

PHYSICS/ENGINEERING DOUBLE DEGREE

Description of the Physics and Electrical & Computer Engineering Double Degree Program

The combined Bachelor of Science (BS) degree in Physics and BS in Electrical & Computer Engineering five year double degree program is recommended for students interested in seeking employment in industrial, governmental, or private organizations that require a strong theoretical science and applied engineering background and for those students that are seeking to continue their academic careers in either graduate school or professional/medical school.

Physics advising questions should be directed to Professor Elizabeth Stoddard (stoddarde@umkc.edu).

University Requirements

General Education

UMKC Essentials is the university-wide curriculum that all undergraduate students will complete. The 30-credit hour program includes a First Year Experience course; three critical thinking courses in the areas of Arts & Humanities, Natural & Physical Sciences, and Social & Behavioral Sciences; a Culture and Diversity course; a Civic & Urban Engagement course; two courses in Written Composition and one course in Oral Communication; and a Math Pathway course. Transfer students entering UMKC will elect from the UMKC Essentials General Education Program or the Missouri Core 42 General Education Curriculum. Academic advisors will meet with incoming transfer students to determine which option best serves the student's educational needs. More information about General Education may be found here: <https://catalog.umkc.edu/undergraduate-academic-regulations-information/general-education-requirements/> (<http://catalog.umkc.edu/undergraduate-academic-regulations-information/general-education-requirements/>)

Constitution Course

Every undergraduate student must take a course covering the United States Constitution and the Missouri State Constitution before graduation. Course options are included in the program requirements section below.

Exit Examinations

Information on exit examinations is available in the Undergraduate Academic Regulations and Information (<http://catalog.umkc.edu/undergraduate-academic-regulations-information/graduation/exitexams/>) section of the catalog.

Missouri Higher Education Civics Achievement Examination

In accordance with Missouri Senate Bill 807 (section 170.013.1), 'any student entering a public institution of higher education for the first time after July 2019 who is pursuing an associate's or bachelor's degree from such institution shall successfully pass an examination on the provisions and principles of American civics with a score of seventy percent or greater as a condition of graduation from such institution'. To satisfy this requirement at UMKC, students access the exam through the Canvas site. This requirement will be listed in the degree audit system as, 'Take State Mandated Missouri Higher Education Civics Achievement Examination', and listed on the transcript as 'Missouri Civics Examination'.

College of Arts & Sciences Degree Requirements

Students pursuing the bachelor of arts and bachelor of science degrees must complete a major. Students pursuing the bachelor of liberal arts degree must complete a minor. Additional details are available in the Student Services (<http://catalog.umkc.edu/colleges-schools/arts-sciences/student-services/>) section of the catalog.

Code	Title	Credits
	Writing Intensive Course (300-level or above)	3
	Foreign Language (3rd Semester Level)	9
	Laboratory Science Experience	1
Total Credits		13

Student Learning Outcomes

Students graduating with a BS degree in Physics and a BS degree in Electrical & Computer Engineering will:

- Have a functional knowledge of the basic areas of physics and electrical & computer engineering.
- Be able to integrate their knowledge with critical thinking skills in order to become quantitative problem solvers.
- Be able to clearly articulate scientific information, both orally and in writing.
- Be able to effectively use the scientific literature.

Students graduating with a BS degree in Physics and a BS in Electrical & Computer Engineering will be prepared for entry into professional schools, graduate programs, or the job market for career employment.

Course Requirements for the Physics BS and Electrical & Computer Engineering BS Double Degree Program

Because of the condensed format of the program, students are strongly advised to contact the Physics undergraduate advisor (Prof. Elizabeth Stoddard (stoddarde@umkc.edu)) and the Electrical & Computer Engineering undergraduate advisor (<http://catalog.umkc.edu/colleges-schools/computing-engineering-school-of/computer-science-electrical-engineering/>) as early as possible before beginning this program.