

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, 2024-25

For more information about policies and requirements, please see the UMKC 2024-25 Catalog.

FIRST YEAR

| FALL SEMESTER | HOURS | SPRING SEMESTER | HOURS |
|---|-----------|--|-----------|
| MATH 210 Calculus I | 4 | MATH 220 Calculus II | 4 |
| COMP-SCI 101 Problem Solving & Programming I | 3 | COMP-SCI 191 Discrete Structures I | 3 |
| COMP-SCI 101L Problem Solving & Programming I Lab | 1 | COMP-SCI 201R Problem Solving & Programming II | 3 |
| ENGLISH 110 English I: Intro to Academic Prose | 3 | COMP-SCI 201L Problem Solving & Programming II Lab | 1 |
| GEFSE 101 First Semester Experience | 3 | GECRT-SS Critical Thinking in Social & Behavioral Sciences | 3 |
| TOTAL | 14 | TOTAL | 14 |

SECOND YEAR

| FALL SEMESTER | HOURS | SPRING SEMESTER | HOURS |
|--|-----------|--|-----------|
| COMP-SCI 291 Discrete Structures II | 3 | COMP-SCI 281R Computer Architecture & Organization (Meets GECRT-SC req) | 3 |
| COMP-SCI 303 Data Structures | 3 | MATH 300 Linear Algebra | 3 |
| PHYSICS 240 Physics for Scientists & Engineers I | 5 | Constitution Requirement (HIST 101 OR 102; POL-SCI 210, CJC 364, or HON 230) | 3 |
| STAT 235 Elementary Statistics | 3 | Communication Requirement (COMM-ST 110, 140, 212 or 277) | 3 |
| ENGLISH 225 English II: Intermed Academic Prose | 3 | GECRT-AH Critical Thinking in Arts & Humanities | 3 |
| TOTAL | 17 | TOTAL | 15 |

THIRD YEAR

| FALL SEMESTER | HOURS | SPRING SEMESTER | HOURS |
|---|-----------|---|-----------|
| COMP-SCI 304 Ethics & Professionalism (Meets GECUE req) | 3 | COMP-SCI 470 Database Management | 3 |
| COMP-SCI 320 Data Communications & Networking | 3 | COMP-SCI 404 Intro to Algorithms & Complexity | 3 |
| COMP-SCI 394R Applied Probability | 3 | COMP-SCI 361 Intro to Cybersecurity | 3 |
| COMP-SCI 431 Operating Systems | 3 | Life or Physical Science Requirement* | 3 |
| General Elective | 3 | GECDV Culture & Diversity Course | 3 |
| TOTAL | 15 | TOTAL | 15 |

FOURTH YEAR

| FALL SEMESTER | HOURS | SPRING SEMESTER | HOURS |
|--|-----------|---|-----------|
| COMP-SCI 441 Programming Language Design/ Implementation | 3 | COMP-SCI 451R Software Engineering Capstone | 3 |
| COMP-SCI 449 Foundations of Software Engineering | 3 | COMP-SCI 461 Intro to Artificial Intelligence | 3 |
| COMP-SCI Elective (300/400 level) | 3 | COMP-SCI 456 Human Computer Interface | 3 |
| COMP-SCI Elective (300/400 level) | 3 | COMP-SCI Elective (400 level) | 3 |
| General Elective | 3 | COMP-SCI/E&C-ENGR, INFO-TEC Elective | 3 |
| TOTAL | 15 | TOTAL | 15 |

Additional Graduation Requirements: Civics Exam, HEIghten Exit Exam.

Total Credits to Graduate: 120

*Must select from BIOLOGY 108 or 109; CHEM 211, GEOLOGY 220, ENV-SCI 110R, or PHYSICS 250.

School of Science and Engineering

Why Major in Computer Science



Beyond the Classroom

Students build experience by participating in our **student-led teams or organizations**:

- Computer Science Club
- Esports
- Game Development Club
- Math Club
- UMKC Distributed Intelligent Computing Association (UDICA)
- UMKC Robotics
- Women in Science

Students can test ideas and explore the application of augmented and virtual reality in our **ARVR Showroom** on the newest spatial computing equipment.

Students have access to \$1 million-worth of equipment housed in our **High Performance Computing Lab**.

Our **BS in Computer Science is ABET accredited** providing assurance that our curriculum meets the standards for professional advancement.



Personalize Your Degree

Students have the opportunity to earn an **emphasis in Cybersecurity** or add a minor in a variety of subjects.

Our Computer Science degree includes **specialized major electives** allowing students to expand upon their interests in areas such as:

- AI, Blockchain Technologies, Digital Forensics, Distributed Computing Systems, Network Security, and VR App Development

Students can participate in **innovative and groundbreaking research** alongside a faculty mentors who are leaders in academic patents.

Easily earn a **master's degree** through our BS to MS program which allows students to complete a graduate degree at undergraduate tuition rates.



After Graduation

SSE offers two **STEM Career Fairs** every year to connect students with industry professionals from the **more than 3,900 tech companies** in the area.

As the **most geographically centric technology industry in the nation**, Kansas City is home to the headquarters for companies like Garmin and H&R Block.

The Kansas City region has over **100,000 technology jobs in various industries** such as:

- Biotechnology
- Cybersecurity
- Education
- Engineering
- Financial technology
- Telecommunications and more!