



**Major Map: Secondary Education - Physics (unified)**

**Catalog Year: 2008-2009**

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.

*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 and the education requirements outlined in the School of Education Student Handbook.*

Course Subject and Title	Hrs.	Upper Division	Transfer Course	Minimum Grade if Required	Date Completed	Final Grade	Pre-requisites met	Additional Critical Tracking Notes
<b>Fall Semester Year 1: 17 hours</b>								
EDUC 180 Introduction to Education	2	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
ENG 110 English Composition I	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
COMS 110 Speech/Communication	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
MATH 210 Calculus I	4	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 240 Physics for Science & Engineering	5	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Spring Semester Year 1: 15 hours</b>								
ENG 225 English Composition II	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
MATH 220 Calculus II	4	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 250 Physics for Science & Engineering II	5	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
FINE ARTS (Pick from Art 110, Consvty 120, Theatre 130)	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
<b>Summer Semester Year 1</b>								
May use summer semester to lighten fall and winter course loads.								
<b>Fall Semester Year 2: 17 hours</b>								
HIST 101 or 102 American History I or II	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	Complete WEPT
POLS 210 American Government	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	
MATH 250 Calculus III	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 310 Mechanics I	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
ENVS 110R/110L Understanding the Earth with lab	3/2	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Spring Semester Year 2: 18 hours</b>								
ENG__ Literature	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	Complete CBASE
TCH-ED 385 Teaching and Learning with Technology	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
MATH 345 Ordinary Differential Equations	4	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
CHEM 211/211L General Chemistry I with lab	4/1	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
GEOL 220 General Geology	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Summer Semester Year 2: 6 hours</b>								
TCH-ED 404 Education of the Exceptional Child	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
Physics Elective 300+	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Fall Semester Year: 18 hours</b>								
Social Science (pick from ECON, GEOG, POLS, PSYCH, SOC)	3	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	Complete PRAXIS II: Physics: Content Knowledge #0265
TCH-ED 403 Educational Psychology	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 460 Electricity & Magnetism I	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	Apply to Professional
CHEM 212/212L General Chemistry II	4/1	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	



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with lab								Education Program
BIOL 108/108L General Biology I with lab	3/1	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Spring Semester Year 3: 16 hours</b>								
TCH-ED 420 Adolescent Development	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 350 Modern Physics with Engineering App.	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 475L Modern Physics or Nuclear Physics Lab	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 385L Elementary Circuits Lab	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
BIOL 109/109L General Biology II with lab	3/1	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Summer Semester Year 3: 9 hours</b>								
EDUC 428 Cultural Diversity in American Education	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
TCH-ED 408WI Advanced Foundations	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
TCH-ED 422 Practicum I	0	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
PHYS 413 Computational Physics	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Fall Semester Year 4: 16 hours</b>								
TCH-ED 423 Practicum II	0	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	Apply for graduation.
TCH-ED 427 Reading in the Secondary School	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
TCH-ED 435 Special Methods Science	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
TCH-ED 438 Culturally Responsive Strategies	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
TCH-ED 470 Philosophy & History of Science & Technology	3	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
GEOG 319 Descriptive & Synoptic Meteorology	4	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	
<b>Spring Semester Year 4: 12 hours</b>								
TCH-ED 437 Student Teaching – Secondary	10	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	Apply for certification.
TCH-ED 493 Special Methods II (Capstone)	2	<input type="checkbox"/>	<input type="checkbox"/>	C			<input type="checkbox"/>	

**Non-course requirements**

- Math Placement Exam
- Written English Proficiency Test (WEPT)
- College Basic Academic Subjects Exam (CBASE)
- PRAXIS II: Physics: Content Knowledge #0265
- Admission to professional education program
- Admission to internship year
- Program Portfolio – Teacher Work Sample

**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.

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

- Complete an oral communications class, English composition I & II, and a required math class or its equivalent with grades C or better
- Complete the specific pre-education, subject area, and education courses with a C grade or higher



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- Attain a cumulative grade point average of at least 2.75
- Attain a subject-area grade point average of at least 2.5 (applies to middle school, secondary, and K-12 programs)
- Gain acceptance into the School of Education Professional Program (consult with your academic advisor)
- Submit acceptable results from a Missouri FBI background check
- Passed each section of the College Basic Academic Subjects Exam (CBASE) with scores of 235 or higher
- Passed the appropriate Praxis II exam

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