



Major Map: Secondary Education – Physics (unified)

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 benchmark indicate academic requirements for each term of enrollment.

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. Grade	Notes
Fall Semester Year 1: 14 hours				
	**Anchor I: Reasoning and Values	3		BIO 108 meets Focus B.
	**Discourse I: DISC 100 - Reasoning and Values	3		
◆	*MATH 210: Calculus I	4	B	
	BIOLOGY 108/108L: General Biology I with Lab	3/1	B	
◆	Complete 12 term hours minimum toward degree Earn 2.750 minimum cumulative UM GPA Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Spring Semester Year 1: 15 hours				
	**Anchor II: Culture and Diversity	3		
	**Discourse II: DISC 200 - Culture and Diversity	3		
◆	*PHYSICS 240: Physics for Science and Engineering	5	B	
◆	MATH 220: Calculus II	4		
◆	Complete Anchor I and Discourse I Complete 30 total hours toward degree Earn a cumulative UM GPA of a 2.750 or higher Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Summer Semester Year 1: 3 hours				
	GEOLOGY 220: General Geology	3	B	
	Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Fall Semester Year 2: 16 hours				
	**Anchor III: Community & Civic Engagement	3		
	**Discourse III: DISC 300 - Culture and Diversity	3		
◆	*PHYSICS 250: Physics for Science and Engineering II	5	B	
	ENV-SCI 110R/110L: Understanding the Earth with Lab	3/2	B	
	Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Spring Semester Year 2: 15 hours				
	Focus A – Arts and Humanities	3		Recommend HIST 1100 or 1101 to



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	Focus C - Human Values & Ethical Reasoning	3		meet Focus C. This course will prepare you for the MoGEA.
	CHEM 211/211L: General Chemistry I with Lab	4/1	B	
	BIOLOGY 109/109L: General Biology II with Lab	3/1	B	
				Recommend HIST 1600 or 1601 to meet Focus A. This course will prepare you for the MoGEA.
◆	Complete Anchor II and Discourse II Complete the Missouri General Education Assessment (MoGEA) Complete the RooWriter Assessment Complete 60 hours toward degree Earn a cumulative UM GPA of a 2.750 or higher Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Summer Semester Year 2: 11 hours				
	*CHEM 212R/212LR: General Chemistry II with Lab	4/1	B	
	TCH-ED 404: Education of the Exceptional Child	3	B	
	TCH-ED 385: Teaching and Learning with Technology	3	B	
	Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Fall Semester Year 3: 16 hours				
	*PHYSICS 310: Mechanics I	3	B	Required to complete a background check along with applying for substitute teaching license.
	*PHYSICS 350: Modern Physics with Engineering App.	3	B	
	*PHYSICS 410: Thermal Physics	3	B	
	GEOG 319: Descriptive and Synoptic Meteorology	4	B	
	TCH-ED 403: Educational Psychology	3	B	
	Apply to the Teacher Education Program Complete the Content Assessment Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Spring Semester Year 3: 12 hours				
	*PHYSICS 460: Electricity and Magnetism I	3	B	Complete interview for Teacher Education program. All test need to be completed by June 1 st .
	*PHYSICS 445LWI: Modern Physics Laboratory OR *PHYSICS 475LWI: Nuclear Physics Laboratories	3	B	
	*PHYSICS 420: Optics	3	B	
	TCH-ED 420: Adolescent Development	3	B	
	Earn a cumulative UM GPA of a 2.750 or higher Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Summer Semester Year 3: 10 hours				
	TCH-ED 430: Gateway to Teaching	3	B	
	EDUC 428: Cultural Diversity in American Education	3	B	
	TCH-ED 408WI: Advanced Foundations	3	B	
	TCH-ED 422: Practicum I	1	B	
	Earn a cumulative UM GPA of a 2.750 or higher Earn a B or higher in all BIOLOGY, GEOG, GEOLOGY, PHYSICS, ENV-SCI, CHEM, TCH-ED, and EDUC courses			
Fall Semester Year 4: 17 hours				
	TCH-ED 423: Practicum II	2	B	
	TCH-ED 427: Reading in the Secondary School	3	B	
	TCH-ED 435: Special Methods Science	3	B	
	TCH-ED 438: Culturally Responsive Strategies	3	B	
	TCH-ED 470: Philosophy & History of Science & Tech.	3	B	
	PHYSICS 472: Introduction to Quantum Mechanics	3	B	



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Spring Semester Year 4: 12 hours		
TCH-ED 437: Student Teaching – Secondary	10	
TCH-ED 495: Science Capstone	2	
Apply for graduation Apply for certification		

Non-course requirements

	Met
RooWriter	<input type="checkbox"/>
Teacher Education Application	<input type="checkbox"/>
Missouri General Education Assessment (MoGEA)	<input type="checkbox"/>
Substitute Certification	<input type="checkbox"/>
Background Check	<input type="checkbox"/>
Pedagogical Assessment	<input type="checkbox"/>
Content Assessment	<input type="checkbox"/>
Disposition Assessment	<input type="checkbox"/>

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)	Major GPA (2.0 Minimum)	UMKC GPA
	See Advisor	2.75 cumulative; 3.0 content; 3.0 professional	2.75

Program Description

The School of Education, organized officially as a separate academic division in 1954, was the result of the University of Kansas City's involvement in professional education since 1940. At that early date the University was offering an M.A. in education, heavily liberal-arts laden, with most classes conducted in the summer and evenings. An undergraduate major in elementary education was established in 1952, and the first University of Kansas City doctoral program, the Ph.D. in education, was inaugurated with the organizing of the school in 1954. Since 1954, the school has grown to include three disciplinary divisions with 19 programs, offering bachelor of arts, master of arts, educational specialist, education doctorate and doctor of philosophy degree programs. Several degree and certification programs are offered in cooperation with the School of Biological Sciences, the Conservatory of Music and the College of Arts and Sciences. The mission of the School of Education is to recruit, prepare and support outstanding teachers, mental health professionals and administrators who will create lifelong opportunities through education for America's diverse urban communities.



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This mission is centered on six key values which embody the knowledge, skills and dispositions expected of our candidates across the School of Education. The goals defined by individual programs are more specific subsets of these broader goals:

- Academic excellence.
- Strategic innovation.
- Inquiry leading to reflective decision making and problem solving.
- Skilled and knowledgeable professionals working collaboratively.
- Democracy, diversity and social justice.
- Caring and safe environments.

Admission Requirements

- Admission to UMKC (<http://umkc.edu/admission>)
- Completed the majority of specific pre-education and subject area course work prior to start of the professional education semesters;
- Attained a cumulative grade point average of at least 2.75;
- Attained a subject-area grade point average of at least 3.0 (middle school, secondary, and K-12);
- Submitted acceptable results from an Missouri FBI background check;
- Passed the Missouri General Education Assessment, Content Assessment and Pedagogical Assessment;
- Completed the application for the School of Education first Bachelor's degree seekers:
- Submitted a score from the ACT or SAT; (if graduated from High School in past 5 years)
- Pass ROO Writer Exam before taking the required writing intensive course.

Instructions are available at the School of Education web site: <http://education.umkc.edu/applyte>

Career Opportunities

To learn more about career opportunities for Education majors please [click here](#).

Contact Information

Questions? Call the School of Education Student Services office at 816-235-2234 or e-mail education@umkc.edu. Those with speech or hearing impairments may use Relay Missouri, 1-800-735-2966 (TT) or 1-800-735-2466 (voice). UMKC is an equal opportunity/affirmative action institution.