

Data Science

University of Missouri - Columbia

Johnson County Community College Transfer Program to the University of Missouri - Columbia	Engineering Advising Office
College of Engineering	(573) 884-6961
Data Science, BS	muengradvising@missouri.edu
Academic Year 2025-2026	https://catalog.missouri.edu/collegeofengineering/datascience/

Program Description

The BS in Data Science is offered in three focus areas through two colleges. Students electing the computer science focus earn their degree from the College of Engineering. Students electing either the mathematics focus or the statistics focus earn their degree from the College of Arts and Science. The choice of a focus area allows students to take specialized coursework in whichever of the three areas they have the most interest. The degree, BS in Data Science, is the same for all three focuses.

The BS in Data Science is an interdisciplinary degree built on a core triad of fields: statistics, mathematics, and computer science. Students in this program will learn how to acquire, analyze, communicate, and develop models from data through application of statistical, mathematical, and computer science skills. They will also learn data ethics and governance, including legitimate use and algorithmic fairness, as well as privacy, security, and stewardship. In their final year, students will demonstrate their ability to apply knowledge and skills and integrate them into a major data science project. The program allows students to complete their major and general education requirements with room for additional minors or certificates to further prepare them for careers or advanced study. With careful planning, students are also able to complete a second major in the affiliated triad disciplines (CS, Math, Statistics) or in Information Technology. Students who complete the BS in Data Science are prepared for careers in virtually every sector of industry, government, and academia, as well as advanced degrees.

Major Program Requirements - The BS in Data Science requires a total of 120 credit hours for completion. Within the major proper, all students must complete a total of 60 hours, consisting of the following four parts: 1) a core curriculum of 10 required courses (30 credits); 2) four intermediate-level core courses (12 credits) from a restricted list of six; 3) four advanced courses (12 credits) within the chosen focus area of Computer Science, Mathematics, or Statistics; and 4) 6 credits of experiential coursework consisting of case studies, internships, research, and/or thesis, 3 credits of which meet the MU capstone requirement. Students may meet the 6-credit requirement through a combination of such experiential coursework.

Students who complete the degree with the Computer Science focus will receive their degree from the College of Engineering; those who complete in Mathematics or Statistics will receive their degree from the College of Arts and Science.

Students earning a Bachelor of Science in Data Science are required to complete University (<https://catalog.missouri.edu/academicdegreerequirements/universityrequirements/>), general education (<https://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/>), and College of Engineering (<https://catalog.missouri.edu/collegeofengineering/#undergraduatetext>) requirements, students must also meet the following major program requirements. All major requirements in the College of Arts and Science must be completed with grades of "C-" or higher unless otherwise indicated. Selected foundational courses, which may fulfill some University general education requirements.

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.

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.

Students seeking undergraduate degrees must complete a minimum of 30 credit hours in MU-authored courses. Missouri Online-Self Paced courses authored by MU faculty are acceptable as are courses offered for credit through Missouri Online. (NOTE: This policy has replaced the requirement for courses to be taken "in residence.")

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/apply/international/>) for information on academic and English language admission requirements. Any questions regarding international student admissions (<https://catalog.jccc.edu/transfer-guides/missouri-columbia/umc-data-science/inter@missouri.edu>) can be directed to that office.

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

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 information about the program, you must meet with an advisor at the transfer institution.

Data Science Transfer Requirements:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title		Hours		
CS 202	Concepts of Programming Algorithms using Python*	4	CMP_SC		
CS 210 & CS 211	Discrete Structures I* and Discrete Structures II*	3			
MATH 241	Calculus I*	5	MATH 1500 & MATH 1500H	Analytic Geometry/ Calculus I and Analytic Geometry Calc I	5
Intermediate Courses					
MATH 242	Calculus II*	5	MATH 1700	Calculus II	5
MATH 254	Differential Equations*	4	MATH 4100	Differential Equations	3

* JCCC course has a prerequisite or corequisite.