

Civil Engineering

University of Missouri - Columbia

Johnson County Community College Transfer Program to the University of Missouri - Columbia	Engineering Advising Office
Engineering	(573) 884-6961
Civil Engineering, BSCiE	muengradvising@missouri.edu
Academic Year 2025-2026	https://catalog.missouri.edu/collegeofengineering/civilengineering/bscie-civil-engineering/

Program Description

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 (https://catalog.missouri.edu/search/?P=CV_ENG%201000) 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 earning a Bachelor of Science in Civil Engineering are required to complete all University general education (<https://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/>), University undergraduate requirements (<https://catalog.missouri.edu/academicdegreerequirements/universityrequirements/>), 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.

Visit the JCCC/MU General Education guide (<https://www.jccc.edu/student-resources/transfer/files/transfer-guides/mu-gen-ed-reqs.pdf>) for equivalent courses.

Admission Requirements

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 visit the MU Office of International Admissions (<https://admissions.missouri.edu/international-students/>) for information on academic and English language admission requirements. 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.

Program Requirements

Course Code Code	Course Title Title	Course Hours Hours	Transfer Code Hours	Transfer Title	Transfer Hours
Mathematics					
MATH 241	Calculus I*	5	MATH 1500 & MATH 1500H	Analytic Geometry/ Calculus I and Analytic Geometry Calc I	5
MATH 242	Calculus II*	5	MATH 1700	Calculus II	5
MATH 243	Calculus III*	5	MATH 2300	Calculus III	
MATH 254	Differential Equations*	4	MATH 4100	Differential Equations	
Basic Sciences					
CHEM 124 & CHEM 125	General Chemistry I Lecture* and General Chemistry I Lab*	4	CHEM 1400 & CHEM 1401	College Chemistry I and College Chemistry I Lab	1
PHYS 220	Engineering Physics I*	5	PHYSICS 2750	University Physics I	5
Select one of the following:					
PHYS 221	Engineering Physics II*	5	PHYSICS 2760	University Physics	5
CHEM 131 & CHEM 132	General Chemistry II Lecture* and General Chemistry II Lab*	4	CHEM 1410/1411	College Chemistry II/Lab	
CHEM 220	Organic Chemistry I*	5	CHEM 2100	Organic Chemistry I	
Basic Science Elective <small>Visit the JCCC/MU General Education guide for JCCC equivalents.</small>					
Engineering					



CS 134	Programming Fundamentals	4	INFOTC 1040 Introduction to Problem Solving and Programming
ENGR 131	Engineering Graphics I:AutoCAD*	4	ENGINR 1100 Engineering Graphics Fundamentals
ENGR 251	Statics*	3	ENGINR 1200 Statics and Elementary Strength of Materials
ENGR 254	Dynamics*	3	ENGINR 2260 Dynamics
ENGR 284	Thermodynamics*	4	ENGINR 2300 Engineering Thermodynamics

* JCCC course has a prerequisite or corequisite.

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