

# Secondary Physics Education, BA

## with Concurrent<sup>†</sup> Major in Physics



### University of Wyoming, 2016-17

The College of Education maintains rigorous admission standards to ensure the quality of preparation for future educators. **New, first time students** who meet the University of Wyoming's standards for admission may declare a major in elementary education, secondary or K-12 education in a specific content area, or education undecided provided they have a minimum ACT composite score of 21 and ACT math score of 21; a lower ACT math score can be replaced by a UW Math Placement Exam (MPE) score of 2 or higher. If electing to pursue education undecided, it is recommended that students decide on their teaching content area no later than the first semester of their sophomore year.

**Current UW students wishing to change their major, students seeking re-admission to UW, or those transferring to UW from another institution** can learn more about the specific admission requirements for these groups at [www.uwyo.edu/ced/admission/requirements.html](http://www.uwyo.edu/ced/admission/requirements.html).

**All students** must undergo and pass an initial criminal background check prior to full admission to the College of Education. Any costs associated with the background check are the responsibility of the student. A second background check is included as part of the state application process for the Wyoming Substitute Teaching Permit, which is required for admission to Phase II of UW's teacher education program. Criminal background checks are a standard for the profession.

Freshman Fall Semester			Hrs	Min	Grade	Notes
		USP First Year Seminar	3		C	FY
		USP US & Wyoming Constitutions	3			V
EDST	2450	Foundations Development & Learning *	3		C	H
MATH	2200	Calculus I **	4		C	Q
PHYS	1310	College Physics I ***	4		C	Can substitute PHYS 1210 (Engineering Physics I).
Credit hours subtotal:			<u>17</u>			

Freshman Spring Semester			Hrs	Min	Grade	Notes
COSC	1010	Introduction to Computer Science I	4		C	Can substitute COSC 1030 (Computer Science I).
ENGL	1010	College Composition and Rhetoric	3		C	C1
MATH	2205	Calculus II	4		C	
PHYS	1320	College Physics II ****	4		C	Can substitute PHYS 1220 (Engineering Physics II).
Credit hours subtotal:			<u>15</u>			

Sophomore Fall Semester			Hrs	Min	Grade	Notes
EDST	2480	Diversity & the Politics of Schooling	4		C	H; admission to Phase I of the program required. #
LIFE	1010	General Biology	4		C	PN
MATH	2210	Calculus III	4		C	
PHYS	2310	Physics III: Wave & Optics *****	4		C	
Credit hours subtotal:			<u>16</u>			

Sophomore Spring Semester			Hrs	Min	Grade	Notes
EDEX	2484	Introduction to Special Education	3		C	Admission to Phase I of the program required. #
EDST	3550	Educational Assessment	2		C	Prerequisite of a 2.75 cumulative UW GPA.
ITEC	2360	Teaching with Technology	3		C	Prerequisite of a 2.50 cumulative UW GPA.
MATH	2310	Applied Differential Equations I	3		C	
PHYS	2320	Physics IV: Modern Physics	3		C	
PHYS	4210	Classical Mechanics I	3		C	
Credit hours subtotal:			<u>17</u>			

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Junior Fall Semester			Hrs	Min Grade	Notes
CHEM	1020	Chemistry I	4	C	PN
PHYS	4310	Quantum Mechanics	3	C	Can substitute ASTR 4610 (Intro to Astrophysics).
PHYS	4410	Electricity and Magnetism I	3	C	
		Physics Elective (2000-level or above) *****	3		
		Elective	3		
Credit hours subtotal:			<b>16</b>		

Junior Spring Semester			Hrs	Min Grade	Notes
ASTR	1050	Survey of Astronomy	4	C	Can substitute ASTR 1000 (Descriptive Astronomy).
EDST	3000	Teacher as Practitioner	6	C	C2; admission to Phase II of the program required. #
		Upper Division Physics Elective	3		
Credit hours subtotal:			<b>13</b>		

Senior Fall Semester			Hrs	Min Grade	Notes
EDSE	3275	Methods I: Secondary Science Education	3	C	Admission to Phase IIIa of the program required. #
EDSE	4275	Methods II: Secondary Science Education	4	C	C3; admission to Phase IIIa of the program required. #
PHYS	4510	Thermodynamics and Statistical Mechanics	3	C	
		Physics Elective (2000-level or above) *****	3	C	
Credit hours subtotal:			<b>13</b>		

Senior Spring Semester			Hrs	Min Grade	Notes
EDSE	4500	Residency in Teaching	15	S	Admission to Phase IIIb of the program is required; offered S/U only. #
Credit hours subtotal:			<b>15</b>		

**TOTAL CREDIT HOURS: 122**

This is a guide for course work in the major; actual course sequence may vary by student. Please refer to the online student degree evaluation, and consult with an academic advisor. • Not all courses are offered every semester and some electives may have prerequisites. Students should review the course descriptions in the *University Catalog* and consult with their academic advisor to plan accordingly.

### University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U. • University Studies Program (USP) Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

### College of Education requirements:

This plan assumes student college readiness. Students should be able to start taking 1000-level courses the first semester of college. • All professional education courses must be completed with a grade of C or higher. Grades of C- or lower will not satisfy this requirement.

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† **Concurrent Majors.** Students may pursue a concurrent major in one or more colleges. Only one degree (BA, BS, etc.) will be awarded from the college of the primary major. All university curricular requirements, including the University Studies Program requirements, must be met only once. Requirements for secondary major/s will be established by the academic departments and may include college requirements, in addition to all major requirements. An academic advisor in each major is required and each adviser must review requirements. The degree will be granted on one date only and only one diploma will be awarded. Both majors will be indicated on the academic transcript and diploma.

# **The Wyoming Teacher Education Program** operates in a series of phases: Phase I, Phase II, Phase IIIa, and Phase IIIb. Continuation in the program in any content area is dependent upon the successful completion of prerequisites for each phase. Specific information about these requirements can be found on the program sheets for each content area that are located at [www.uwyo.edu/ted/majors-and-program-sheets](http://www.uwyo.edu/ted/majors-and-program-sheets).

#### Secondary Physics Education Program Notes:

• A minimum 2.5 gpa is required in major content. All major content courses must be completed with a grade of C or higher. Grades of C- or lower will not satisfy this requirement.

\* The prerequisite of a 2.50 cumulative UW gpa is waived for new, incoming freshman having declared Education as their major.

\*\* Requires MATH ACT  $\geq 27$ , MATH SAT  $\geq 600$ , Math Placement Exam  $\geq 5$ , or  $\geq C$  in MATH 1405 or 1450.

\*\*\* For declared physics majors, the prerequisite of Math 2200 is waived and concurrent enrollment is approved.

\*\*\*\* For declared physics majors, the prerequisite of Math 2205 is waived and concurrent enrollment is approved.

\*\*\*\*\* Options may exist for this course. Please discuss with an academic advisor.

\*\*\*\*\* Students are encouraged to apply to become Supplemental Instruction (SI) teachers to fulfill this elective. Students must have successfully completed the course for which they would like to lead the SI group. Students must contact the instructor of the course regarding this option in advance of contacting the SI Coordinator with the STEP Success Center (766-4354).