Electrical Engineering

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
Electrical Engineering, BSEE	muengradvising@missouri.edu
Academic Year 2025-2026	https://catalog.missouri.edu/collegeofengineering/electricalengineering/bsee-electrical-engineering/

Program Description

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 CoE 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 (https://catalog.missouri.edu/academicdegreerequirements/universityrequirements/) requirements including University general education (https://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/), as well as all degree and college or school 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.

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).

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/apply/international/) for information on academic and English language admission requirements. Any questions regarding international student admissions (https://catalog.jccc.edu/transferadmin/192/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.

Electrical Engineering Transfer Requirements

Major Core Requirements

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title	Hours			
CHEM 124 & CHEM 125	General Chemistry I Lecture* and General Chemistry I Lab*	4/1	CHEM 1400 & CHEM 1401	College Chemistry I and College Chemistry I Lab	1
ECON 230	Principles of Macroeconomics (OR)	3	ECONOM 1015	Principles of Macroeconomics	3
ECON 231	Principles of Microeconomics	3	ECONOM 1014 & ECONOM 4	Principles of Economics and Principles of Microeconomics	3
ENGL 122	Composition II*	3	ENGLSH 1000	Writing Rhetoric	3
ENGR 251	Statics*	3	ENGINR 1200	Statics Elem Strength of Mat	3
ENGR 284	Thermodynamics*	4	ENGINR 2300		
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	3
MATH 254	Differential Equations*	4	MATH 4100	Differential Equations	3
PHYS 220	Engineering Physics I*	5	PHYSCS 2750	University Physics I	5
PHYS 221	Engineering Physics II*	5	PHYSCS 2760	University Physics	5

Constitutional Elective

Select one of the following:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
HIST 140	U.S. History to 1877	3	HIST 1100	Survey/Amer History to 1865	3
HIST 141	U.S. History Since 1877	3	HIST 1200	Survey/Amer History since 1865	3
POLS 124	American National Government	3	POL_SC 1100	American Government	3
POLS 126	State and Local Government	3	POL_SC 2100	State Government	3
Visit the JCCC/MU General Education guide for JCCC equivalents. Humanities/Fine Arts courses		9			
Visit the JCCC/MU General Education guide for JCCC equivalents. Social Science/ Behavioral Science courses		3			
Other major core requirement courses:					
ENGR 121	Engineering Orientation	2	ENGINR 1000	Introduction to Engineering	1

* JCCC course has a prerequisite or corequisite.

Last Approved Wed Sep 24 16:27:48 2025