



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

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The Department of Electrical Engineering and Computer Science (EECS) offers both the Bachelor of Science with a major in Electrical Engineering and the Bachelor of Science with a major in Computer Engineering. The undergraduate program in both degrees at the University of Missouri provides students with the requisite fundamentals in either discipline and prepares them for beginning practice in both the traditional and emerging fields of these disciplines. The degree programs are flexible 126-credit structures that provide the fundamentals of engineering, in addition to a thorough coverage of the major specialties within their respective fields. In addition, technical electives allow concentration in selected areas.

The EECS department emphasizes close interaction with industry. Industry engineers visit regularly and industry-sponsored student projects are provided to give extra dimension to the program.

Many students in the EECS department combine the electrical engineering major with the computer engineering major in a special 142-credit program. These students receive both the BS EE and BS CpE degrees.

Students interested in interdisciplinary studies may use some electives to study business, pre-medicine, prelaw, and other areas. Students are able to choose from a wide variety of courses offered by other departments in the College of Engineering, as well as from other MU colleges, taking advantage of the multidisciplinary nature of the campus.

Both the Bachelor of Science in Electrical Engineering (BS EE) and the Bachelor of Science in Computer Engineering (BS CoE) require that students earn a 2.0 GPA or better in all courses that have an MU engineering prefix. All ECE courses require a grade of C or better in ECE prerequisites.

Engineering design in both the electrical engineering and computer engineering programs is provided through an integrated laboratory structure. Beginning with the first laboratory course in the fourth semester of each program, students have a significant design and laboratory experience in each semester of their respective programs.

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.

Major Program Requirements - The electrical engineering degree offers course work in all traditional areas of the electrical engineering field. Focused areas of work are offered in the areas of communications, digital systems, discrete and integrated electronics, electromagnetics, energy systems and power electronics, robotics and system control. (Focus areas are not listed on transcripts or diplomas).

Students must complete all [university requirements](#), including [general education](#), and degree requirements below.

Diversity Requirement - Engineering majors must take one 3-hour course that focuses on issues such as race, ethnicity, gender, or sexuality. Each semester a list of approved courses will be made available to students.

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
Major core 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 4100 Differential Equations	3	MATH 254 Differential Equations*	4
PHYSCS 2750 University Physics I	5	PHYS 220 Engineering Physics I*	5
PHYSCS 2760 University Physics II	5	PHYS 221 Engineering Physics II*	5
CHEM 1400/1401 College Chemistry I/Lab	4	CHEM 124/125 General Chemistry I Lecture*Lab*	4/1
ENGLSH 1000 Exposition and Argumentation	3	ENGL 122 Composition II*	3
ENGINR 1200 Statics and Elementary Strength of Materials	3	ENGR 251 Statics*	3
ECONOM 1015 Principles of Macroeconomics OR ECONOM 1014 Principles of Microeconomics	3	ECON 230 Principles of Macroeconomics OR ECON 231 Principles of Microeconomics	3
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	3	Refer to JCCC/MU General Education guide	3
Other major core requirement courses:			
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.