

Four-Year Graduation Plan - Courses and 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 you may go to our website at [www.sce.umkc.edu](http://www.sce.umkc.edu) or the catalog at <http://www.umkc.edu/catalog>

*Your path to graduation may vary slightly 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.*

First Math	<b>MATH 210: Calculus I &amp; STAT 235: Statistics</b>	Foreign Language Requirement	Yes	Free Elective Hours	Varies
------------	--	------------------------------	-----	---------------------	--------



Please note:

**Prior to Year 1** (may include summer)





Students must have successfully passed (with a "C" or better) MATH 110: College Algebra and MATH 125: Trigonometry or MATH 120: Pre-calculus or have taken four (4) units of high school Mathematics including Trigonometry prior to enrolling in MATH 210: Calculus I.

Critical Course or Benchmark	Course Subject, Number, and Title and Academic Plan Benchmarks Bold = UMKC General Education Core Requirement *Prerequisite May Be Required **Co-Requisite Enrollment Required	Min Recom Grade	Credit Hours (CH)	Notes
------------------------------	---	-----------------	-------------------	-------

Fall Semester Year 1: 16-17 hours

	<b>**Anchor I: Reasoning and Values<sup>1</sup></b> - ANCH 150 Preferred		3	*Enrollment restricted. Students must pass the online ALEKS Math Placement Exam or provide transcripts showing prerequisites satisfied prior to enrolling Web site for more information: <a href="http://dev.umkc.edu/mathplacement/default.cfm">http://dev.umkc.edu/mathplacement/default.cfm</a>
	<b>**DISC 100: Reasoning and Values<sup>1</sup> (Speech and Writing)</b>		3	
	General Elective		3	
	MATH 210: Calculus I or STAT 235 or MATH 120 <sup>+</sup> (Complete MATH 120: Precalculus only if not placed in MATH 210)	C	4	
	<b>Focus C: Human Values, Actions, and Ethics - Constitution</b>		3	
	Complete 16 term credit hours Earn minimum 2.000 cumulative UM GPA Earn minimum 2.000 Major GPA			

Spring Semester Year 1: 16 hours

	<b>**Anchor II: Culture and Diversity<sup>1</sup></b>		3
	<b>**DISC 200: Culture and Diversity<sup>1</sup></b>		3
	COMP-SCI 101: Problem Solving & Program I	C	3
	COMP-SCI 191: Discrete Structures I	C	3
	MATH 220: Calculus II or MATH 210 or STAT 235 <sup>+</sup> (Complete MATH 210: Calculus I only if not placed in MATH 220)	C	4
	Complete 32 cumulative credit hours Earn minimum 2.000 cumulative UM GPA Earn minimum 2.000 Major GPA		


Summer Semester Year 2: 0 hours if all previous courses completed

--	--	--	--

	Complete Anchor I and DISC 100
--	--------------------------------


Fall Semester Year 2: 15 hours

	**COMP-SCI 201R: Problem Solving & Program II	C	3	Constitution requirement may be satisfied by taking either HISTORY 101 or HISTORY 102 or POL-SCI 210.  Complete <a href="#">RooWriter Writing Assessment</a> .
	**COMP-SCI 201L: Problem Solving & Program II Lab	C	1	
	COMP-SCI 291: Discrete Structures II	C	3	
	*STAT 235: Elementary Statistics (if not completed above) OR Elective		3	
	Foreign Language 110 <sup>2</sup>		3	
	Elective		2	

	Complete MATH 210, COMP-SCI 101 AND COMP-SCI 191 Complete 15 term credit hours Earn minimum 2.000 cumulative UM GPA Earn minimum 2.000 Major GPA
--	---


Spring Semester Year 2: 14-16 hours

	COMP-SCI 281R: Computer Architecture & Organization	C	3	Life & Physical Science required for major
	COMP-SCI 303: Data Structures	C	3	
	Foreign Language 120 <sup>2</sup>		3	Students must take one Life Science and one Physical Science course with a minimum of one lab in one or the other. Students may select from any of the following areas: Biology, Chemistry, Environmental Science, Geography, Geology, Natural Science, Physical Science or Physics.
	<b>Focus B: Life &amp; Physical Science</b>		3-5	
	Elective		2-3	

	Earn minimum 2.000 cumulative UM GPA Earn minimum 2.000 Major GPA Complete Anchor II and DISC 200 Complete MATH 220 Complete COMP-SCI 201R COMP-SCI 201L and COMP-SCI 291 before COMP-SCI 303
--	---

Summer Semester Year 3: 0 hours if all previous courses completed


--	--	--	--

	Complete 61 cumulative credit hours Earn minimum 2.000 cumulative UM GPA Earn minimum 2.000 Major GPA Complete of RooWriter Assessment Test prior to enrolling in DISC 300 Completion of COMP-SCI 281R and COMP-SCI 303
--	---

