



Physics

High School (9-12) Teacher Certification Program for College Graduates

Advising Guide

Graduate certification programs must be designed for the individual student and signed off by Dr. Hal Harris.

This program plan is not intended for self-advising.

For an appointment, call Dr. Harris at 314-516-5344 or email hharris@umsl.edu
We look forward to working with you.

Physics Education announcements are posted in Chemistry and Biochemistry, 315 Benton Hall

Revised February 2006

Physics: PDC Program Plan

Name _____ Student # _____

Address _____

City _____ State/zip _____

Home Phone _____ Other phone/ e-mail _____

Education Advisor: _____

Physics Faculty Advisor: Dr. Hal Harris hharris@umsl.edu 314-516-5344

Advising Dates: #1 _____ #2 _____ #3 _____

BA or BS from which undergraduate college? _____

Major _____ Year _____ GPA _____

Mathematics Prerequisite Courses

<u>Course Titles</u>	<u>Course No.</u>	<u>Prereq. for</u>	<u>Credit</u>
College Algebra (3)	MATH 1030	CHEM 1111	_____
Trigonometry (2)	MATH 1035	CHEM 1111	_____
Calculus I (5)	MATH 1800	PHYS 2111	_____
Calculus II (5)	MATH 1900	PHYS 2112	_____
Calculus III (5)	MATH 2000	PHYS 3200	_____
Differential Equations (3)	MATH 2020	PHYS 3221 3223, 3231	_____

<u>Course Titles</u>	<u>Course No.</u>	<u>Prereq. for</u>	<u>Credit</u>
Science Courses			
<u>Physics</u>			
Mechanics and Heat (5)	PHYS 2111	PHYS/DESE	_____
Electricity, Magnetism & Optics (5)	PHYS 2112	PHYS/DESE	_____
Survey Theoretical Physics (3)	PHYS 3200	PHYS/DESE	_____
Mechanics (5)	PHYS 3221	PHYS/DESE	_____
Electricity and Magnetism (3)	PHYS 3223	PHYS/DESE	_____
Intro. To Modern Physics (3)	PHYS 3231	PHYS/DESE	_____
Modern Electronics (3)	PHYS 4310	PHYS/DESE	_____
Advanced Physics Laboratory (3)	PHYS 4311	PHYS/DESE	_____
<u>Chemistry</u>			
Introductory Chemistry I (5)	CHEM 1111	PHYS/DESE	_____
<u>Biology</u>			
Introductory Biology I (5)	BIO 1811	DESE	_____
<u>Earth Science</u>			
General Geology (4)	GEO 1101	3 Credit Hours	
OR Elementary Meteorology (4)	MET 1001		
OR Introductory Astronomy (4)	ASTR 1001		DESE
<u>Environmental Science</u>			
Environmental Biology (3)	BIO 1202	3 Credit Hours	
OR General Ecology (3)	BIO 2102		
OR Conservation Biology (2)	BIO 3202		DESE
<u>Philosophy</u>			
Philosophy of Science (3)	PHIL 3380	DESE	_____

Graduate Teacher Certification Sequence: Education Courses (Physics)

NOTE: **ALL Education courses now require field experiences in diverse schools.**
 Transfer courses without fieldwork may not be accepted. See Graduate Education advisor
 to enroll in accelerated program (Nancy Ashford, 516-5483, or nashford@umsl.edu).

Apply to Graduate School (2.75 minimum GPA) and the Teacher Education Program.

<u>Level I</u>		<u>District Placement</u>	<u>Credit</u>
Foundations of Education (4) <i>[Replaces TCH ED 2210 & 2211]</i>	TCH ED 5311	_____	_____
Learning . . . in Sec. School (4) <i>[Replaces TCH ED 2212 & 3312]</i>	ED PSY 6109	_____	_____
<i>Prereq: General Psychology (3)</i>	PSY 1003		_____

Apply for Internship and Student Teaching (online). *Deadline: May 1 for Fall internship and Spring student teaching. Contact your Physics Ed. Faculty Advisor for course audit and placement. You need a “near-major,” 2.5 GPA in your subject area, and diverse field experiences.*

<u>Level II</u>		<u>District Placement</u>	<u>Credit</u>
Designing Instruction (3) <i>[Replaces TCH ED 3310]</i>	TCH ED 5310	_____	_____

NOTE: Plan to complete TCH ED 5310 or 3310 two semesters before student teaching.

