UMKC Major Map: Bachelor of Science in Geology

First-Time College Students **Catalog Year: 2014 - 2015**

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 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	*MATH 110 or MATH 116, or 200-level MATH/STAT*	Foreign Language Requirement	*No*	Free Elective Hours	*3-22*

Critical Course or Bench-mark	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: 14-15 hours				
	****Anchor I: Reasoning and Values** - Click for options		3	ALEKS Math Placement Exam is required prior to enrollment in MATH 120 and some 200-level MATH/STATS courses, including 210 and 235. MATH 120 or any MATH/STAT at the 200 level fulfills CAS Math Requirement.
	****DISC 100: Reasoning and Values** (Speech and Writing)		3	
◆	**Focus B: Scientific Reasoning and Quantitative Analysis** **GEOLOGY 220: General Geology	C	3	
◆	** GEOLOGY 220L: General Geology Laboratory (CAS Laboratory Requirement)	C	2	
◆	MATH 120: Precalculus (CAS Science & Math Requirement) OR *MATH 210: Calculus I (CAS Science & Math Requirement) OR *STAT 235: Elementary Statistics (CAS Science & Math Requirement)	C	3-5	
◆	Complete 15 term hours toward degree (recommended), 12 minimum (required) 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	
	****DISC 200: Culture and Diversity** (Speech and Writing)		3	
	*MATH 210: Calculus I (CAS Science & Math Requirement) OR *STAT 235: Elementary Statistics (CAS Science & Math Requirement) OR Free Elective		3-4	
◆	GEOG 203: Introduction to GIS		4	
◆	Complete Anchor I and DISC 100 Complete 15 term hours toward degree (recommended), 12 minimum (required) Complete 30 total hours minimum toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

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Summer Semester Year 1: 0 hours if all previous courses completed

				May use summer semester ensure completion of 30 hours per academic year or to lighten fall and spring course loads.
◆	Complete STAT 235: Elementary Statistics or MATH 210: Calculus I			

Fall Semester Year 2: 15 hours

	GEOLOGY 250L: Field Methods in Earth and Environmental Science OR CAS Arts & Humanities – Click for options (if taking GEOLOGY 251 instead later)	C	3	Take the **RooWriter Writing Assessment** the semester immediately following DISC 200 and at least a semester before registering for a Writing Intensive course. ^BIOLOGY 108: General Biology is required for the Geology B.S., but High School Biology satisfies this requirement.
◆	GEOLOGY 325: Sedimentology/Stratigraphy	C	4	
	CHEM 211: General Chemistry I (Focus Elective**)		4	
	**CHEM 211L: General Chemistry I Laboratory (CAS Science & Math Requirement)		1	
	^BIOLOGY 108: General Biology I or Free Elective (if already fulfilled by high school credit)		3	
◆	Complete 15 term hours toward degree (recommended), 12 minimum (required) Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

Spring Semester Year 2: 14-15 hours

	GEOLOGY 251: Field Methods in Earth and Environmental Science (if GEOLOGY 250L not taken above) OR CAS Arts & Humanities – Click for options		3	
◆	GEOLOGY 313: Evolution and the Geologic Record OR GEOLOGY 314: Geomorphology OR GEOLOGY 3XX/4XX: Elective for major – Click for options	C	3-4	
	**CHEM 212R: General Chemistry II (CAS Science & Math Requirement)		4	
	**CHEM 212LR: General Chemistry II Laboratory		1	
	Focus A: Arts and Humanities Click for options		3	
◆	Complete Anchor II and DISC 200 Complete 15 term hours toward degree (recommended), 12 minimum (required) Complete 60 total hours toward degree Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

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

				GEOLOGY 490 may be taken Summer Semester Year 2 by permission.

