Division of Computing, Analytics, and Mathematics

University of Missouri - Kansas City

Johnson County Community College Transfer Program to the University of Missouri - Kansas City	School of Science & Engineering
School of Science and Engineering	816-235-2399
Division of Computing, Analytics, and Mathematics	sse@umkc.edu
Academic Year 2025-2026	https://sse.umkc.edu

Program Description

The Associate of Science, AS (https://catalog.jccc.edu/degreerequirements/associate-science/) at JCCC is a general transfer degree and partners well with the first two years of most bachelor degree programs. Students pursuing the AS may select courses that satisfy both the AS degree requirements and lower division requirements for a bachelor's degree at four-year institutions. The elective hours within the AS allow students to complete additional general education and lower division courses required for specific majors. The AS degree requires completion of 60 credit hours. Meeting with a JCCC counselor (https://www.jccc.edu/student-resources/counseling/academic-counseling/) is strongly recommended for selection of appropriate courses.

The Division of Computing, Analytics, and Mathematics at UMKC offers the following degrees:

- Computer Science
  - Bachelor of Arts in Computer Science (https://catalog.umkc.edu/colleges-schools/science-engineering/computer-science/bachelor-of-arts-computer-science/)
  - Bachelor of Information Technology (https://catalog.umkc.edu/colleges-schools/science-engineering/computer-science/bachelor-of-information-technology/)
  - Bachelor of Information Technology with Cybersecurity Emphasis (https://catalog.umkc.edu/colleges-schools/science-engineering/computer-science/bachelor-of-information-technology-cybersecurity/)
  - Bachelor of Science in Computer Science (https://catalog.umkc.edu/colleges-schools/science-engineering/computer-science/bachelor-of-science-computer-science/)
  - Bachelor of Science in Computer Science with Cybersecurity Emphasis (https://catalog.umkc.edu/colleges-schools/science-engineering/computer-science/bachelor-of-science-computer-science-cybersecurity/)
- Mathematics and Statistics
  - Bachelor of Arts in Mathematics and Statistics (https://catalog.umkc.edu/colleges-schools/science-engineering/mathematics-statistics/ba-mathematics-statistics/)
  - Bachelor of Science in Mathematics and Statistics (https://catalog.umkc.edu/colleges-schools/science-engineering/mathematics-statistics/bs-mathematics-statistics/bs-mathematics-statistics.pdf)

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

- 2.25 or higher cumulative GPA (Students between 2.0-2.24 will have the opportunity to petition. Please contact Nate Jacobs in UMKC Admissions for the full policy).
- Credit/no credit may only be applied to elective coursework and will not apply towards UMKC's general education core or major requirements.
- Equivalent courses can be repeated but all grades will be averaged for GPA calculation purposes and students will only receive credit for one attempt.
- Visit the full transfer admission requirements (https://www.umkc.edu/transfer/apply.html) for more information.

School of Science and Engineering Transfer Admission Requirements

- Visit the School of Science & Engineering (https://sse.umkc.edu/admissions/transfer-students.html) admission requirements by major.

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.) in General Sciences at JCCC will satisfy all general education requirements at UMKC, including the Constitution requirement. The A.S. is a better option for most students wanting to transfer into SSE. 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 **(**https://nam12.safelinks.protection.outlook.com/?url=http%3A%2F%2Fnextcatalog.jccc.edu%2Ftransfer-guides%2Fumkc%2Fumkc-general-education%2F&data=05%7C02%7Cskhalif2%40jccc.edu%7C3bbbe8fc84564328cf7008de1320415e%7C15244239dcf245e7aefd127b69fc5438%7C1%7C0%7C638969226426393815%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=%2FvPga7IbeZ0jrCCeMsWei47YJU4Mi5k%2B50ooxjEZup4%3D&reserved=0**)**. (**https://www.jccc.edu/student-resources/academic-counseling/transfer/files/transfer-guides/umkc-general-education.pdf**)**

Computer Science (BA) – A minimum grade of "C" in required in all Computer Science, Math, and Stat coursework.

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
MATH 161	Elementary Statistics*	3	STAT 235 Elementary Statistics		
MATH 241	Calculus I*	5	MATH 210	Calculus I	4
MATH 242	Calculus II*	5	MATH 220	Analytic Geometry Calc I	4
Life and Physical Sciences – Select one Life Science course and one Physical Science course. A minimum of one lab is required.					
Life Science – Select one					
BIOL 121	Introductory Biology for Non-Majors	4	BIOLOGY 102 Biology and Living		
BIOL 125	General Botany	5	BIOLOGY 108 General Biology I		
BIOL 150	Biology of Organisms*	5	BIOLOGY 109 General Biology II		
CHEM 122	Principles of Chemistry*	5	CHEM 115	Elements of Chemistry I	4
CHEM 124	General Chemistry I Lecture*	4	CHEM 211	General Chemistry I	5
CHEM 131	General Chemistry II Lecture*	4	CHEM 212R	General Chemistry II	4
Physical Science – Select one					
ASTR 120	Fundamentals of Astronomy	3	ASTR 150	Astronomy:Motion of the Cosmos	3
GEOS 140	Physical Geography	3	ENV-SCI 110R Understanding the Earth		
GEOS 130	General Geology	5	GEOLOGY 220 General Geology		

