

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	No	Free Elective Hours	11-12
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Please note - prior to Year 1 (may include summer)

Students must have successfully passed (with a "C" or better) MATH 120: Pre-calculus or a combination of a MATH 110: College Algebra and MATH 125: Trigonometry or have taken four (4) units of high school mathematics including trigonometry as preparation for MATH 210 and preferably before Fall Semester Year 1, but not mandatory.




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
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**Fall Semester Year 1: 16 hours**

	<b>**Anchor I: Reasoning and Values<sup>1</sup></b> - ANCH 150 preferred		3	<sup>2</sup> Enrollment is restricted. Students must pass the online ALEKS Math Placement Exam prior to enrolling.
	<b>**DISC 100: Reasoning and Values<sup>1</sup></b>		3	
	ECON 202: Introduction to Economics II	C	3	
	MATH 210: Calculus I <sup>2</sup> ( <b>Focus B</b> ) (Complete MATH 120: Precalculus only if not placed in MATH 210)	C	4	
	<b>Focus A: Arts &amp; Humanities<sup>1</sup></b>		3	

 Complete 16 term credit hours  
Earn minimum 2.000 term UM GPA

**Spring Semester Year 1: 15 hours**

	<b>**Anchor II: Culture and Diversity<sup>1</sup></b>		3	<b>ALEKS Math Entrance Test Required<sup>2</sup></b>
	<b>**DISC 200: Culture and Diversity<sup>1</sup></b>		3	
	COMP-SCI 101: Problem Solving & Programming I	C	3	
	COMP-SCI 191: Discrete Structures I	C	3	
	STAT 235: Elementary Statistics ( <b>Focus Elective</b> ) (Complete MATH 210: Calculus only if not previously completed)	C	3	

 Complete COMP-SCI 101 AND COMP-SCI 191  
Complete 15 term credit hours  
Complete 30 cumulative credit hours  
Earn a minimum 2.000 UM GPA

Complete Anchor I and DISC 100

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

Earn a minimum 2.000 cumulative UM GPA  
Complete Anchor II and DISC 200

Fall Semester Year 2: 14-15 hours

	**COMP-SCI 201R: Problem Solving & Programming II	C	3	<sup>5</sup> Select either a Life Science or a Physical Science and at least one with a lab. Choices are: Biology, Chemistry, Environmental Science, Geo-Science or Physics. General elective credit hours are based upon how many credits are taken in the Life & Physical Sciences to equal a total of 120 credit hours for the degree.
	**COMP-SCI 201L: Problem Solving & Programming II Lab	C	1	
	COMP-SCI 291: Discrete Structures II	C	3	
	Life & Physical Science <sup>5</sup>		4-5	
	Free Elective	C	3	
	Complete COMP-SCI 201R, COMP-SCI 201L and COMP-SCI 291 before COMP-SCI 303. Complete STAT 235, Anchor II, and DISC 200. Complete 16 term credit hours Earn minimum 2.000 cumulative UM GPA			

Spring Semester Year 2: 15-16 hours

	COMP-SCI 281R: Computer Architecture & Organization	C	3	<sup>4</sup> RooWriter Assessment Test must be taken following the successful completion of DISC 200, but must be taken the semester before enrolling in ANCH 308.
	INFO-TECH 222: Multimedia Production & Concepts	C	3	
	Life & Physical Science <sup>5</sup>	C	3-4	
	COMP-SCI 303: Data Structures	C	3	
	ACCT 210: Principles of Accounting	C	3	<sup>5</sup> Select either a Life Science or a Physical Science and at least one with a lab. Choices are: Biology, Chemistry, Environmental Science, Geo-Science or Physics. General elective credit hours are based upon how many credits are taken in the Life & Physical Sciences to equal a total of 120 credit hours for the degree.
	Complete 15 term credit hours Complete 60 cumulative credit hours Earn minimum 2.000 cumulative UM GPA Complete RooWriter Assessment Test <a href="https://www.umkc.edu/RooWriter/logon.aspx">https://www.umkc.edu/RooWriter/logon.aspx</a> Complete ECON 202, ACCT 210 and COMP-SCI 303 before Fall Semester Year 3.			

