

Applied Computing

University of Kansas

Johnson County Community College Transfer Program to the University of Kansas	School of Engineering
School of Engineering	Phone Number: 785-864-3881
Applied Computing, BS	Email: kuengr@ku.edu
Academic Year 2026-2027	Homepage: Bachelor of Science in Applied Computing (https://catalog.ku.edu/engineering/electrical-engineering-computer-science/bs-applied-computing/)

Program Description

Students interested in KU's Engineering programs need to work closely with advisors at both JCCC and KU. This helps students stay on track and not prolong the time it takes to earn an engineering bachelor's degree from KU. Students are advised to complete the Kansas Systemwide General Education requirements, and the prerequisite courses listed on the transfer guide. Students are also encouraged to use the Reverse Transfer (<https://www.jccc.edu/student-resources/transfer/>) option (if eligible) after transferring to KU. The Reverse Transfer (<https://www.jccc.edu/student-resources/transfer/>) allows students to earn their associate degree from JCCC while working towards their bachelor's degree at KU.

Through the recently approved applied computing major, students receive an enriched computer science experience, with a focus in one of following fields: Astronomy, Biology, Chemistry, Economics, Finance, Journalism, or Physics.

Admissions Requirements

Admission to The University of Kansas is required, along with the following, for admission to the KU School of Engineering as a transfer student:

1. Be admissible to KU
 2. 2.5+ cumulative college GPA
 3. "C-" or better in MATH 125 Calculus I, or its direct equivalent (MATH 241 Calculus I* at JCCC)
 4. "C" or better in all math, science and engineering courses applicable to the engineering degree
- The School of Engineering recommends that students apply for transfer admission to KU by May 1 for summer and fall; December 1 for spring.
 - Admission is selective. Meeting minimum requirements does not guarantee admission.
 - Timely completion of prerequisite courses is imperative due to tight sequencing of major courses. Consult KU catalog and seek KU advising early.
 - The BS in Applied Computing is an ABET-accredited program.
 - A minimum of 125-128 hours is required to complete the BS in Applied Computing. The BS in Applied Computing must produce graduates before becoming eligible for accreditation.
 - A maximum of 75 hours may be transferred to KU from community colleges. Students should be aware that 45 junior/senior credit hours are required for completion of the bachelor's degree; the last 30 hours of coursework must be at KU; and community college courses do not transfer as junior/senior hours.
 - Transfer credits must have a grade of "C-" or higher to be applied toward the degree.
 - Transfer students will have their applications to the School of Engineering evaluated on a case-by- case basis and must have a minimum GPA of 2.5 to be considered.
 - Credit/No Credit: For EECS majors, courses used to fulfill the KU Core 34 in Communications, Social & Behavioral Sciences, Arts & Humanities, U.S. Culture, and Global Culture accept Credit/No Credit.
 - Upper-Level Eligibility: In addition to prerequisites and co-requisites, EECS undergraduates are required to earn Upper-Level Course Eligibility by attaining grades of "C-" or better in each of the following courses:

- Astronomy concentration:
 - EPHX 210 & PHSX 216, PHSX 212 & PHSX 236
 - MATH 125, MATH 126, MATH 127, MATH 220, MATH 290
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- Biology concentration:
 - MATH 125, MATH 126, MATH 127, MATH 290
 - BIOL 150, BIOL 152, BIOL 154
 - CHEM 130, CHEM 135
 - EECS 101, EECS 140, EECS 168, EECS 268, EECS 348
- Chemistry concentration:
 - EPHX 210 & PHSX 216, PHSX 212 & PHSX 236
 - CHEM 130, CHEM 135
 - MATH 125, MATH 126, MATH 127, MATH 220, MATH 290
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- Economics concentration:
 - MATH 125, MATH 126, MATH 127, MATH 290
 - ECON 142, ECON 144, ECON 520
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- Finance concentration
 - MATH 125, MATH 126, MATH 127, MATH 290
 - ECON 142
 - ACCT 200, FIN 310
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- Journalism concentration:
 - JMC 104
 - MATH 125, MATH 126, MATH 127, MATH 290
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- Physics concentration:
 - EPHX 210 & PHSX 216, PHSX 212 & PHSX 236
 - MATH 125, MATH 126, MATH 127, MATH 220, MATH 290
 - EECS 101, EECS 140, EECS 168, EECS 210, EECS 268, EECS 348
- If students earn less than a "C-" in any of the above-listed courses, they must repeat the course at the next available opportunity and must not take a course for which that course is a prerequisite. It is the students' responsibility to contact their advisors before the new semester begins about any required repetitions and associated enrollment adjustments (drops and adds).
- To enroll in any upper-level EECS course (numbered 300 and above), students must have fulfilled the Upper-Level Eligibility Requirements detailed above.
- Exceptions: EECS 312, EECS 330, EECS 361, and EECS 388 may be taken in the same semester as students are completing their upper-level eligibility.
- Students may also petition (<http://www.eecs.ku.edu/>) for a Partial Waiver of Upper-Level Eligibility Requirements.