PHYS 130	College Physics I*	5	PHYSICS 210	General Physic I	4
PHYS 131	College Physics II*	5	PHYSICS 220	General Physics II	4
PHYS 220	Engineering Physics I*	5	PHYSICS 240	Physics Scientist/ Engineers I	5
PHYS 221	Engineering Physics II*	5	PHYSICS 250	Physics Scientist/ Engineers II	5
Take each of the following					
Foreign Language Level I Students having 2 years of high school FL can waive FL requirements					
Visit the FL Level I for JCCC equivalents.					
FL 120	Elementary German I	5	GERMAN 110	Elementary German I	3-5
Foreign Language Level II Students having 2 years of high school FL can waive FL requirements					
Visit the FL Level II* for JCCC equivalents.					
Select one of the following:					
CS 200	Concepts of Programming Algorithms Using C++*	4	COMP-SCI 101 AND COMP-SCI 101L Problem Solving Programming I/Lab		
CS 201	Concepts of Programming Algorithms using C#*	4	COMP-SCI 101 AND COMP-SCI 101L Problem Solving Programming I/Lab		
CS 205	Concepts of Programming Algorithms using Java*	4	COMP-SCI 101 AND COMP-SCI 101L Problem Solving Programming I/Lab		
CS 210	Discrete Structures I*	3	COMP-SCI 191 AND COMP-SCI 291 Discrete Structures I AND Discrete Structures II		
CS 211	Discrete Structures II*	3	COMP-SCI 191 AND COMP-SCI 291 Discrete Structures I AND Discrete Structures II		
CS 235	Object-Oriented Programming Using C++*	4	COMP-SCI 201R AND COMP-SCI 201L Problem Solving Programming II/Lab		
CS 250	Basic Data Structures using C++*	4	COMP-SCI 303	Data Structures	3

Computer Science (BS) & Computer Science with Cybersecurity Emphasis (BS) – A minimum of one lab from one of the following areas: Biology, Chemistry, Environmental Science, Geoscience, or Physics is required. A minimum grade of “C-” in required in all math, science, and computer science coursework.

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
MATH 161	Elementary Statistics*	3	STAT 235 Elementary Statistics		
MATH 241	Calculus I*	5	MATH 210	Calculus I	4
MATH 242	Calculus II*	5	MATH 220	Analytic Geometry Calc I	4
MATH 246	Elementary Linear Algebra*	3	MATH 300	Linear Algebra I	3
Life and Physical Sciences					
PHYS 220	Engineering Physics I*	5	PHYSICS 240	Physics Scientist/ Engineers I	5
Take one of the following:					

BIOL 125	General Botany	5	BIOLOGY 108 General Biology I		
BIOL 150	Biology of Organisms*	5	BIOLOGY 109 General Biology II		
CHEM 124	General Chemistry I Lecture*	4	CHEM 211	General Chemistry I	5
GEOS 130	General Geology	5	GEOLOGY 220 General Geology		
GEOS 140	Physical Geography	3	ENV-SCI 110R Understanding the Earth		
PHYS 221	Engineering Physics II*	5	PHYSICS 250	Physics Scientist/ Engineers II	5
Take each of the following					
CS 200	Concepts of Programming Algorithms Using C++*	4	COMP-SCI 101 101L Problem Solving Prog. I/Lab		
CS 201	Concepts of Programming Algorithms using C#*	4	COMP-SCI 101 101L Problem Solving Prog. I/Lab		
CS 205	Concepts of Programming Algorithms using Java*	4	COMP-SCI 101 101L Problem Solving Prog. I/Lab		
CS 210	Discrete Structures I*	3	COMP-SCI 191 Discrete Structures I		
CS 211	Discrete Structures II*	3	COMP-SCI 291 COMP-SCI 291		
CS 235	Object-Oriented Programming Using C++*	4	COMP-SCI 201R 201L Problem Solving Prog II/ Lab		
CS 250	Basic Data Structures using C++*	4	COMP-SCI 303	Data Structures	3

Information Technology (BIT) & Information Technology (BIT) with Cybersecurity Emphasis A minimum grade of “C-” is required in all courses in math, science and computer science.

