

## Major Map: Mathematics and Statistics B.S.

### First-time College Students

Catalog Year: 2013-2014

#### 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. **All incoming freshmen must develop an academic plan (which maps out all courses needed to graduate within your intended major/degree). Your academic advisor is available to meet with you and create your specific plan.**

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 of checking prerequisites to any courses. Critical Courses (and Min. Grades as noted below) provide feedback regarding major fit and help indicate the likelihood of successful completion of chosen academic program and degree.

Mathematics: Math 110 or MATH 116, or 200-level MATH/STAT Foreign Language Requirement: No Free Elective Hours: 7-22

Critical Course or Benchmark ◆	Course Subject, Number, and Title and Academic Plan Benchmarks <b>Bold = UMKC General Education Core Requirement</b> *Prerequisite May Be Required **Co-Requisite Enrollment Required	Hours	Min. Recommended Grade	Notes
<b>Fall Semester Year 1: 14 hours</b>				
	<b>**Anchor I: Reasoning and Values</b> – Click for Options	3		Math Entrance Exam required prior to enrollment in MATH 120.
	<b>**Discourse I: DISC 100 – Reasoning and Values</b> (Speech and Writing)	3		
	<b>Focus C- Human Values &amp; Ethical Reasoning</b> - Click for Options (May choose Focus C Course to also fulfill MO Constitution Requirement)	3		POL-SCI 210, HIST 1100 or 1101 fulfill <b>Focus C</b> as well as the Missouri Constitution requirement.
◆	MATH 120: Precalculus	5	C-	
◆	Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
<b>Spring Semester Year 1: 15 hours</b>				
	<b>**Anchor II: Culture and Diversity</b> - Click for Options	3		
	<b>**Discourse II: DISC 200 - Culture and Diversity</b> (Speech and Writing)	3		
◆	MATH 210: Calculus I	4	C-	
	<b>Focus B – Scientific Reasoning &amp; Quantitative Analysis</b> — Strongly Recommended: PHYSICS 240: Physics for Sci and Eng	5		
◆	Complete Discourse I and Anchor I Complete 12 term hours minimum toward degree Complete 28 total hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
<b>Summer Semester Year 1</b>				

				May use summer semester ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
<b>Fall Semester Year 2: 16 hours</b>				
◆	MATH 220: Calculus II	4	C-	
	CAS Science & Math Requirement - Click for Options	3		
	Electives in Math or Science (for BS)	3		
	<b>Focus Elective</b> - Click for Options	3		
	<b>Focus A – Arts &amp; Humanities</b> – Click for Options	3		
◆	Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
<b>Spring Semester Year 2: 16-17 hours</b>				
◆	MATH 250: Calculus III	4	C-	
	MATH 301: On Solid Ground: Sets and Proof OR MATH/STAT 3XX/4XX: Mathematics/Statistics elective – Click for Options	3-4		
	Missouri Constitution course (if not fulfilled by above) – Click for Options OR other CAS Social & Behavioral Sciences Requirement – Click for Options	3		
	CAS Arts & Humanities – Click for Options	3		
	Electives in Math or Science (for BS)	3		
◆	Complete Discourse II and Anchor II Complete 12 term hours minimum toward degree Complete 60 total hours toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
<b>Summer Semester Year 2</b>				
<b>Fall Semester Year 3: 15-16 hours</b>				
	<b>Discourse III: Civic and Community Engagement</b>	3		
	<b>Anchor III: Civic and Community Engagement</b> - Click for Options	3		
	MATH 300: Linear Algebra	3		
	MATH 345: Ordinary Differential Equations OR MATH 406: Partial Differential Equations OR MATH 430: Numerical Analysis I OR STAT 436: Introduction to Mathematical Statistics I	3-4		
	Elective hours in Math or Science (for BS), if needed OR Free Elective	3		
◆	Complete RooWriter Writing Assessment Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
<b>Spring Semester Year 3: 15-17 hours</b>				
	♣MATH 410: Modern Algebra OR	3		

	MATH/STAT 3XX/4XX: Mathematics/Statistics elective – Click for Options			⚙️The major requires Math 410 or Math 420. A student may take both, but often one of these is replaced by another Math/Stat 3XX/4XX Elective.
	CAS Science & Math Requirement – Must take Lab Science to fulfill Laboratory requirement	3-5		
	CAS Social & Behavioral Sciences Requirement - Click for Options	3		
	CAS Arts & Humanities – Click for Options	3		
	Elective hours in Math or Science (for BS), if needed OR Free Elective	3		
<b>Summer Semester Year 3</b>				
<b>Fall Semester Year 4: 15 hours</b>				
	MATH 402: Advanced Analysis I	3		Apply for graduation and complete Final Degree Audits for the following: UMKC General Education Core, CAS Degree Requirements, Major Requirements, and/or Minor Requirements.  Take the ETS Proficiency Profile (EPP) exit exam.
	⚙️MATH 420: Linear Algebra II OR MATH/STAT 3XX/4XX: Mathematics/Statistics elective – Click for Options	3		
	Elective hours in Math or Science (for BS), if needed OR Free Elective	3		
	Elective hours in Math or Science (for BS), if needed OR Free Elective	3		
	Free Elective	3		
<b>Spring Semester Year 4: 10-14 hours</b>				
	3XX/4XX: Writing Intensive Course (CAS Writing Intensive Requirement)—Recommended: MATH 464WI: History of Mathematics	3		In combination with required upper-level courses, take enough Free Elective hours at the 300/400-level to meet the minimum requirement of 36 upper-level credit hours.  Take Major Field (MF) exam.
	MATH/STAT 3XX/4XX: Mathematics/Statistics elective – Click for Options	3-4		
	Free Elective	4		
	<i>Free Elective (only take these credits if needed to reach 120 minimum hours)</i>	0-3		

**Non-course requirements**

- RooWriter Writing Assessment
- ETS Proficiency Profile (EPP) exam
- Major Field (MF) exam

**Met**

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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.

**Graduation Requirements Summary:**

Total Hours (120 minimum)	Totals Hrs at UMKC (30 hours minimum)	Upper-level Hours (36 minimum)	Major GPA (2.0 Minimum)	UMKC GPA

All students completing an undergraduate education degree must meet the following conditions in order to graduate and be recommended for graduation or certification:

- [list of requirements as stated in the catalog pertaining to minimum GPA, capstone coursework, additional licensure exams, etc.]