



Johnson County Community College
Transfer Program to University of Missouri
Computer Science, BS
2024-25 Catalog

CONTACT: Engineering Advising Office
PHONE: (573) 884-6961
EMAIL: muengradvising@missouri.edu
HOME PAGE:
<https://catalog.missouri.edu/collegeofengineering/computerscience/bs-computer-science/>

Computer Science emphasizes the study of algorithms, programming methodology, software systems, computational theories and algorithms, computer organization, networking, computer graphics, cyber-security, machine learning, artificial intelligence, high performance computing, and database. In the two-semester capstone design courses, students complete design projects that serve as a culminating academic experience. Internships with companies for real-world experience and undergraduate research opportunities with faculty are abundant and encouraged. Students who complete the BS in Computer Science can work for government agencies, academic institutions, or private industry creating and applying new technologies to solve complex problems, or attend graduate schools.

Major Program Requirements - The Bachelor of Science with a major in Computer Science emphasizes the study of software systems, computational theories and algorithms, computer organization, networking, and programming methodology. Students who complete the BS in Computer Science can work for government agencies, academic institutions, or private industry creating and applying new technologies to solve complex problems.

The BS degree requires the completion of the three-semester calculus sequence plus discrete math and statistics. A student who selects an appropriate additional math course as a technical elective and has at least 9 credits in math with appropriate grades at MU can earn a math minor.

The BS degree requires the completion of 126 credits. Computer Science students must pass all CS core courses that are prerequisites for other CS core courses that the student takes with a “C” or better grade. All other CS core courses must be passed with a “C-“ grade or better. To graduate, a student must earn an overall GPA of 2.0 or better and a 2.0 GPA or better in all CS or IT courses.

In addition to the major core requirements, students must complete all University [graduation requirements](#) including University [general education](#), as well as all degree and college or school requirements.

Refer to [JCCC/MU General Education guide](#) for equivalent courses.

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.

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
Constitutional Elective – Select one of the following:			
HIST 1100 Survey of American History to 1865	3	HIST 140 U.S. History to 1877	3
HIST 1200 Survey of American History Since 1865	3	HIST 141 U.S. History Since 1877	3
POL SC 1100 American Government	3	POLS 124 American National Government	3
POL SC 2100 State Government	3	POLS 126 State and Local Government	3
Humanities/Fine Arts courses	9	Refer to JCCC/MU General Education guide	9
Social Science/Behavioral Science courses	6	Refer to JCCC/MU General Education guide	6
General Requirements:			
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 2320 Discrete Mathematical Structures	3	CS 210 Discrete Structures I* AND CS 211 Discrete Structures II*	3 3
Science Courses: One of the following 2-semester sequences (<i>Physics, Chemistry, Biology or Geology</i>) must be taken (at least one of the courses must include a lab). Labs listed separately are not considered a 2 nd science course.			
PHYSCS 1210 College Physics I AND PHYSCS 1220 College Physics II	4 4	PHYS 130 College Physics I* AND PHYS 131 College Physics II*	5 5
OR PHYSCS 2750 University Physics I AND PHYSCS 2760 University Physics II	5 5	PHYS 220 Engineering Physics I* AND PHYS 221 Engineering Physics II*	5 5
CHEM 1400/1401 College Chemistry I/Lab	4	CHEM 124/125 General Chemistry I Lecture*/Lab*	4/1
AND CHEM 1410/1411 College Chemistry II/Lab	4	CHEM 131/132 General Chemistry II Lecture*/Lab*	4/1
BIO_SC 1030 General Principles and Concepts of Biology with Lab OR BIO_SC 1200 General Botany with Lab OR BIO_SC 1500 Intro to Biological Systems w/Lab OR BIO_SC 3750 General Microbiology AND BIO_SC 3760 Microbiology Lab OR ANTHRO 2051 Intro to Biological Anthropology AND ANTHRO 2052 Biological Anth Lab	5 5 5 5	BIOL 121 Introductory Biology for Non- Majors OR BIOL 125 General Botany OR BIOL 135 Principles of Cell and Molecular Biology OR BIOL 230 Microbiology* AND BIOL 231 Microbiology Lab* OR ANTH 126 Physical Anthropology No equivalent	4 5 4 3 2 3
GEOL 1100 Introduction to the Earth w/Lab	4	GEOS 130 General Geology	5

MU Requirements	Hrs	JCCC Equivalents	Hrs
Complete at least 9 hours in each of the following categories. One course in one of the categories must be numbered 2000 or higher.			
1. Humanities/Fine Arts – Must include COMMUN 1200 Public Speaking and courses from at least two different departments	3 6	COMS 121 Public Speaking Refer to JCCC/MU General Education guide	3 6
2. Social/Behavioral Sciences – Must include courses from at least two different departments and fulfill the Missouri Constitutional Requirement.	9	Refer to JCCC/MU General Education guide	9
Complete enough elective hours to bring the total credit hours that count towards the degree to 126.			
Two courses must be designated “Writing Intensive.” ENGLSH 1000 Exposition and Argumentation (must earn a “C” or higher). For more information on WI guidelines and courses, visit https://cwp.missouri.edu/	3	ENGL 122 Composition II*	3
Technical Electives – can be 2000 level and above CS or IT courses, 4000 level Math courses, any 4000+ level statistics course , 2000 level and above Engineering courses, IS_LT 4099, MANGMT 3000, MAKRTNG, FINANC 3000, and other course that meet the prior approval of the student’s CS advisor. All technical electives taken outside the CS Department must meet the prior approval of the student’s CS advisor.	6	Refer to MU – Columbia Course Equivalency database for equivalent courses.	6
Computer Science Core Courses - All core CS Courses that are a pre-requisite need to have a “C” or better to pass (Otherwise the other core courses need a “C-“ to pass)			
ENGINR 1000 Introduction to Engineering	1	ENGR 121 Engineering Orientation	2

* 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.