Four Year Graduation Plan – Courses & Critical Benchmarks:
The following is a sample course of study. It is the Student’s responsibility to ensure that all program requirements are met. This guide is not a substitute for academic advisement. For more information see the University Catalog at umkc.edu/catalog.

Please Note: Completing ENGLISH 110 (English Comp I) or COMM-ST 110 (Speech) or equivalents; SAT verbal 690; ACT English 30 or AP English Language/composite score of 4.2 will waive the DISC 100 requirement.

Students must have successfully passed (with a “B” or better) Pre-calculus or a combination of a College Algebra and Trigonometry or have taken four (4) units of high school mathematics including trigonometry in high school to be prepared for major math sequence. Students who do not place into MATH 266: Accelerated Calculus I may have to complete preparatory math coursework, adding 3 – 8 hours to the total hours required for the degree.

<table>
<thead>
<tr>
<th>First Math Course:</th>
<th>MATH 266 Accelerated Calculus I</th>
<th>Foreign Language Requirement:</th>
<th>None</th>
<th>Free Choice Elective Hours:</th>
<th>None</th>
</tr>
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<table>
<thead>
<tr>
<th>Critical Course</th>
<th>Course Subject, Number, &amp; Title and Academic Plan Benchmarks</th>
<th>Min. Req. Grade</th>
<th>Credit Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEM 211 General Chemistry</strong></td>
<td>Bold = UMKC General Education Core requirement ** Co-Requisite Enrollment Required</td>
<td>C</td>
<td>4</td>
<td></td>
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<tr>
<td><strong>CHEM 211L General Chemistry Lab</strong></td>
<td></td>
<td>C</td>
<td>1</td>
<td></td>
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<tr>
<td>MATH 266 Accelerated Calculus I</td>
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<td>C</td>
<td>4</td>
<td></td>
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<tr>
<td><strong>DISC 100 Reasoning &amp; Values</strong> (Speech &amp; Writing)</td>
<td></td>
<td>C</td>
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<tr>
<td><strong>ANCHOR I Reasoning &amp; Values</strong> (ANCH 150 Computing &amp; Engineering in Society Recommended)</td>
<td></td>
<td>C</td>
<td>3</td>
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Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

<table>
<thead>
<tr>
<th>Spring Semester Year 1: 17 hours</th>
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<tbody>
<tr>
<td>MATH 268 Accelerated Calculus II</td>
<td>C</td>
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<tr>
<td>PHYSICS 240 Physics for Science &amp; Engineering</td>
<td>C</td>
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<tr>
<td>MEC-ENGR 130 Engineering Graphics</td>
<td>C</td>
</tr>
<tr>
<td><strong>DISC 200 Culture &amp; Diversity</strong> (Speech &amp; Writing)</td>
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<tr>
<td><strong>ANCHOR II Culture &amp; Diversity</strong> (ANCH 203 The Technology Enterprise Recommended)</td>
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</tbody>
</table>

Complete 17 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

<table>
<thead>
<tr>
<th>Summer Semester Year 1: 0 hours</th>
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</table>

Complete 32 hours towards degree. Maintain 2.00 minimum GPA. Complete ANCHOR I & DISC 100. May use summer term to lighten fall or spring course loads, or to catch-up on math coursework.
### Fall Semester Year 2: 17 hours
- MEC-ENGR 270 Engineering Analysis I: C 3
- CIV-ENGR 275 Engineering Statics: C 3
- MEC-ENGR 219 Computer Programming for Engineers: C 3
- PHYSICS 250 Physics for Science & Engineering II*: C 5
- CIV-ENGR 319 Engineering Computation & Statistics: C 3

Take the **RooWriter Assessment** after completing DISC 200 and before reaching 90 credit hours.

*PHYSICS 250 Required for degree, may not substitute PHYSIC 220.

Complete 18 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

### Spring Semester Year 2: 15 hours
- MEC-ENGR 272 Engineering Analysis II: C 3
- CIV-ENGR 276 Strength of Materials: C 3
- MEC-ENGR 285 Dynamics: C 3
- CIV-ENGR 318 Geographic Information Systems for Engineers: C 3
- MEC-ENGR 220 Electric Circuits: C 3

Complete 16 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

### Summer Semester Year 2: 3 hours
- **CIMM 101**: Machine Shop Safety at Metropolitan Community College-Kansas City (MCC) 1
- Two additional Applied Skills Elective hours at MCC (if CIV-ENGR 401SV not already completed at UMKC): **CIMM 102** Basic Lathe Operation, **CIMM 103** Basic Mill Operation, and/or **WELD 100** Intro to Welding 2

Prior to taking courses at MCC students must be admitted to MCC as a visiting student. Click for details.