Fall Semester Year 3: 15 hours


	COMP-SCI 282: Assembler Language Programming	C	3	ANCH 308: Ethical Issues in Computing & Engineering required.
	<b>**Anchor III: Civic and Community Engagement</b> <sup>1</sup> ANCH 308: Ethical Issues in Computing & Engineering	C	3	
	<b>**DISC 300: Civic and Community Engagement</b> <sup>1</sup>		3	
	General Elective		3	

General Elective			3
------------------	--	--	---

 Complete 15 term credit hours  
Earn minimum 2.000 cumulative UM GPA and Major GPA


**Spring Semester Year 3: 13-14 hours**

COMP-SCI/E&C ENGR/INFO TECH 300<490: CSEE/IT Elective <sup>3</sup>	C	3	Life & Physical Science required for major.
<b>Focus Elective: Life &amp; Physical Science</b>		4-5	
General Elective 300<490		3	Students must take one Life Science and one Physical Science course with a minimum of one lab in one or the other. Students may select from any of the following areas: Biology, Chemistry, Environmental Science, Geography, Geology, Natural Science, Physical Science or Physics.
General Elective 300<490		3	

 Complete 13 term credit hours and 89 cumulative credit hours  
Earn minimum 2.000 cumulative UM GPA and Major GPA  
Complete STAT 235

**Fall Semester Year 4: 15 hours**


COMP-SCI 449: Fundamentals of Software Engineering	C	3	Apply for graduation.
COMP-SCI/E&C ENGR/INFO TECH 300<490: CSEE/IT Elective <sup>3</sup>	C	3	All UMKC students must take the Assessment Test and CS/IT majors must take the Major Field Exam in the semester before they graduate. For details go to: <a href="http://www.umkc.edu/testingcenter">www.umkc.edu/testingcenter</a>
COMP-SCI/E&C ENGR/INFO TECH 300<490: CSEE/IT Elective <sup>3</sup>	C	3	
General Elective 300<490		3	
General Elective 300<490		3	
General Elective 300<490		3	

 Complete 15 term credit hours  
Earn minimum 2.000 cumulative UM GPA and Major GPA  
Must take COMP-SCI 449 and COMP-SCI 451R consecutively.

Assessment Test & Major Field Exam

**Spring Semester Year 4: 14-16 hours**

COMP-SCI/E&C ENGR/INFO TECH 400<490: CSEE/IT Elective <sup>7</sup>	C	3	CSEE Degree Completion Survey
COMP-SCI 451R: Software Engineering	C	3	
<b>Focus A: Arts &amp; Humanities</b> - <a href="#">Click for options</a>		3	UMKC Exit Survey
General Elective 300<490 <sup>4</sup>		5-7	

 Complete 14 term credit hours  
Complete 120 cumulative credit hours  
Earn minimum 2.000 cumulative UM GPA and Major GPA

**Graduation Requirements Summary**

Total Hours (120 minimum)	Total Hours at UMKC (30 hours min)	Major GPA	UMKC GPA
120	30	2.00	2.00



Other Information

**Non-course requirements**

**Met**

- RooWriter Assessment Test
- Measure of Academic Proficiency and Progress (MAPP)
- Major Field Exam
- UMKC Senior Exit Survey
- CSEE Degree Completion Survey

<sup>1</sup> All students must take and/or establish credit for the following General Education Course Requirements: DISC 100, DISC 200, DISC 300, Anchor 1, Anchor 2, Anchor 3, Focus A, Focus B, Focus C and Focus Elective for a total of 30 credit hours of General Education. See General Education Requirements list for appropriate courses. Go to [www.umkc.edu/core/courses](http://www.umkc.edu/core/courses)

<sup>2</sup> Students must take a two course sequence of one foreign language, or have taken a two year sequence at high school. If foreign language requirement is waived due to high school credit, then students need to add up to ten (10) credit hours of General Electives to total 120 credit hours total for the BA COMP-SCI degree.

<sup>3</sup> Four CSEE electives are required. Three can be 300 level or above, but the remaining elective must be 400 level or above. Students may choose between courses from COMP-SCI, E&C-ENGR and INFO-TECH . Students may replace one CSEE/IT elective with three credit hours of Internship.

<sup>4</sup> Students should plan to take two to four additional credit hours of General Elective courses to bring cumulative credit hours up to 120.

Policy

The School reserves the right to make changes in courses, degree requirements, 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

Coretta Carter-Muhammad, Computer Science and Information Technology  
 816-235-2699  
 carterlc@umkc.edu  
<http://sce.umkc.edu/contact/index.cfm>

**Academic Advisor:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Faculty Advisor:** \_\_\_\_\_ **Date** \_\_\_\_\_

Career Opportunities

UMKC Career Services Resources: <http://www.career.umkc.edu/?q=node/87>  
 O\*Net OnLine: <http://www.onetonline.org/find/>