JCCC Transfer Guide Disclaimer

*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 information about the program, you must meet with an advisor at the transfer institution.*

Program Requirements

Students must earn a grade of "C" or better in math, science, and engineering courses applicable to the engineering degree.

KU Core 34 Requirements

- Students transferring to KU, that complete the General Education requirements required for the Associate of Arts (AA) (<https://catalog.jccc.edu/degree/requirements/associate-arts/>), Associate of Fine Arts (AFA) (<https://catalog.jccc.edu/degree/requirements/associate-fine-arts/>) or Associate of Science (AS) (<https://catalog.jccc.edu/degree/requirements/associate-science/>) degree from JCCC will be considered to have satisfied KU's Core 34 general education curriculum.
- Students who transfer to KU, without completing the General Education requirements required for the Associate of Arts (AA) (<https://catalog.jccc.edu/degree/requirements/associate-arts/>), Associate of Fine Arts (AFA) (<https://catalog.jccc.edu/degree/requirements/associate-fine-arts/>) or Associate of Science (AS) (<https://catalog.jccc.edu/degree/requirements/associate-science/>) degree will have courses evaluated on a course-by-course basis toward meeting KU requirements. To learn more about courses that satisfy KU Core 34 Requirements (<https://catalog.ku.edu/core34/>) and KU CredTran (<https://credittransfer.ku.edu/>).

Visit the **KU Core 34 General Education guide** (<https://catalog.jccc.edu/transfer-guides/ku/ku-general-education/>) for JCCC equivalents.

Course Code Code	Course Title Title	Course Hours Hours	Transfer Code	Transfer Title	Transfer Hours
KU Core 34 English (two courses)		6			
KU Core 34 Communications		3			
KU Core 34 Math and Statistics		3			
Select one of the following:					
MATH 241	Calculus I * ^~	5	MATH 125	Calculus I	4
OR					
MATH 231 & MATH 232	Business and Applied Calculus I * and Business and Applied Calculus II *	6	MATH 115 & MATH 116	Calculus I and Calculus II	6
KU Core 34 Natural and Physical Sciences (lab required)		4-5			
KU Core 34 Social and Behavioral Sciences (Select two courses in two different disciplines)		6			
KU Core 34 Arts and Humanities (Select two courses in two different disciplines)		6			
KU Core 34 US Culture (Institutionally Designated)		3			
KU Core 34 Global Culture (Institutionally Designated)		3			

Mathematic Courses required for Applied Computing

Course Code Code	Course Title Title	Course Hours Hours	Transfer Code	Transfer Title	Transfer Hours
MATH 242	Calculus II *	5	MATH 126	Calculus II	4
MATH 243	Calculus III *	5	MATH 127	Calculus III	4
MATH 246	Elementary Linear Algebra *	3	MATH 290	Elementary Linear Algebra	2
CS 210 & CS 211	Discrete Structures I * and Discrete Structures II *	6	EECS 210	Discrete Structures	4

Computer Science Core Courses required for Applied Computing

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title		Hours		
CS 134	Programming Fundamentals	4	EECS 168	Programming I	4
Select one of the following:					
CS 200	Concepts of Programming Algorithms Using C++ *	4	EECS 268	Programming II	4
OR					
CS 201	Concepts of Programming Algorithms using C# *	4	EECS 268	Programming II	4
OR					
CS 202	Concepts of Programming Algorithms using Python *	4	EECS 268	Programming II	4
OR					
CS 205	Concepts of Programming Algorithms using Java *	4	EECS 268	Programming II	4
Select one of the following:					
CS 250	Basic Data Structures using C++ *	4	EECS 330 Data Structures and Algorithms		
OR					
CS 252	Basic Data Structures Using Python *	4	EECS 330 Data Structures and Algorithms		
OR					
CS 255	Basic Data Structures Using Java *	4	EECS 330 Data Structures and Algorithms		

Astronomy Concentration

In addition to the core courses above, students in the Astronomy concentration take the following courses:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title		Hours		
MATH 254	Differential Equations *	4	MATH 220 Applied Differential Equations		
PHYS 220	Engineering Physics I * ^ (Applies to Core 34: Natural and Physical Sciences)	5	PHSX 211 & PHSX 216	General Physics I Lecture and General Physics I Laboratory	5
PHYS 221	Engineering Physics II *	5	PHSX 212 & PHSX 236	General Physics II Lecture and General Physics II Laboratory	4

Biology Concentration

In addition to the core courses above, students in the Biology concentration take the following courses:

