

Major Map: Chemistry B.A.
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: Yes Free Elective Hours: 9-35

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	Hours	Min. Recommended Grade	Notes
Fall Semester Year 1: 13-15 hours				
	**Anchor I: Reasoning and Values – Click for Options	3		Math Entrance Exam required prior to enrollment in MATH 110 and many higher level MATH/STAT courses.
	**Discourse I: DISC 100 – Reasoning and Values (Speech and Writing)	3		
	**CHEM 211L: General Chemistry I Laboratory (CAS Laboratory Requirement) OR Free Elective	1	C-	CHEM 211L fulfills CAS Laboratory Experience Requirement
◆	2 Courses from (select 2 different curricular designations): **CHEM 211: General Chemistry I (Focus B – Scientific Reasoning & Quantitative Analysis) OR CHEM 111: Physical Basis of Chemistry Chemistry I OR MATH 110: College Algebra (CAS Science & Math Requirement) OR MATH 120: Precalculus OR MATH 125: Trigonometry OR *MATH 210: Calculus I OR *MATH 220: Calculus II OR *STAT 235: Elementary Statistics OR (for pre-dental, pre-medical and pre-pharmacy only) BIOLOGY 108: General Biology I AND BIOLOGY 108L: General Biology I Laboratory OR BIOLOGY 109: General Biology II AND BIOLOGY 109L: General Biology II Laboratory	6-8	C-	MATH 110 or any MATH/STAT at the 200 level fulfills CAS Math Requirement
◆	Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA			

	Earn minimum 2.000 cumulative UM GPA			
Spring Semester Year 1: 14-16 hours				
	**Anchor II: Culture and Diversity - Click for Options	3		Math Entrance Exam required prior to enrollment in many higher level MATH/STAT courses. MATH 110 or any MATH/STAT at the 200 level fulfills CAS Math Requirement
	**Discourse II: DISC 200 - Culture and Diversity (Speech and Writing)	3		
◆	**CHEM 212R: General Chemistry II (Focus Elective) OR **CHEM 211: General Chemistry I (Focus B – Scientific Reasoning & Quantitative Analysis)	4	C-	
	**CHEM 212LR: General Chemistry II Laboratory OR **CHEM 211L: General Chemistry I Laboratory (CAS Laboratory Requirement)	1	C-	
	MATH 110: College Algebra (CAS Science & Math Requirement) OR MATH 120: Precalculus OR MATH 125: Trigonometry OR MATH 210: Calculus I OR *MATH 220: Calculus II OR STAT 235: Elementary Statistics OR (for pre-dental, pre-medical and pre-pharmacy only) BIOLOGY 108: General Biology I AND BIOLOGY 108L: General Biology I Laboratory OR BIOLOGY 109: General Biology II AND BIOLOGY 109L: General Biology II Laboratory	3-5	C-	
◆	Complete Discourse I and Anchor I Complete 28 total hours minimum toward degree Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Summer Semester Year 1				
				Should use summer to complete the General Chemistry course sequence if necessary.
◆	Complete General Chemistry course sequence (including CHEM 211, 211L, 212LR and 212L) with a “C-” or better in each course. Completion of MATH 110: College Algebra or 200+ MATH/STAT course.			
Fall Semester Year 2: 14-18 hours				
◆	**CHEM 321: Organic Chemistry I	3	C-	Foreign Language is required for all B.A. degrees in the College of Arts and Sciences; The foreign language placement exam is highly recommended to ensure placement in the correct level.
	**CHEM 321L: Organic Chemistry I Lab	1	C-	
	Foreign Language Requirement (110 or higher) – Click for Options	3-5		
	PHYSICS 210: General Physics I (CAS Science & Math Requirement) OR Free Elective	4	C-	Math Entrance Exam required prior to enrollment in many higher level MATH/STAT courses. Any MATH/STAT at the 200 level fulfills CAS Math Requirement Take the RooWriter Writing Assessment the semester
	Focus A – Arts & Humanities – Click for Options OR (for pre-dental, pre-medical and pre-pharmacy only) MATH 210: Calculus I OR *MATH 220: Calculus II OR STAT 235: Elementary Statistics OR (for pre-dental, pre-medical and pre-pharmacy only)	3-5	C-	