Fall Semester Year 3: 14-15 hours

	GEOLOGY 312: Mineralogy	C	4	POL-SCI 210, HISTORY 101 or 102 fulfill **Focus C: Human Actions, Values, and Ethics** as well as the Constitution
	PHYSICS 210: General Physics I OR PHYSICS 240: Physics for Scientists & Engineers I		4-5	

	Focus C: Human Actions, Values, and Ethics Click for options (May choose Focus C course to also fulfill MO Constitution Requirement)		3	requirement.
	Missouri Constitution course (if not fulfilled by above) – Click for options OR other CAS Social & Behavioral Sciences Requirement – Click for options		3	
◆	Complete RooWriter Writing Assessment Complete 15 term hours toward degree (recommended), 12 minimum (required) Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

Spring Semester Year 3: 14-15 hours

	****Anchor III: Civic and Community Engagement** - Click for options		1	
	****DISC 300: Civic and Community Engagement** (Speech and Writing)		3	
	GEOLOGY 350: Earth Structures and Tectonics		4	
	PHYSICS 220: General Physics II OR PHYSICS 250: Physics for Scientists & Engineers II		4-5	
◆	Complete 15 term hours toward degree (recommended), 12 minimum (required) Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

Summer Semester Year 3: 6 hours

	GEOLOGY 490: Geology Field Camp		6	
◆	Complete GEOLOGY 490: Geology Field Camp (offered even years)			

Fall Semester Year 4: 15-16 hours

	GEOLOGY 3XX/4XX: Elective for major – Click for options		3-4	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.
	CAS Arts & Humanities Requirement - Click for options		3	
	CAS Social & Behavioral Sciences Requirement - Click for options		3	
	Elective hours in Math or Science (for BS), if needed OR Free Elective		3	
	Free Elective		3	
◆	Complete 15 term hours toward degree (recommended), 12 minimum (required) Earn minimum 2.000 term GPA Earn minimum 2.000 cumulative UM GPA			

Spring Semester Year 4: 9-15 hours

	^GEOLOGY 499WI: Geology Seminar (CAS Writing Intensive Requirement)		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.
	GEOLOGY 313: Evolution and the Geologic Record (if not taken above) OR GEOLOGY 314: Geomorphology OR GEOLOGY 3XX/4XX: Elective for major – Click for options		3-4	

	Free Elective		3
	Free Elective (only take these credits if needed to reach 120 minimum hours)		*0-5*

Complete 15 term hours toward degree (recommended), 12 minimum (required)
Earn minimum 2.000 term GPA
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	2.0	2.0

Other Information and Policy

Non-course requirements **Met**
RooWriter Writing Assessment
ETS Proficiency Profile (EPP) exam

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.

A minimum of 36 upper-level hours required for graduation.

Advising Contact Information

Geology Undergraduate Advisor: Tina Niemi, (816) 235-5342; niemit@umkc.edu
Department Chair: James Murowchick, (816) 235-2979; murowchickj@umkc.edu
Department Office Administrator: Mary McDonough, (816) 235-1334; geosciences@umkc.edu

Career Opportunities

The US Department of Labor and Statistics projects excellent job opportunities for geoscientists for the next 15 years. Current rates of retirement of geologists exceed the production of new geologists, suggesting an increasing need for geoscientists in the coming years. Career opportunities for geologists include employment in academics, government, and industry in diverse fields such as oil and gas exploration and production, water resources, mining, and environmental geology and work for the U. S. Army Corps of Engineers, U.S. Geological Survey, petroleum and mining companies, and a large number of geotechnical engineering and environmental firms.

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

Program Description

The UMKC Undergraduate Geology degree program educates students on fundamental geologic concepts, provides training in field and laboratory techniques and problem solving, and prepares students for careers as professional geoscientists. Through course work instruction, field experiences, and mentoring, students develop an understanding of Earth materials and the underlying principles and dynamic processes that change the Earth through time. The geology curriculum emphasizes developing the ability to collect and interpret field data as well as familiarity with mapping techniques and laboratory analyses, as these are vital components of training for all geologists.

Admission Requirements

The Admissions requirements for the Geology B.A. are the same as the requirements for admission to UMKC. However, the department prefers students to have a high school degree that includes three to four years of math, three to four years of science including at least one Biology course, and at least two years of a foreign language.