

### 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](http://umkc.edu/catalog).

Your path to graduation may vary based on factors such as college credit you earned while in high school, transfer work from other institutions of higher learning, and placement in Mathematics. You are responsible for checking prerequisites to any courses. Critical Courses and minimum recommended grades (as noted below) provide feedback regarding major fit and help indicate likelihood of successful completion of chosen academic program and degree.

**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.**

<b>First Math Course:</b>	MATH 266 Accelerated Calculus I	<b>Foreign Language Requirement:</b>	None	<b>Free Choice Elective Hours:</b>	None
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Critical Course	Course Subject, Number, & Title and Academic Plan Benchmarks <b>Bold = UMKC General Education Core requirement</b> ** Co-Requisite Enrollment Required	Min. Rec. Grade	Credit Hours	Notes
<b>Fall Semester Year 1: 15 hours</b>				
◆	**CHEM 211 General Chemistry	C	4	<sup>1</sup> Enrollment restricted. Must take <a href="#">ALEKS Math Placement Exam</a> or show prerequisite requirement has been met prior to enrolling.  <sup>2</sup> If DISC 100 is waived, MEC-ENGR 130 recommended.
◆	**CHEM 211L General Chemistry Lab	C	1	
◆	MATH 266 Accelerated Calculus I <sup>1</sup>	C	4	
◆	** <b>DISC 100 Reasoning &amp; Values</b> <sup>2</sup> (Speech & Writing) <a href="#">Click for options</a>	C	3	
◆	** <b>ANCHOR I Reasoning &amp; Values</b> <a href="#">Click for Options</a> (ANCH 150 Computing & Engineering in Society Recommended)	C	3	
Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
<b>Spring Semester Year 1: 17 hours</b>				
◆	MATH 268 Accelerated Calculus II	C	3	<sup>3</sup> PHYSICS 240 Required for degree, may not substitute PHYSIC 210.
◆	PHYSICS 240 Physics for Science & Engineering I <sup>3</sup> ( <b>Focus B</b> )	C	5	
◆	MEC-ENGR 130 Engineering Graphics	C	3	
◆	** <b>DISC 200 Culture &amp; Diversity</b> (Speech & Writing) <a href="#">Click for options</a>	C	3	
◆	** <b>ANCHOR II Culture &amp; Diversity</b> <a href="#">Click for options</a> (ANCH 203 The Technology Enterprise Recommended)	C	3	
Complete 17 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
<b>Summer Semester Year 1: 0 hours</b>				
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	Take the <a href="#">RooWriter Assessment</a> after completing DISC 200 and before reaching 90 credit hours.  4PHYSICS 250 Required for degree, may not substitute PHYSIC 220.
◆	CIV-ENGR 275 Engineering Statics	C	3	
◆	MEC-ENGR 219 Computer Programing for Engineers	C	3	
◆	PHYSICS 250 Physics for Science & Engineering II <sup>4</sup> ( <b>Focus Elective</b> )	C	5	
	CIV-ENGR 319 Engineering Computation & Statistics	C	3	
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				
	<a href="#">CIMM 101</a> : Machine Shop Safety at Metropolitan Community College-Kansas City (MCC)		1	Prior to taking courses at MCC students must be admitted to MCC as a visiting student. <a href="#">Click for details.</a>
	Two additional Applied Skills Elective hours at MCC (if CIV-ENGR 401SV not already completed at UMKC): <a href="#">CIMM 102</a> Basic Lathe Operation, <a href="#">CIMM 103</a> Basic Mill Operation, and/or <a href="#">WELD 100</a> Intro to Welding		2	
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 <b>Focus C Human Values &amp; Ethical Reasoning</b> <sup>5</sup> <a href="#">Click for options</a>	C	3	<sup>5</sup> HISTORY 101, 102, or POL-SCI 210 meet both Focus C & <a href="#">Missouri Constitution</a> Requirements.
	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	Complete the <a href="#">Fundamentals of Engineering (FE) exam</a> .  <a href="#">Complete the ETS Proficiency Profile</a> .  <a href="#">Apply for graduation</a> .  <sup>5</sup> HISTORY 101, 102, or POL-SCI 210 meet both Focus C & <a href="#">Missouri Constitution</a> Requirements.
	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 <b>Focus C Human Values &amp; Ethical Reasoning</b> <sup>5</sup> <a href="#">Click for options</a>	C	3	
Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				

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	Complete Senior Exit Survey.
	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	
	<b>Focus A Arts &amp; Humanities</b> <a href="#">Click for options</a>	C	3	
Complete 17 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 4: 15 hours				
	CIV-ENGR 4XX Elective <a href="#">Click for options</a>	C	3	
	CIV-ENGR 4XX Elective <a href="#">Click for options</a>	C	3	
	CIV-ENGR 481 Highway & Traffic Engineering	C	3	
	<b>**ANCHOR III Civic &amp; Community Engagement</b> <a href="#">Click for options</a>	C	3	
	<b>**DISC 300 Civic &amp; Community Engagement</b>	C	3	
Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				

Graduation Requirements Summary					
Total Hours	Total Hours at UMKC	Upper Lvl Hrs in Major at UMKC	Total Upper Level (300/400) hours	Major GPA	UMKC GPA
130	30 minimum	12 minimum	36 minimum	2.00 minimum	2.00 minimum

### 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

RooWriter Assessment	Met
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](mailto:sce@umkc.edu)  
<http://sce.umkc.edu/>

## Career Opportunities

UMKC Career Services – [career.umkc.edu](http://career.umkc.edu) | 816-235-1636 | 2<sup>nd</sup> Floor, Atterbury Student Success Center  
O\*Net OnLine – [OnetOnline.org](http://OnetOnline.org) Learn about careers related to your major, income potential, and more.