Applied Computing

University of Kansas

Johnson County Community College Transfer Program to the University of Kansas	School of Engineering
School of Engineering	785-864-3881
Applied Computing, B.S.	kuengr@ku.edu
Academic Year 2025-2026	www.eecs.ku.edu

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.*** 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.***

Admissions Requirements

- Through the recently approved applied computing major, students receive an enriched computer science experience, with a focus in one of 6 fields: Astronomy, Biology, Chemistry, Economics, Journalism, or Physics.
- 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. 2.5+ cumulative college GPA
    2. “C” or better in MATH 125 Calculus I, or its direct equivalent (MATH 241 Calculus I* at JCCC)
    3. “C” or better in all math, science and engineering coursework

- 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 B.S. in Applied Computing is an ABET accredited program.
- A minimum of 125-128 hours is required to complete the B.S. in Applied Computing. The B.S. 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 course work 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 (“C-“ does not qualify) in each of the following courses:
- IC ASTR: Core 34: English (both); EPHX 210, PHSX 216, 212, 236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 348
- IC BIOL: Core 34: English (both); MATH 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348; CHEM 130, 135; BIOL 150, 152, 154
- IC CHEM: Core 34: English (both); EPHX 210, PHSX 216, 212, 236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 348; CHEM 130, 135
- IC ECON: Core 34: English (both); Math 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348; ECON 142, 144, and 520
- IC JOUR: Core 34: English; JMC 104, MATH 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348
- IC PHSX: Core 34: English (both); EPHX 210, PHSX 216, 212, 236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 348 Updated 6/5/25 1
- 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 beginning the new semester regarding any required repetitions and the 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 for a Partial Waiver of Upper-Level Eligibility Requirements by completing the appropriate petition (http://www.eecs.ku.edu/).
- Students transferring to KU, that complete the General Education requirements required for the Associate of Arts (AA) (https://catalog.jccc.edu/degreerequirements/associate-arts/), Associate of Fine Arts (AFA) (https://catalog.jccc.edu/degreerequirements/associate-fine-arts/) or Associate of Science (AS) (https://catalog.jccc.edu/degreerequirements/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/degreerequirements/associate-arts/), Associate of Fine Arts (AFA) (https://catalog.jccc.edu/degreerequirements/associate-fine-arts/) or Associate of Science (AS) (https://catalog.jccc.edu/degreerequirements/associate-science/) degree will have courses evaluated on a course-bycourse 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://nam12.safelinks.protection.outlook.com/?url=http%3A%2F%2Fnextcatalog.jccc.edu%2Ftransfer-guides%2Fku%2Fku-general-education&data=05%7C02%7Cskhalif2%40jccc.edu%7C506a4b607ca34eaa00fb08de158ef1c2%7C15244239dcf245e7aefd127b69fc5438%7C1%7C0%7C638971900858599422%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C%7C&sdata=b2O9VaVq9VFjN8MJkWQ4YCl60oq5GZXnn69Vpa2sSL0%3D&reserved=0) for JCCC equivalents.

2025-26 Catalog

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Program Requirements

KU General Education Core 34

Code	Title	Hours
Visit the KU Core 34 English (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.		
Visit the KU Core 34 Communications (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.		
Visit the KU Core 34 Core 34 Social and Behavioral Sciences (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents. (Select two courses in two different disciplines: 6 hrs. total)		
Visit the KU Core 34 Arts and Humanities (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents. (Select two courses in 6 Visit the KU Core 34 General Education guide for JCCC equivalents. 6 AH two different disciplines: 6 hrs. total)		
Visit the KU Core 34 US Culture (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.		
Visit the KU Core 34 Global Culture (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.		

Mathematics

Course Code	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
Select one of the following:					
MATH 241	Calculus I* ^^	5	MATH 125	Calculus I	4
MATH 231	Business and Applied Calculus I*	3	MATH 115	Calculus I	3
MATH 232	Business and Applied Calculus II*	3	MATH 116	Calculus II	3
MATH 242	Calculus II*	5	MATH 126 & MATH 146	Calculus II and "Calculus II, Honors"	4
MATH 243	Calculus III*	5	MATH 127 & MATH 147	Calculus III and "Calculus III, Honors"	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+		

Computer Science Core Courses

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

CS 255	Basic Data Structures Using Java*	4	EECS 268	Programming II	4

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	Analytic Geometry Calc I	4
PHYS 220	Engineering Physics I* (PHSX 216)	5	PHSX 211	General Physics I Lecture	4
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	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	Title	Hours			
BIOL 135	Principles of Cell and Molecular Biology	4	BIOL 150 Prin. of Molecular Cellular Biology+ AND BIOL 154 Intro 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*	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	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*	5	CHEM 130 General Chemistry I/Lab#+		
CHEM 131 & CHEM 132	General Chemistry II Lecture* and General Chemistry II Lab*	4	CHEM 135 General Chemistry II+		
CHEM 220	Organic Chemistry I*	5	CHEM 330	Organic Chemistry I	3
PHYS 220	Engineering Physics I* (PHYS 216) ^	5	PHSX 211	General Physics I Lecture	4

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	Course Title	Course Hours	Transfer Code	Transfer Title	Transfer Hours
Code	**Title**	**Hours**			
ECON 230	Principles of Macroeconomics	3	ECON 144	Priniciples of Macroeconomics	3
ECON 231	Principles of Microeconomics #	3	ECON 142	Principles of Microeconomics	3
Visit the KU Core 34 Natural and Physical Sciences (lab required) (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.					

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	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	6	JMC 320	Intro to Digital Marketing Com	3
JOUR 222	Advanced Reporting*	3	JMC 415	Multimedia Reporting	3
WEB 120	Web Analytics*	3	JMC 309	Data Storytelling	3
Select one of the following:					
WEB 225	Advanced Digital Video Tools*	1	JMC 211 Tech Tools: Audio/Video		
VDA 116	InDesign I*	1	JMC 212 Tech Tools: Graphic Design		
VDA 112	Photoshop I*	1	JMC 213 Tech Tools: Visuals		
Visit the KU Core 34 Natural and Physical Sciences (lab required) (https://catalog.jccc.edu/transfer-guides/ku/ku-transfer-core34/) for JCCC equivalents.					

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+		
PHYS 220	Engineering Physics I* (PHYS 216) ^#	5	PHSX 211	General Physics I Lecture	4
PHYS 221	Engineering Physics II*	5	PHSX 212 & PHSX 236	General Physics II Lecture and General Physics II Laboratory	4

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* JCCC course has a prerequisite or corequisite.
\+ Must earn a grade of “C” or better.
^^ ^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.

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