	BIOL 202: Cell Biology			immediately following Discourse II and at least a semester before registering for a Writing Intensive course.
◆	Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Spring Semester Year 2: 14-18 hours				
	**CHEM 322R: Organic Chemistry II	3	C-	Math Entrance Exam required prior to enrollment in many higher level MATH/STAT courses.
	**CHEM 322L: Organic Chemistry II Lab	1	C-	
◆	PHYSICS 210: General Physics I (if not fulfilled above) OR *PHYSICS 220: General Physics II	4	C-	MATH 110 or any MATH/STAT at the 200 level fulfills CAS Math Requirement
	Foreign Language Requirement (120 or higher) – Click for Options	3-5		
	CAS Social & Behavioral Sciences Requirement - Click for Options OR (for pre-dental, pre-medical and pre-pharmacy only) MATH 210: Calculus I OR *MATH 220: Calculus II OR STAT 235: Elementary Statistics OR (for pre-dental, pre-medical and pre-pharmacy only) BIOL 202: Cell Biology	3-5	C-	
◆	Complete Discourse II and Anchor II Complete 60 total hours toward degree Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Summer Semester Year 2				
				Should use summer to complete the Organic Chemistry course sequence if necessary.
◆	Complete Organic Chemistry course sequence (including CHEM 321, 321L, 322R and 322L) with a "C-" or better in each course.			
Fall Semester Year 3: 16-17 hours				
	Discourse III: Civic and Community Engagement	3		
	Anchor III: Civic and Community Engagement - Click for Options	3		
	*CHEM 3XX: Any 300-level Chemistry course OR *LS-BIOC 341: Basic Biochemistry OR *LS-BIOC 365: Human Biochemistry I	3	C-	
	Foreign Language Requirement (211 or higher) – Click for Options	3		
	LS-ANAT 118: Introductory Anatomy (pre-dental, pre-medical and pre-pharmacy) OR Free Elective	3		
	LS-ANAT 118L: Introductory Anatomy Laboratory (pre-dental, pre-medical and pre-pharmacy) OR Free Elective	1-2		

◆	Complete RooWriter Writing Assessment Complete Foreign Language Requirement (211 or higher) Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Spring Semester Year 3: 14 hours				
	*CHEM 341WI: Analytical Chemistry I (CAS Writing Intensive Requirement)	4	C-	POL-SCI 210, HIST 1100 or 1101 fulfill Focus C as well as the Missouri Constitution requirement.
	Focus C- Human Values & Ethical Reasoning – Click for Options	3		
	Missouri Constitution course (if not fulfilled above – Click for Options) or other CAS Social & Behavioral Sciences Requirement course – Click for Options	3		
	LS-PHYS 117: Human Physiology (pre-dental, pre-medical and pre-pharmacy) OR Free Elective	3		
	LS-PHYS 117L: Human Physiology Laboratory (pre-dental, pre-medical and pre-pharmacy) OR Free Elective	1		
Summer Semester Year 3				
				May use summer semester to ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
Fall Semester Year 4: 13-15 hours				
	Focus A - (if not fulfilled above) – Click for Options OR Free Elective	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.
	CAS Social & Behavioral Sciences Requirement - Click for Options (recommend 300/400-level) (if not fulfilled above) OR Free Elective	3		
	*CHEM 3XX: Any 300-level Chemistry course	1-3	C-	Take the ETS Proficiency Profile (EPP) exit exam.
	CAS Arts & Humanities – Click for Options	3		
	Free Elective (recommend 300/400-level)	3		
Spring Semester Year 4: 12-18 hours				
	CAS Arts & Humanities – Click for Options	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.
	Free Elective (recommend 300/400-level)	3		
	Free Elective (recommend 300/400-level)	3		
	Free Elective (recommend 300/400-level)	3		
	<i>Free Elective (only take these credits if needed to reach 120 minimum hours)</i>	0-6		Take Major Field (MF) exam.

Non-course requirements

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

Met

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.]