Johnson County Community College
Transfer Program to the University of Kansas
School of Engineering
Interdisciplinary Computing, B.S.
2023-2024 Catalog

Contact: School of Engineering Phone: 785-864-4487
Email: kuengr@ku.edu
Home Page: www.eecs.ku.edu

Through the recently approved interdisciplinary computing major, students receive an enriched computer science experience, with a focus in one of 6 fields: Astronomy, Biology, Chemistry, Economics, Geography, 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 Interdisciplinary Computing is an ABET accredited program.
- A minimum of 122-130 hours is required to complete the B.S. in Interdisciplinary Computing. The B.S. in Interdisciplinary Computing must produce graduates before becoming eligible for accreditation.
- Sixty-four credits may be transferred to a KU degree from community colleges. The last 30 hours of course work must be completed at KU. A minimum of 45 upper-level hours must be completed at KU.
- 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.
- Pass/Fail policy: only accepted for KU Core GE 2.1Written Communication, GE 2.2 Oral Communication, GE 3H Humanities, GE 3S Social Sciences, AE 4.1 Human Diversity, AE 4.2 Global Awareness, and AE 5 Social \& Ethical Responsibility. If an Engineering department recommends that certain course work be used to fulfill any of these requirements, those courses must be taken for an " $A$ "-" " " grade.
- 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: GE 2.1 (both); EPHX 210/216, 212/236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 348
- IC BIOL: GE 2.1 (both); MATH 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348; CHEM 130, 135; BIOL 150, 152,154
- IC CHEM: GE 2.1 (both); EPHX 210/216, 212/236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 348; CHEM 130, 135
- IC ECON: GE2.1 (both); Math 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348; ECON 142, 144, and 520
- IC JOUR: JMC 104, Additional GE 2.1, MATH 125, 126, 127, 290; EECS 101, 140, 168, 210, 268, 348
- IC PHSX: GE 2.1 (both); EPHX 210/216, 212/236; MATH 125, 126, 127, 220, 290; EECS 101, 140, 168, 210, 268, 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 beginning the new semester regarding any required repetitions and the associated enrollment adjustments (drops and adds).

Upper Level Eligibility cont.: 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, EECS 388, and EECS 468 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, found in the EECS office or at www.eecs.ku.edu.

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.

## Program Requirements

| KU Courses | Hrs | JCCC Courses | Hrs | KU Core |
| :---: | :---: | :---: | :---: | :---: |
| CORE COURSES |  |  |  |  |
| Computer Science |  |  |  |  |
| EECS 168 Programming I | 4 | CS 200 Concepts of Programming Algorithms Using C++* OR <br> CS 202 Concepts of Programming Algorithms using Python* OR <br> CS 205 Concepts of Programming Algorithms using Java* | 4 <br> 4 <br> 4 | N/A |
| EECS 268 Programming II | 4 | CS 250 Data Structures using C++* OR CS 252 Basic Data Structures Using Python* OR CS 255 Basic Data Structures Using Java* | $\begin{aligned} & 4 \\ & 4 \\ & 4 \\ & \hline \end{aligned}$ | N/A |
| Additional required courses will be taken at KU. |  |  |  |  |
| Mathematics |  |  |  |  |
| MATH 125 Calculus I | 4 | MATH 241 Calculus I* | 5 | GE 1.2 |
| MATH 126 Calculus II | 4 | MATH 242 Calculus II* | 5 | N/A |
| MATH 127 Calculus III | 4 | MATH 243 Calculus III* | 5 | N/A |
| MATH 290 Elementary Linear Algebra | 2 | MATH 246 Elementary Linear Algebra* | 3 | N/A |
| EECS 210 Discrete Structures | 4 | CS 210 Discrete Structures I* AND CS 211 Discrete Structures II* | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | N/A |
| Communications |  |  |  |  |
| ENGL 101 Composition | 3 | ENGL 121 Composition ${ }^{*}$ | 3 | GE 2.1 |
| ENGL 102 Critical Reading and Writing | 3 | ENGL 122 Composition II* | 3 | GE 2.1 |
| COMS 130 Speaker-Audience Comm. | 3 | COMS 121 Public Speaking | 3 | GE 2.2 |
| Arts/Humanities/Social Science |  |  |  |  |
| KU Core Goal GE 3H | 3 | See list for Goal GE 3H | 3 | GE 3H |
| KU Core Goal GE 3S | 3 | See list for Goal GE 3S | 3 | GE 3S |
| KU Core Goal AE 4.1 | 3 | See list for Goal AE 4.1 | 3 | AE 4.1 |
| KU Core Goal AE 4.2 | 3 | See list for Goal AE 4.2 | 3 | AE 4.2 |