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
ACCT 222	Managerial Accounting*	3	ACCTNG 211	Intro to Managerial Accounting	3
MATH 241	Calculus I*	5	MATH 210	Calculus I	4
MATH 161	Elementary Statistics*	3	STAT 235 Elementary Statistics		
Life and Physical Sciences – Select one Life Science course and one Physical Science course. A minimum of one lab is required.					
Life Science—Select one of the following					
BIOL 121	Introductory Biology for Non-Majors	4	BIOL 102 & BIOLOGY 102	Lab Experiences in Biology and Biology and Living	3
BIOL 125	General Botany	5	BIOLOGY 108 General Biology I		
BIOL 150	Biology of Organisms*	5	BIOLOGY 109 General Biology II		
CHEM 122	Principles of Chemistry*	5	CHEM 115	Elements of Chemistry I	4
CHEM 124	General Chemistry I Lecture*	4	CHEM 211	General Chemistry I	5
CHEM 131	General Chemistry II Lecture*	4	CHEM 212R	General Chemistry II	4
Physical Science – Select one of the following					
ASTR 120	Fundamentals of Astronomy	3	ASTR 150	Astronomy:Motion of the Cosmos	3
GEOS 140	Physical Geography	3	ENV-SCI 110R Understanding the Earth		

GEOS 130	General Geology	5	GEOLOGY 220 General Geology		
PHYS 130	College Physics I*	5	PHYSICS 210	General Physic I	4
PHYS 131	College Physics II*	5	PHYSICS 220	General Physics II	4
PHYS 220	Engineering Physics I*	5	PHYSICS 240	Physics Scientist/ Engineers I	5
PHYS 221	Engineering Physics II*	5	PHYSICS 250	Physics Scientist/ Engineers II	5
Take each of the following					
ACCT 121	Accounting I	3	ACCTNG 210	Intro Finanical Accounting	3
ACCT 122	Accounting II*	3	ACCTNG 210 Intro to Financial Accounting		
Select one of the following:					
CS 200	Concepts of Programming Algorithms Using C++*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 201	Concepts of Programming Algorithms using C#*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 205	Concepts of Programming Algorithms using Java*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 210	Discrete Structures I*	3	COMP-SCI 191 Discrete Structures I		
CS 211	Discrete Structures II*	3	COMP-SCI 291 Discrete Structures II		
CS 235	Object-Oriented Programming Using C++*	4	COMP-SCI 201R 201L Problem Solving Prog II/ Lab		
CS 250	Basic Data Structures using C++*	4	COMP-SCI 303	Data Structures	3
ECON 231	Principles of Microeconomics	3	ECON 202 Principles of Microeconomics		

Mathematics and Statistics (BA)

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
MATH 173	Precalculus*	5	MATH 120	Precalculus	5
MATH 161	Elementary Statistics*	3	STAT 235 Elementary Statistics		
MATH 241	Calculus I*	5	MATH 210	Calculus I	4
MATH 242	Calculus II*	5	MATH 220	Analytic Geometry Calc I	4
MATH 243	Calculus III*	5	MATH 250 Calculus III		
MATH 246	Elementary Linear Algebra*	3	MATH 300	Linear Algebra I	3
Foreign Language Level I Students having 2 years of high school FL can waive FL req.					
Visit the FL Level I for JCCC equivalents.					
Foreign Language Level II Students having 2 years of high school FL can waive FL req.					
Visit the FL Level II* for JCCC equivalents.					
FL 120	Elementary German I	5	GERMAN 110	Elementary German I	3-5
Lab Science Visit the UMKC transfer equivalency for course options.					

Visit course descriptions for JCCC courses.

General Electives (Suggested Coursework Below) Student must take electives credit hours to meet the minimum credit hour requirement for their degree, including at least 36 credit hours of coursework at the 300-level or above. Please note 30 credit hours must be taken at UMKC of the minimum 120 credit hours required by the university.					
ACCT 121	Accounting I	3	ACCTNG 210	Intro Finanical Accounting	3
ACCT 122	Accounting II*	3	ACCTNG 210 Intro to Financial Accounting		
Select one of the following:					
CS 200	Concepts of Programming Algorithms Using C++*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 201	Concepts of Programming Algorithms using C#*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 205	Concepts of Programming Algorithms using Java*	4	COMP-SCI 101 101L Problem Solving Prog I/Lab		
CS 210	Discrete Structures I*	3	COMP-SCI 191 Discrete Structures I		
CS 211	Discrete Structures II*	3	COMP-SCI 291	Discrete Structures II	3
ECON 230	Principles of Macroeconomics	3	ECON 201 Principles of Macroeconomics		
ECON 231	Principles of Microeconomics	3	ECON 202 Principles of Microeconomics		
MATH 173	Precalculus*	5	MATH 120	Precalculus	5
MATH 161	Elementary Statistics*	3	STAT 235 Elementary Statistics		
MATH 241	Calculus I*	5	MATH 210	Calculus I	4
MATH 242	Calculus II*	5	MATH 220	Analytic Geometry Calc I	4
MATH 243	Calculus III*	5	MATH 250 Calculus III		
MATH 246	Elementary Linear Algebra*	3	MATH 300	Linear Algebra I	3

* JCCC course has a prerequisite or corequisite.

*** Meets the requirement for the Computer Science degree but will not count towards a major or minor in Math.

^ Currently, CS 202 at JCCC does not meet the prerequisite for the second programming course at JCCC but it will meet the requirement for UMKC.

^^ Discrete Structures I/II is not needed for the Data Analytics/Actuarial Science minors.

Last Approved Thu Nov 6 18:47:18 2025