Post-degree candidates may defer the last Level II course to the Internship:

Differentiated Instruction (4) <i>[Replaces TCH ED 4391 & 3313]</i>	TCH ED 5312	_____	_____
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Level III:

Internship Semester: *Physics Methods and Internship MUST be taken concurrently the semester before student teaching. These courses are offered only during the Fall semester.*

Curriculum & Methods of Teaching Physical Sciences (3)	PHYS 4800/ SEC ED 3240	Faculty Advisor Approval	_____
Professional Internship (3)	SEC ED 4989	100 clock hours	_____

Student Teaching Semester: *Student Teaching and Seminar MUST be taken concurrently in the Spring.*

Physics Teaching Seminar (1)	PHYS 4833	_____
Secondary Student Teaching (12)	SEC ED 4990	_____

Student teaching is a full-day, full semester role. PLEASE AVOID holding a job at this time.

Undergraduate Sequence: Education Courses (Physics)

NOTE: **ALL Education courses now require field experiences in diverse schools.**
Transfer courses without fieldwork may not be accepted (see advisor in TC&A).

<u>Level I</u> (prerequisite to all higher courses)	<u>District Placement</u>	<u>Credit</u>
Intro. to Teaching (3)	TCH ED 2210 _____	_____
Intro. to Schools (3)	TCH ED 2211 _____	_____
Intro to Learners & Learning (3)	TCH ED 2212 _____	_____
<i>Prereq: General Psychology (3)</i>	PSY 1003 _____	_____

FORMAL ADMISSION: Complete Level I, meet GPA requirements, and apply to the Teacher Education Program (in TC&A) before enrolling in Level II courses.

Apply for Internship and Student Teaching (online). Deadline: Feb. 1 for Fall internship and Spring student teaching. Contact your Physics Ed. Faculty Advisor for course audit and placement. You need a “near-major,” 2.5 GPA in your subject area, and diverse field experiences.

<u>Level II</u>	<u>District Placement</u>	<u>Credit</u>
Intro. to Instructional Methods (3)	TCH ED 3310 _____	_____
Psych. of Teaching & Learning (3)	TCH ED 3312 _____	_____
Intro. Learners w/ Disabilities (3)	TCH ED 3313 _____	_____
Teaching Reading in Sec. Sch. (3)	TCH ED 4391 _____	_____

NOTE: Plan to complete TCH ED 3310/ Level II two semesters before student teaching.

Level III:

Internship Semester: *Physics Methods and Internship must be taken concurrently the semester before student teaching. These courses are offered only during the Fall semester.*

Curriculum & Methods of Teaching Physical Sciences (3)	PHYS 4800/ SEC ED 3240	Faculty Advisor Approval	_____
Professional Internship (3)	SEC ED 4989	100 clock hours	_____

Student Teaching Semester: *Student Teaching and Seminar MUST be taken concurrently in the Spring.*

Physics Teaching Seminar (1)	PHYS 4833	_____
Secondary Student Teaching (12)	SEC ED 4990	_____

Student teaching is a full-day, full semester role. PLEASE AVOID holding a job at this time.

Additional Courses Required for Unified Science Certification/Physics Endorsement

<u>Course Titles</u>	<u>Course No.</u>	<u>Prereq. for</u>	<u>Credit</u>
<u>Biology</u>			
Introductory Biology II (5)	BIO 1812	DESE	_____
<u>Chemistry</u>			
Introductory Chemistry II (5)	CHEM 1121	DESE	_____
<u>Earth Science</u>			<u>6 Credit Hours (3 more)</u>
General Geology (4)	GEO 1101	DESE	
OR Elementary Meteorology (4)	MET 1001	DESE	
OR Introductory Astronomy (4)	ASTR 1001	DESE	_____

*Questions? Contact Dr. Hal Harris
314-516-5344 or HHarris@umsl.edu*