## Program Requirements cont.

| Astronomy Concentration - In addition to the core courses above, students in the Astronomy concentration take the following courses: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| MATH 220 Applied Differential Equations | 3 | MATH 254 Differential Equations* | 4 | N/A |
| EPHX 210^/216 General Physics I/Lab | 3/1 | PHYS 220 Engineering Physics I*^ | 5 | GE 1.1 |
| PHSX 212/236 General Physics II/Lab | 3/1 | PHYS 221 Engineering Physics II* | 5 | GE 3N |
| Additional required courses will be taken at KU. |  |  |  |  |
| Biology Concentration - In addition to the core courses above, students in the Biology concentration take the following courses: |  |  |  |  |
| BIOL 150 Prin. of Molecular \& Cellular Biology | 3 | BIOL 135 Principles of Cell \& Molecular Biology | 4 | GE 3N |
| BIOL 152 Principles of Organismal Biology | 3 | BIOL 150 Biology of Organisms* | 5 | GE 3N |
| CHEM 130 General Chemistry I/Lab OR CHEM 135 General Chemistry II/ Lab | $\begin{aligned} & 5 \\ & 5 \end{aligned}$ | CHEM 124/125 General Chemistry I*/Lab* OR CHEM 131/132 General Chemistry II*/Lab* | 4/1 | GE 3N GE 3N |
| PHIL 160 Introduction to Ethics | 3 | PHIL 143 Ethics | 3 | $\begin{aligned} & \text { GE 1.1, GE } \\ & 3 \mathrm{H}, \mathrm{AE} 5.1 \end{aligned}$ |
| Additional required courses will be taken at KU. |  |  |  |  |
| Chemistry Concentration - In addition to the core courses above, students in the Chemistry concentration take the following courses: |  |  |  |  |
| MATH 220 Applied Differential Equations | 3 | MATH 254 Differential Equations* | 4 | N/A |
| CHEM 130 General Chemistry I/Lab | 5 | CHEM 124/125 General Chemistry I*/Lab* | 4/1 | GE 3N |
| CHEM 135 General Chemistry II/ Lab | 5 | CHEM 131/132 General Chemistry II*/Lab* | 4/1 | GE 3N |
| CHEM 330 Organic Chemistry I | 3 | CHEM 220 Organic Chemistry ${ }^{*}$ | 5 | GE 3N |
| EPHX 210^/216 General Physics I/Lab | 3/1 | PHYS 220 Engineering Physics I*^ | 5 | GE 1.1 |
| PHSX 212/236 General Physics II/Lab | 3/1 | PHYS 221 Engineering Physics II* | 5 | GE 3N |
| Additional required courses will be taken at KU. |  |  |  |  |
| Economics Concentration - In addition to the core courses above, students in the Economics concentration take the following courses: |  |  |  |  |
| ECON 144 Principles of Macroeconomics | 3 | ECON 230 Principles of Macroeconomics | 3 | GE 1.2, 3 S |
| ECON 142 Principles of Microeconomics | 3 | ECON 231 Principles of Microeconomics | 3 | GE 1.2, 3 S |
| KU Core Goal GE 1.1 | 3 | See list for Goal GE 1.1 | 3 | GE 1.1 |
| KU Core Goal GE 3N | 3 | See list for Goal GE 3N | 3 | GE 3N |
| KU Core Goal AE 5.1 | 3 | See list for Goal AE 5.1 | 3 | AE 5.1 |
| Additional required courses will be taken at KU. |  |  |  |  |

## Program Requirements cont.

| Journalism Concentration - In addition to the core courses above, students in the Journalism concentration take the following courses: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| JMC 101 Media and Society | 3 | JOUR 120 Mass Media and Society | 3 | GE 3S |
| JMC 304 Media Writing for Audiences | 3 | JOUR 122 News Writing and Reporting | 3 | GE 2.1 |
| JMC 309 Data Storytelling | 3 | WEB 120 Web Analytics* | 3 | N/A |
| Arts/Humanities/Social Sciences | 3 | See list for Goal GE 3H and Goal GE 3S | 3 | GE 3H, 3S |
| Additional required courses will be taken at KU. |  |  |  |  |
| Journalism Concentration - News/Information - In addition to the core courses and journalism basics courses above, students in the News/Information emphasis of the Journalism concentration take the following courses: |  |  |  |  |
| JMC 415 Multimedia Reporting | 3 | JOUR 222 Advanced Reporting* | 3 | N/A |
| Additional required courses will be taken at KU. |  |  |  |  |
| Journalism Concentration - Strategic Communication - In addition to the core courses and journalism basics courses above, students in the Strategic Communication emphasis of the Journalism concentration take the following courses: |  |  |  |  |
| JMC 320 Stratcom I: Introduction to Strategic Communication | 3 | JOUR 125 Fundamentals of Advertising AND JOUR 130 Principles of Public Relations | 3 3 | N/A |
| Additional required courses will be taken at KU. |  |  |  |  |
| Physics Concentration - In addition to the core courses above, students in the Physics concentration take the following courses: |  |  |  |  |
| MATH 220 Applied Differential Equations | 3 | MATH 254 Differential Equations* | 4 | N/A |
| PHSX 210^/216 General Physics I/Lab | 3/1 | PHYS 220 Engineering Physics I*^ | 5 | GE 1.1 |
| PHSX 212/236 General Physics II/Lab | 3/1 | PHYS 221 Engineering Physics II* | 5 | GE 3N |
| Additional required courses will be taken at KU. |  |  |  |  |

* JCCC course has a prerequisite or corequisite.
${ }^{\wedge}$ PHSX 211 (PHYS 220 at JCCC) satisfies the EPHX 210 requirement for Engineering at KU.