Course Code Code	Course Title Title	Course Hours	Transfer Code Hours	Transfer Title	Transfer Hours
BIOL 135	Principles of Cell and Molecular Biology	4		BIOL 150 Prin. of Molecular and Cellular Biology AND BIOL 154 Introductory Biology Lab for STEM Majors	
BIOL 150	Biology of Organisms *	5	BIOL 152	Prin of Organismal Biology	3
CHEM 124 & CHEM 125	General Chemistry I Lecture * and General Chemistry I Lab * ^^ (Applies to Core 34: Natural and Physical Sciences)	5	CHEM 130	General Chemistry I	5
CHEM 131 & CHEM 132	General Chemistry II Lecture * and General Chemistry II Lab *	5	CHEM 135	General Chemistry II	5

Chemistry Concentration

In addition to the core courses above, students in the Chemistry concentration take the following courses:

Course Code Code	Course Title Title	Course Hours	Transfer Code Hours	Transfer Title	Transfer Hours
CHEM 124 & CHEM 125	General Chemistry I Lecture * and General Chemistry I Lab * ^^ (Applies to Core 34: Natural and Physical Sciences)	5	CHEM 130	General Chemistry I	5
CHEM 131 & CHEM 132	General Chemistry II Lecture * and General Chemistry II Lab *	5	CHEM 135	General Chemistry II	5
CHEM 220	Organic Chemistry I *	5	CHEM 330	Organic Chemistry I	3
PHYS 220	Engineering Physics I * #	5	PHSX 211 & PHSX 216	General Physics I Lecture and General Physics I Laboratory	5
PHYS 221	Engineering Physics II *	5	PHSX 212 & PHSX 236	General Physics II Lecture and General Physics II Laboratory	4
MATH 254	Differential Equations *	4	MATH 220	Analytic Geometry Calc I	4

Economics Concentration

In addition to the core courses above, students in the Economics concentration take the following courses:

Course Code Code	Course Title Title	Course Hours	Transfer Code Hours	Transfer Title	Transfer Hours
ECON 230	Principles of Macroeconomics	3	ECON 144	Principles of Macroeconomics	3

ECON 231	Principles of Microeconomics ^^ (Applies to Core 34: Social and Behavioral Sciences)	3	ECON 142	Principles of Microeconomics	3
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Finance Concentration

In addition to the core courses above, students in the Finance concentration take the following courses:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title		Hours		
ACCT 122	Accounting II *	3	ACCT 200	Fund of Financial Accounting	4
ECON 231	Principles of Microeconomics ^^ (Applies to Core 34: Social and Behavioral Sciences)	3	ECON 142	Principles of Microeconomics	3

Journalism Concentration

In addition to the core courses above, students in the Journalism concentration take the following courses:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title		Hours		
JOUR 120	Mass Media and Society 3 ^^ (Applies to Core 34: Arts and Humanities)	3	JMC 101	Media and Society	3
JOUR 122	News Writing and Reporting	3	JMC 304	Media Writing for Audiences	3
JOUR 125 & JOUR 130	Fundamentals of Advertising and Principles of Public Relations (Journalism Elective)	6	JMC 320	Intro to Digital Marketing Com	3
JOUR 222	Advanced Reporting * (Journalism Elective)	3	JMC 415	Multimedia Reporting	3

Select one of the following:

WEB 125	Digital Video Tools	1	JMC 211	Tech Tools: Audio / Video	1
OR					
VDA 116	InDesign I *	1	JMC 212	Tech Tools: Graphic Design	1
OR					
VDA 112	Photoshop I *	1	JMC 213	Tech Tools: Visuals	1
OR					
VDA 190	Applications for Visual Design *	1	JMC 212	Tech Tools: Graphic Design	1
OR					
VDA 190	Applications for Visual Design *	1	JMC 213	Tech Tools: Visuals	1

Physics Concentration

In addition to the core courses above, students in the Physics concentration take the following courses:

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title	Hours			
MATH 254	Differential Equations *	4	MATH 220	Applied Differential Equations	3
PHYS 220	Engineering Physics I * ^ (Applies to Core 34: Natural and Physical Sciences)	5	PHSX 211 & PHSX 216	General Physics I Lecture and General Physics I Laboratory	5
PHYS 221	Engineering Physics II *	5	PHSX 212 & PHSX 236	General Physics II Lecture and General Physics II Laboratory	4

* JCCC course has a prerequisite or corequisite.

^^ This course is a Required major course and is also part of Core 34: Systemwide General Education. If this course is not taken to fulfill the Core 34:SGE requirement, it must be taken in place of elective hours.

This course is a Required Core 34: Systemwide General Education course. This program is approved by the Kansas Board of Regents to require this specific Core 34: Systemwide General Education course. If a student did not take this course, it must be taken in addition to other degree requirements.

~ MATH 125 Calculus I is the "math pathway" course. If a student is not ready to start in Calculus 1, this degree will take more than 4 years to complete. This course will fulfill the Core 34 Math and Statistics requirement. Student must earn a grade of "C-" or better.

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