



The Associate of Arts degree (A.A.) at JCCC is a general transfer degree and partners well with the first two years of most bachelor degree programs. Students pursuing the A.A. may select courses that satisfy both the A.A. degree requirements and lower division requirements for a bachelor's degree at four-year institutions. The 30 hours of electives within the A.A. allows students to complete additional general education and lower division courses required for specific majors. The A.A. degree requires completion of 60 credit hours, the maximum number of hours from a community college that will be applied toward a bachelor's degree at most four-year schools. **Meeting with a JCCC counselor is strongly recommended for selection of appropriate courses.**

The Department of Civil and Mechanical Engineering at UMKC offers the following degrees:

- Bachelor of Science in Civil Engineering
- Bachelor of Science in Mechanical Engineering

All UMKC undergraduate degrees require at least 120 credit hours, some programs may require more hours. Students must complete at least 30 credit hours at UMKC and at least 12 upper division credit hours in their major department/program at UMKC to be eligible to receive an undergraduate degree from UMKC.

General UMKC Transfer Admission Requirements

- 2.0 or higher cumulative GPA
- Credit/no credit may only be applied to elective coursework and will not apply towards UMKC's general education core or major requirements. *(UMKC did allow Credit/No-credit or Pass/Fail for Spring 2020 coursework. Please see specific program for transfer guidelines.)*
- Equivalent courses can be repeated but all grades will be averaged for GPA calculation purposes and students will only receive credit for one attempt
- Full transfer admission requirements can be found at: <https://www.umkc.edu/transfer/apply.html>

SCE-Civil & Mechanical Engineering Transfer Admission Requirements

- Students are encouraged to complete at least Calculus I and either Chemistry or Engineering Physics I with no grades less than a "C" before applying.

General Education Requirements for Transfer students:

All UMKC undergraduate students complete general education requirements. **Completing an Associate of Arts (A.A.) degree or the Associate of Science (A.S.) at JCCC will satisfy all general education requirements at UMKC, including the Constitution requirement. It is highly recommended that students complete the Associates degree prior to transfer to UMKC whenever possible.** JCCC students transferring to UMKC without completing the A.A. or A.S. will have the option to elect to complete either the UMKC Essentials or the Missouri Transfer (MOTR) Core 42 curriculum to meet general education requirements.

^To learn more about these two options and UMKC general education requirements, including how transfer coursework applies to specific general education requirements, please refer to <https://www.jccc.edu/student-resources/academic-counseling/transfer/files/transfer-guides/umkc-general-education.pdf>

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Major Specific Information

Major/Course	UMKC Course	JCCC Course	Req. Fulfilled
Civil Engineering (BS) and Mechanical Engineering (BS) Students are encouraged to complete at least Calculus I and either Chemistry or Engineering Physics I with no grades less than a "C" before applying.			
Engineering Physics I	PHYSICS 240	PHYS 220 Engineering Physics I*	Major Requirement ^General Education
Engineering Physics II	PHYSICS 250	PHYS 221 Engineering Physics II*	Major Requirement
Calculus I	MATH 210 or MATH 266	MATH 241 Calculus I*	Major Requirement
Calculus II	MATH 220 or MATH 268	MATH 242 Calculus II*	Major Requirement
Calculus III	MATH 250	MATH 243 Calculus III*	Major Requirement
Differential Equations	MATH 345	MATH 254 Differential Equations*#	Major Requirement
General Chemistry I	CHEM 211 & 211L	CHEM 124 General Chemistry I* & CHEM 125 General Chemistry I Lab*	Major Requirement ^ General Education
Engineering Graphics	MEC-ENGR 130 OR MEC-ENGR 131 (if ENGR 131 completed at JCCC)	ENGR 131 Engineering Graphics I: AutoCAD* (and MEC-ENGR 131 at UMKC)	Major Requirement
Engineering Statics	CIV-ENGR 275	ENGR 251 Statics*	Major Requirement
Engineering Computation	E&C-ENGR 216	CS 200 CS 200 Concepts of Programming Algorithms Using C++*	Major Requirement

Civil Engineering Only

Basic Science course	BIOLOGY 108 OR GEOLOGY 220	BIOL 135 Principles of Cell and Molecular Biology OR GEOS 130 General Geology	Major Requirement
Engineering Dynamics	MEC-ENGR 285	ENGR 254 Dynamics*	Not required for Civil Engineering, but will accept as Engineering Elective
Statistics	STAT 235	MATH 181 Statistics*	Major Requirement

Mechanical Engineering Only

Engineering Dynamics	MEC-ENGR 285	ENGR 254 Dynamics*	Major Requirement
Statistics	STAT 235	MATH 181 Statistics* OR MATH 246 Elementary Linear Algebra*#	Major Requirement

JCCC MATH 246 and 254 meet degree requirements for UMKC Civil and/or Mechanical Engineering degrees, but are not accepted by the UMKC Math department toward a Mathematics Major or Minor.

* 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.