

Major Map: Chemistry 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: 9-24

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: 13-16 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 211: General Chemistry I (Focus B – Scientific Reasoning & Quantitative Analysis)	4	C-	CHEM 211L fulfills CAS Laboratory Experience Requirement.
	**CHEM 211L: General Chemistry I Laboratory	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	2-5	C-	MATH 110 or any Math/STAT at the 200 level counts toward the 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: 15 hours				
	**Anchor II: Culture and Diversity - Click for Options	3		Math Entrance Exam required prior to enrollment in MATH 110 and many higher level MATH/STAT courses.
	**Discourse II: DISC 200 - Culture and Diversity (Speech and Writing)	3		
◆	* **CHEM 212R: General Chemistry II (Focus Elective)	4	C-	Any Math/STAT at the 200 level counts toward the CAS Science & Math Requirement.
	* **CHEM 212LR: General Chemistry II Laboratory	1	C-	
	*MATH 210: Calculus I (CAS Science & Math Requirement) OR *MATH 220: Calculus II OR *MATH 250: Calculus III	4	C-	

◆	Complete Discourse I and Anchor I Complete 12 term hours minimum toward degree Complete 24 total hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Summer Semester Year 1				
				May use summer semester ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
Fall Semester Year 2: 16 hours				
◆	*/**CHEM 321: Organic Chemistry I	3	C-	Take the RooWriter Writing Assessment the semester immediately following Discourse II and at least a semester before registering for a Writing Intensive course.
	*/**CHEM 321L: Organic Chemistry I Lab	1	C-	
	*PHYSICS 240: Physics for Sci and Eng I	5	C-	
	*MATH 220: Calculus II OR *MATH 250: Calculus III OR Free Elective	4	C-	
	Focus A: Arts & Humanities – Click for Options	3		
◆	Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Spring Semester Year 2: 16 hours				
◆	**CHEM 322R: Organic Chemistry II	3	C-	POL-SCI 210, HIST 1100 or 1101 fulfill Focus C as well as the Missouri Constitution requirement.
	**CHEM 322L: Organic Chemistry II Lab	1	C-	
	*PHYSICS 250: Physics for Sci and Eng II	5	C-	
	*MATH 250: Calculus III OR Free Elective	4	C-	
	Focus C - Human Values & Ethical Reasoning – Click for Options	3		
◆	Complete Discourse II and Anchor II Complete 12 term hours minimum toward graduation Complete 60 total hours toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			
Summer Semester Year 2				
				May use summer semester ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
Fall Semester Year 3: 14-16 hours				
	Discourse III: Civic and Community Engagement	3		
	Anchor III: Civic and Community Engagement - Click for Options	3		
	*CHEM 431: Physical Chemistry I	3	C-	
	*CHEM 341: Analytical Chemistry with Lab	4	C-	
	*CHEM 410: Chemical Literature	1	C-	
	<i>Free Elective (only take these credits if necessary)</i>	0-2		
◆	Complete RooWriter Writing Assessment Complete 12 term hours minimum toward degree Earn minimum 2.000 term GPA			

Earn minimum 2.000 cumulative UM GPA			
Spring Semester Year 3: 15 hours			
* CHEM 432: Physical Chemistry II	3	C-	
* CHEM 437WI: Experimental Physical Chemistry I (CAS Writing Intensive Requirement)	3	C-	
* CHEM 451R: Inorganic Chemistry	3	C-	
Missouri Constitution course (if not fulfilled above – Click for Options) or other CAS Social & Behavioral Sciences Requirement course – Click for Options	3		
Free Elective	3		
Summer Semester Year 3: 0 hours			
			May use summer semester ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
Fall Semester Year 4: 14-16 hours			
* CHEM 382: Inorganic and Organic Synthesis	2	C-	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.
* CHEM 367: Bioorganic Chemistry	3	C-	
CAS Social & Behavioral Sciences Requirement - Click for Options	3		
CAS Arts & Humanities – Click for Options	3		
Free Elective	3		
Free Elective (<i>only take these credits if necessary</i>)	0-2		
Spring Semester Year 4: 12-15 hours			
* CHEM 442R	3	C-	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.
*3XX/4XX: Advanced Work Major Requirement – Click for Options	3	C-	
CAS Arts & Humanities – Click for Options	3		
Free Elective	3		
<i>Free Elective (only take these credits if needed to reach 120 minimum hours)</i>	0-3		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.]