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

Fall Semester Year 3: 14 - 15 hours

	INFO-TECH 321: Intro Comp Res Admin	C	3	ANCH 308: Ethical Issues in Computing & Engineering
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# UMKC Major Map: Bachelor of Information Technology

## First-Time College Students

Catalog Year: 2016 - 2017

	MKT 324: Marketing Concepts	C	3	required for degree.  Complete the RooWriter Writing Assessment <sup>4</sup>
	<b>**Anchor III: Civic and Community Engagement<sup>1</sup></b> ANCH 308: Ethical Issues in Computing & Engineering	C	3	
	<b>**DISC 300: Civic and Community Engagement<sup>1</sup></b>		3	
	General Elective <sup>5</sup>		2-3	



Complete 14-15 term credit hours  
Earn minimum 2.000 cumulative UM GPA  
Complete STAT 235 and ECON 202 before enrolling in DSOM 326

## Spring Semester Year 3: 15 hours

	COMP-SCI 431: Introduction to Operating Systems	C	3	<sup>6</sup> All UMKC students must take the ETS-PP or MAPP Assessment Test and CS/IT majors must take the Major Field Exam before applying to graduate. For details go to: <a href="http://www.umkc.edu/testingcenter">www.umkc.edu/testingcenter</a>
	DSOM 326, Operational Management	C	3	
	INFO-TECH300<490, IT Specialty Elective <sup>2</sup>	C	3	
	<b>Focus C: Human Actions, Values, and Ethics<sup>1</sup></b> and Constitution		3	
	General Elective		3	



Complete 15 term credit hours  
Complete 90 cumulative credit hours  
Earn minimum 2.000 cumulative UM GPA.  
Complete Assessment Test and Major Field Exam.

<sup>3</sup> Constitution requirement may be satisfied by taking either HISTORY 101 or HISTORY 102 or POL-SCI 210.

## Fall Semester Year 4: 15 hours

	COMP-SCI 449: Fundamentals of Software Engineering	C	3	<b>Apply for graduation</b>
	COMP-SCI/INFO-TECH 300<490: Elective <sup>3</sup>	C	3	
	INFO-TECH300<490: IT Specialty Elective <sup>2</sup>	C	3	
	Business Elective 200<490 <sup>4</sup>	C	3	
	COMP-SCI 371: Database Design, Implementation and Validation or COMP-SCI 470: Introduction to Database Management Systems	C	3	



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

## Spring Semester Year 4: 15 hours

	COMP-SCI 451R: Software Engineering	C	3	<b>UMKC Exit Survey</b>  <b>CSEE Degree Completion Survey</b>
	COMP-SCI 420: Introductory Networking and Applications or COMP-SCI 421A: Foundations of Data Networks	C	3	
	INFO-TECH 491: Internship <sup>5</sup>		3	
	BUS 300<490: Business Elective <sup>4</sup>	C	3	
	COMP-SCI 456: Human Computer Interface	3	3	



Complete minimum 15 term credit hours  
Complete 120 cumulative credit hours  
Earn minimum 2.000 cumulative UM GPA

## Graduation Requirements Summary

Total Hours (120 minimum)	Total Hours at UMKC (30 hours min)	Major GPA	UMKC GPA
120	30	2.000	2.000

## Other Information

### Non-course requirements

Met

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

<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> IT Specialty electives are satisfied by taking two courses from the following categories: Networking (COMP-SCI 420, INFO-TECH 426 or INFO-TECH 427) or Programming (COMP-SCI 375, COMP-SCI 423, COMP-SCI 457, COMP-SCI 461 or INFO-TECH 350,)

<sup>3</sup> CS/IT Electives can be any COMP-SCI/INFO-TECH course that is at the 300 level or above that is not a required course. See advisor for details.

<sup>4</sup> Business Elective - choose two of the following: ACCT 211, MGT 306, MGT 330, FIN 325 or ENT 215)

<sup>5</sup> Students with appropriate Computer Science, Information Technology or Business experience may petition to replace the internship requirement with a three credit hour CS/IT elective.

## 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 and teacher education timetables and 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/>