

Physics Education, B.S.

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Requirements

Prepares the student to teach high school physics and AP physics. The program allows for those interested to supplement their studies with extra courses in physics or other science through elective upper division credit. A seminar course provides the student with exposure to careers in physics.

Total Program Credits: 120

Matriculation Requirements:			
<ol style="list-style-type: none"> Students are admitted directly to the Baccalaureate degree program in Physics Education upon acceptance to the Secondary Education Program. Students must obtain the departmental Advisor's signature on an approved program plan prior to enrollment in their second semester of study. 			
Secondary Education Requirements:			
<ol style="list-style-type: none"> ACT exam minimums: Composite 21, English 20, Math 19; or SAT exam minimums: Critical Read /Math 1000, with Math and Reading scores of 450; or If student has a bachelor degree or higher, he/she does not need to meet this testing requirement. GPA of 3.0 or higher with no grade lower than a C in content area courses. Completion of all General Education requirements and the majority of content area courses. Pass LiveScan Criminal Background Check. 			
General Education Requirements:			39 Credits
	ENGL 1010	Introduction to Academic Writing	3
or	ENGH 1005	Literacies and Composition Across Contexts (5)	
	ENGL 2010	Intermediate Writing/Academic Writing and Research	3
	MATH 1210	Calculus I	5
Complete one of the following:			3
	HIST 1700	American Civilization (3)	
	HIST 2700	US History to 1877 (3)	
and	HIST 2710	US History since 1877 (3)	
	HIST 1740	US Economic History (3)	
	POLS 1000	American Heritage (3)	
	POLS 1100	American National Government (3)	
Complete the following:			
	PHIL 2050	Ethics and Values	3
	HLTH 1100	Personal Health and Wellness (2)	
or	PES 1097	Fitness for Life	2
Distribution Courses:			
	Biology		3
	CHEM 1210	Principles of Chemistry I (To be taken with CHEM 1215)	4
	CHEM 1220	Principles of Chemistry II (To be taken with CHEM 1225)	4
	Humanities		3

	Fine Arts	3
	Social/Behavioral Science	3
Discipline Core Requirements:		73 Credits
Must be completed with a grade B- or higher.		
CHEM 1215	Principles of Chemistry I Laboratory (To be taken with CHEM 1210)	1
CHEM 1225	Principles of Chemistry II Laboratory (To be taken with CHEM 1220)	1
HIST 4320	History of Scientific Thought	3
MATH 1220	Calculus II	5
MATH 2210	Calculus III	3
PHYS 2210	Physics for Scientists and Engineers I	4
PHYS 2215	Physics for Scientists and Engineers I Lab	1
PHYS 2220	Physics for Scientists and Engineers II	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
PHYS 3010	Physics Experiments for Secondary Education	1
PHYS 3110	Modern Physics I	3
PHYS 3115	Introduction to Experimental Physics I WE	2
PHYS 4200	Teaching Methods in Science	3
Education Courses:		
EDEL 1010	Introduction to Education	2
EDSC 3000	Educational Psychology	3
EDSC 3250	Instructional Media	2
EDSC 4200	Classroom Management I	2
EDSC 4250	Classroom Management II	2
EDSC 4440	Content Area Literacies	3
EDSC 445G	Multicultural Instruction ESL	3
EDSC 455G	Secondary Curriculum Instruction and Assessment	3
EDSC 4850	Student Teaching--Secondary	8
EDSC 4990	Teacher Performance Assessment Project WE	2
EDSP 340G	Exceptional Students	2
Complete the following set:		
PHYS 490R	Seminar (Must be repeated two times.) (0.5)	1
Complete 8 credits from the following:		8
ASTR 3050	Astrophysics I (3)	
ASTR 3060	Astrophysics II (3)	
PHYS 1100	Introductory Math Techniques for Physics and Engineering (3)	
PHYS 2500	Elementary Fluids and Thermal Physics (3)	
PHYS 3120	Modern Physics II (3)	
PHYS 3125	Introduction to Experimental Physics II WE (2)	

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	PHYS 3230	Principles of Electronics for the Physical Sciences (3)	
	PHYS 3300	Mathematical Physics (3)	
	PHYS 3400	Classical Mechanics (3)	
	PHYS 3500	Thermodynamics (3)	
	PHYS 3800	Energy use on Earth (3)	
	PHYS 4700	Acoustics (3)	
Elective Requirements:			8 Credits
	Complete 8 credits of upper division electives.		8

Graduation Requirements:

1. Completion of a minimum of 120 semester credits with a minimum of 40 upper-division credits.
2. Overall Grade of 3.0 (B) or above with no grade lower than a C or better in major required content courses and no grade lower than a B- in Licensure and Methods courses.
3. Residency hours -- minimum of 30 credit hours through course attendance at UVU, with at least 10 hours earned in the last 45 hours.
4. Completion of GE and specified departmental requirements.
5. A minimum of 52 credit hours must be in the major with a minimum of 20 credits taken at UVU. A minimum of 24 chemistry and physics credits must be upper-division.
6. Successful completion of at least one Global/Intercultural course.