Civil Engineering Students must complete three applied skills hours prior to the start of their junior year. Complete 70 credit hours towards degree. Complete ANCHOR II & DISC 200. Maintain 2.00 minimum GPA.

### Fall Semester Year 3: 16 hours
- CHEM 431 Physical Chemistry OR **Focus C Human Values & Ethical Reasoning**§ Click for options C 3
- CIV-ENGR 335 Soil Mechanics C 3
- CIV-ENGR 321 Structural Analysis: C 4
- CIV-ENGR 351 Fluid Mechanics: C 3
- CIV-ENGR 467 Introduction to Construction Management: C 3

Complete 16 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

### Spring Semester Year 3: 15 hours
- CIV-ENGR 323 Steel Design: C 3
- CIV-ENGR 342 Water & Wastewater: C 3
- CIV-ENGR 357 Engineering Hydraulics: C 3
- CIV-ENGR 378WI CE Materials: C 3
- MEC-ENGR 299 Thermodynamics OR **Focus C Human Values & Ethical Reasoning**§ Click for options: C 3

Complete the **Fundamentals of Engineering (FE) exam**.

Complete the **ETS Proficiency Profile**.

Apply for graduation.

§HISTORY 101, 102, or POL-SCI 210 meet both Focus C & Missouri Constitution Requirements.
### Summer Semester Year 3: 0 hours
- Complete 98 credit hours towards degree.
- Complete RooWriter Assessment
- Maintain 2.00 minimum GPA.

May use summer term to lighten fall or spring course loads.

### Fall Semester Year 4: 17 hours
- CIV-ENGR 411 System Design I
  - C 2
- CIV-ENGR 422WI Reinforced Concrete
  - C 3
- CIV-ENGR 432 Foundation Engineering
  - C 3
- CIV-ENGR 497 Engineering Hydrology
  - C 3
- CIV-ENGR 4XX Elective (See Advisor)
  - C 3
- Focus A Arts & Humanities [Click for options]
  - C 3

Complete Senior Exit Survey. Must earn minimum 2.00 term and cumulative GPA.

### Spring Semester Year 4: 15 hours
- CIV-ENGR 4XX Elective [Click for options]
  - C 3
- CIV-ENGR 4XX Elective [Click for options]
  - C 3
- CIV-ENGR 481 Highway & Traffic Engineering
  - C 3
- **ANCHOR III Civic & Community Engagement** [Click for options]
  - C 3
- **DISC 300 Civic & Community Engagement**
  - C 3

Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.

### Graduation Requirements Summary

<table>
<thead>
<tr>
<th>Total Hours</th>
<th>Total Hours at UMKC</th>
<th>Upper Lvl Hrs in Major at UMKC</th>
<th>Total Upper Level (300/400) hours</th>
<th>Major GPA</th>
<th>UMKC GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>30 minimum</td>
<td>12 minimum</td>
<td>36 minimum</td>
<td>2.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>

### Other Information
A minimum of 30 hours must be earned at the University of Missouri-Kansas City, regardless of the number and level of hours earned at another institution. Undergraduate degree-seeking students are required to earn credit in at least 36 credit hours of coursework numbered 300 and above at UMKC. In the case of transfer credit, the coursework must be numbered as junior-senior level work by the transferring institution.

### Non-course requirements
- Met
  - RooWriter Assessment
  - Fundamentals of Engineering Exam
  - ETS Proficiency Profile
  - Civil Engineering Department Senior Exit Degree Completion Survey

### Policy
The University reserves the right to make changes in courses and course schedules without notice. Students are expected to maintain a quality of achievement significantly above minimum UMKC standards for degree work. Individual student progress will be monitored throughout the program. Satisfactory progress is required of all students for retention in the program. Students are expected to maintain academic standards, perform satisfactorily in courses, refrain from academic dishonesty, comply with the established University requirements, and refrain from unethical or unprofessional behavior or behaviors that obstruct the training process or threaten the welfare of the student or others. Other circumstances involving student behavior will be addressed by the faculty on an individual basis.
Advising Contact Information
School of Computing & Engineering
534 R H Flarsheim Hall
5110 Rockhill Road
Kansas City MO 64110
816-235-2399
sce@umkc.edu
http://sce.umkc.edu/

Career Opportunities
UMKC Career Services – career.umkc.edu | 816-235-1636 | 2nd Floor, Atterbury Student Success Center
O*Net OnLine – OnetOnline.org Learn about careers related to your major, income potential, and more.