

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.

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.**

First Math Course:	MATH 266 Accelerated Calculus I	Foreign Language Requirement:	None	General Elective Hours:	None
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Critical Course	Course Subject, Number, & Title and Academic Plan Benchmarks Bold = UMKC General Education Core requirement	Min. Recom. Grade	Credit Hours	Notes
Fall Semester Year 1: 16 hours				
◆	CHEM 211+211L General Chemistry + Lab	B	5	¹ Enrollment restricted. Must show prerequisite requirement has been met prior to enrolling. ² If DISC 100 is waived, MEC-ENGR 130 recommended.
◆	MATH 266 Accelerated Calculus I ¹	B	4	
	DISC 100 Reasoning & Values² (Speech & Writing) Click for options		3	
	ANCHOR I Reasoning & Values Click for Options (ANCH 150 Computing & Engineering in Society Recommended)		3	
	Shop Safety Course (see advisor for options)		1	
Complete 16 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 1: 17 hours				
◆	MATH 268 Accelerated Calculus II	B	3	³ PHYSICS 240 Required for degree, may not substitute PHYSICS 210.
◆	PHYSICS 240 Physics for Science & Engineering I ³ (Focus B)	B	5	
	MEC-ENGR 130 Engineering Graphics		3	
	**DISC 200 Culture & Diversity (Speech & Writing) Click for options		3	
	**ANCHOR II Culture & Diversity Click for options (ANCH 203 The Technology Enterprise Recommended)		3	
Complete 17 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Summer Semester Year 1: 0 hours				
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: 18 hours				
◆	CIV-ENGR 275 Engineering Statics	B	3	Take the RooWriter Assessment after completing DISC 200 and before reaching 90 credit hours.
	E&C-ENGR 216 Engineering Computation		4	
◆	MEC-ENGR 272 Engineering Analysis	B	3	⁴ PHYSICS 250 Required for degree, may not substitute PHYSICS 220. ⁵ HISTORY 101, 102, or POL-SCI 210 meet both Focus C & Missouri Constitution Requirements.
◆	PHYSICS 250 Physics for Science & Engineering II ⁴ (Focus Elective)	B	5	
	Focus C Human Actions, Values, & Ethics ⁵ (HISTORY 101, 102, or POL-SCI 210 Recommended) Click for options		3	
Complete 18 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 2: 17 hours				
◆	MATH 250 Calculus III	B	4	
◆	CIV-ENGR 276 Strength of Materials	B	3	
	E&C-ENGR 276+277 Circuit Theory I + Lab		4	
◆	MEC-ENGR 299 Engineering Thermodynamics	B	3	
◆	MEC-ENGR 285 Engineering Dynamics	B	3	
Complete 17 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Summer Semester Year 2: 3 hours				
Maintain 2.00 minimum GPA.				
Fall Semester Year 3: 16 hours				
	CIV-ENGR 319 Engineering Computation & Statistics		3	
	MEC-ENGR 324+324L Engineering Materials + Lab		4	
	MEC-ENGR 351 Fluid Mechanics		3	
	MEC-ENGR 356 Mechanical Component Design		3	
	MEC-ENGR 360 Thermal System Design		3	
Complete 16 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 3: 16 hours				
	MEC-ENGR 306 Computer Aided Engineering		3	Complete the HEIghten exit exam. Apply for graduation.
	MEC-ENGR 385 System Dynamics		3	
	MEC-ENGR 352 Mechanical Instruments Lab		2	
	MEC-ENGR 380 Manufacturing Methods		3	
	MEC-ENGR 399 Heat & Mass Transfer		3	
	MEC-ENGR 353 Heat Transfer/Fluid Mechanics Lab		2	
Complete 16 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Summer Semester Year 3: 0 hours				
Complete 100 credit hours towards degree. Maintain 2.00 minimum GPA.				
				May use summer term to lighten fall or spring course loads.

Fall Semester Year 4: 15 hours				
	MEC-ENGR 4XX Core Elective Click for options		3	
	MEC-ENGR 4XX Core Elective Click for options		3	
	MEC-ENGR 4XX Open Elective Click for options		3	
	ANCHOR 309 Mechanical Design Synthesis I		3	
	DISC 300 Civic & Community Engagement		3	
Complete 15 term credit hours. Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 4: 15 hours				
	MEC-ENGR 496WI Mechanical Design Synthesis II		3	Complete Senior Exit Survey.
	MEC-ENGR 4XX Design Elective Click for options		3	
	MEC-ENGR 4XX Core Elective Click for options		3	
	MEC-ENGR 4XX Core Elective Click for options		3	
	Focus A Arts & Humanities Click for options		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

Missouri Higher Education Civics Achievement Examination	Met
RooWriter Assessment	___
HEIghten exit exam	___
Mechanical 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

UMKC School of Computing & Engineering
DST Student Services Center

336 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.