Physics Education, B.S.**Graduation Plan**

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in [Wolverine Track](#).

Milestone courses (pre-requisites for a course in one of the subsequent semesters) are marked in red and italicized.

Semester 1	Course Title	Credit Hours
<i>ENGL 1010</i>	Introduction to Writing	3
MATH 1210	Calculus I	5
Americal Institutions	GE List	3
PHIL 2050	Ethics and Values	3
HLTH 1100 or PES 1097	GE List	2
	Semester total:	16
Semester 2	Course Title	Credit Hours
ENGL 2010	Intermediate Writing/Academic Writing and Research	3
MATH 1220	Calculus II	5
PHYS 2210	Physics for Scientists and Engineers I	4
PHYS 2215	Physics for Scientists and Engineers I Lab	1
Biology Distribution	GE List	3
	Semester total:	16
Semester 3	Course Title	Credit Hours
MATH 2210	Calculus III	3
PHYS 2220	Physics for Scientists and Engineers II	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
CHEM 1210	Principles of Chemistry I	4
CHEM 1215	Principles of Chemistry I lab	1
Humanities Distribution	GE List	3
	Semester total:	16
Semester 4	Course Title	Credit Hours
CHEM 1220	Principles of Chemistry II	4
CHEM 1225	Principles of Chemistry II lab	1
PHYS 3110	Modern Physics I	3
PHYS 3115	Intro to Exp. Phys. I WE	2
Physics Elective*		3
Fine Arts Distribution	GE List	3
	Semester total:	16
Notes: *Physics electives include ASTR 3050, ASTR 3060, PHYS 1100, PHYS 2500, PHYS 3120, PHYS 3125, PHYS 3230, PHYS 3300, PHYS 3400, PHYS 3500, PHYS 3800 and PHYS 4700. Student must complete 8 credit hours from the set.		

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Semester 5	Course Title	Credit Hours
HIST 4320	History of Scientific Thought	3
Social/ Behavioral Science Distribution	GE List	3
EDSC 3000	Educational Psychology	3
EDSC 3250	Instructional Media	2
Physics Elective*		3
PHYS 490R	Seminar	0.5
Semester total:		14.5

Notes: HIST 4320 is only offered Fall of even numbered years
 *Physics electives include ASTR 3050, ASTR 3060, PHYS 1100, PHYS 2500, PHYS 3120, PHYS 3125, PHYS 3230, PHYS 3300, PHYS 3400, PHYS 3500, PHYS 3800 and PHYS 4700. Student must complete 8 credit hours from the set.

Semester 6	Course Title	Credit Hours
EDSC 4440	Content Area Literacies	3
PHYS 3010	Physics Experiments for Secondary Education	1
Upper Division Elective		2
EDSC 445G	Multicultural Instruction ESL	3
PHYS 4200	Teaching Methods in Science	3
Upper Division Elective	Upper division Elective	2
Physics Elective*		2
Semester total:		16

Notes: *Physics electives include ASTR 3050, ASTR 3060, PHYS 1100, PHYS 2500, PHYS 3120, PHYS 3125, PHYS 3230, PHYS 3300, PHYS 3400, PHYS 3500, PHYS 3800 and PHYS 4700. Student must complete 8 credit hours from the set.

Semester 7	Course Title	Credit Hours
EDSC 4200	Classroom Management I	2
EDSC 455G	Secondary Curriculum Instruction and Assessment	3
EDSP 340G	Exceptional Students	2
EDEL 1010	Introduction to Education	2
PHYS 490R	Seminar	0.5
Upper Division Elective	Upper division Elective	2
Upper Division Elective	Upper division Elective	2
Semester total:		13.5

Semester 8	Course Title	Credit Hours
EDSC 4850	Student Teaching - Secondary	8
EDSC 4250	Classroom Management II	2
EDSC 4990	Teacher Performance Assessment Project WE	2
Semester total:		12

Degree total:	120
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