

## BACHELOR OF SCIENCE IN CIVIL ENGINEERING, 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 266 Accelerated Calculus I	4	MATH 268 Accelerated Calculus II	3
CHEM 211/211L General Chemistry I/Lab	5	PHYSICS 240 Physics for Scientists & Engineers I	5
CIV-ENGR 111 First Year Cornerstone	1	MEC-ENGR 130 Engineering Graphics	3
ENGLISH 110 English I: Intro Academic Prose	3	ENGLISH 225 English II: Intermed Academic Prose	3
GEFSE 101 First Semester Experience	3	GECRT-SS Critical Thinking in Behavioral & Social Sciences	3
<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>17</b>

### SECOND YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
MATH 250 Calculus III	4	MATH 345/345L Ordinary Differential Equations/Lab	4
PHYSICS 250 Physics for Scientists & Engineers II	5	CIV-ENGR 190 Special Topics	1
CIV-ENGR 113 Engineering Measurements	1	CIV-ENGR 276 Strength of Materials	3
CIV-ENGR 275 Engineering Statics (Meets GECRT-SC req)	3	CIV-ENGR 351 Fluid Mechanics	3
E&C-ENGR 216 Engineering Computation	4	Communication Requirement (COMM-ST 110, 140, 212 or 277)	3
		GECRT-AH Critical Thinking in Arts & Humanities	3
<b>TOTAL</b>	<b>17</b>	<b>TOTAL</b>	<b>17</b>

### THIRD YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
Basic Science Requirement (GEOLOGY 220 or BIOLOGY 108 recommended)	3	CIV-ENGR 323 Structural Steel Design*	3
STAT 235 Elementary Statistics	3	CIV-ENGR 378WI Civil Engineering Materials**	3
CIV-ENGR 321 Structural Analysis	4	CIV-ENGR 497 Engineering Hydrology	3
CIV-ENGR 335 Soil Mechanics	3	Constitution Requirement (HIST 101 OR 102; POL-SCI 210, CJC 364, or HON 230)	3
CIV-ENGR 467 Construction Management	3	GECDV Culture & Diversity	3
<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>15</b>

### FOURTH YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
CIV-ENGR 411 System Design I	2	CIV-ENGR 412 System Design II (Meets GECUE req)	3
CIV-ENGR 422WI Reinforced Concrete	3	CIV-ENGR 481 Intro to Transportation*	3
CIV-ENGR 432 Foundation Engineering	3	CIV-ENGR 342 Intro to Environmental Engineering**	3
CIV-ENGR Elective	3	CIV-ENGR Elective	3
CIV-ENGR Elective	3	CIV-ENGR Elective	3
<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>15</b>

Additional Graduation Requirements: Civics Exam, OSHA 10-Hour Training, HEIghten Exit Exam.

**Total Credits to Graduate: 127**

\*These courses can be interchanged between Spring semesters.

\*\*These courses can be interchanged between Spring semesters.

*CIV-ENGR Elective Interest Areas: Structural; Water Resources; Geotechnical & Materials; Construction Management; General.*

# School of Science and Engineering

## Why Major in Civil Engineering



### Beyond The Classroom

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

- American Society of Civil Engineers (ASCE)
- Association of Environmental and Engineering Geologists
- Concrete Canoe
- National Society of Black Engineers (NSBE)
- Society of Hispanic Professional Engineers (SHPE)
- Society of Women Engineers (SWE)
- UMKC Robotics

Students design and build their own **off-road vehicle, unmanned aircraft, robot, or concrete canoe** to compete against other universities in our student-led teams.

Our **Civil Engineering degree is ABET accredited** ensuring our curriculum meets the standards to prepare graduates for industry and professional advancement.



### Personalize Your Degree

Our **BS Civil Engineering degree includes specialized major electives** allowing students to expand upon their interests in areas like:

- construction law
- environmental compliance
- hydraulic structures
- project management
- structural design

Participate in **innovative and ground-breaking research** alongside faculty mentors. Join projects focused on low carbon construction materials or using concrete to simulate the surface of Saturn's moons to help NASA scientists test equipment.

UMKC was awarded a **\$10 million federal grant from the US Department of Transportation** to develop innovative approaches to improve the sustainability and equity of transportation infrastructure.



### After Graduation

SSE connects students with industry partners in the area through **information sessions** and two **STEM Career Fairs** every year.

The Kansas City region has **one of the top five architecture and engineering concentrations** in the nation with access to companies like:

- Black & Veatch, Burns & McDonnell, HDR, HNTB, Kiewit, McCown Gordon, Olsson, Terracon, and many more!

The **demand for engineering jobs** in the Kansas City area has **grown at more than twice** the national average.

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

UMKC's location and connection with the Kansas City area offers Civil Engineering students ease of access to **year-round internships and future employment**.