courses" include all courses that are offered through the College of Engineering or its equivalent on the four campuses, or that have "Engineering" in the curricular designator. Only the last grade in a repeated course will be used in the calculation.

MU Requirements	Hrs	JCCC Equivalents	Hrs
Mathematics			
MATH 1500 Analytic Geometry and Calculus I	5	MATH 241 Calculus I*	5
MATH 1700 Calculus II	5	MATH 242 Calculus II*	5
MATH 2300 Calculus III	3	MATH 243 Calculus III*	5
MATH 4100 Differential Equations	3	MATH 254 Differential Equations*	4
Basic Sciences			
PHYSCS 2750 University Physics I	5	PHYS 220 Engineering Physics I*	5
PHYSCS 2760 University Physics II **OR** CHEM 1400/1401 College Chemistry I/Lab **AND** CHEM 2100 Organic Chemistry I	5 4 3	PHYS 221 Engineering Physics II* **OR** CHEM 124/125 General Chemistry I Lecture*Lab* **AND** CHEM 220 Organic Chemistry I*	5 4/1 5
BIO SC 1500 Introduction to Biological Systems with Laboratory	5	BIOL 135 Principles of Cell and Molecular Biology	4
Basic Science Elective	3	Refer to JCCC/MU General Education guide	3
Engineering			
ENGINR 1200 Statics and Elementary Strength of Materials	3	ENGR 251 Statics*	3
ENGINR 2601 Dynamics	3	MAE 2600 Dynamics	3

* 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.