# **Secondary Physics Education, BA** with Concurrent Major in Physics



This sample degree plan is a guide, to be used for planning in consultation with your academic advisor. Actual course sequence may vary by student. A ▲ symbol identifies courses that must be taken and passed during the suggested semester in order for a student to stay on track toward completing the degree program within four years.

| Sequence                 | Course<br>Prefix | Course<br>Number | Course Title                               | Credit<br>Hours | Min<br>Grade | Notes  |  |  |  |
|--------------------------|------------------|------------------|--|-----------------|--------------|--|--|--|--|
| Fresh                    | man I            | Fall Se          | emester                                    |                 |              |  |  |  |  |
|                          |                  |                  | USP First-Year Seminar                     | 3               | С            | FY   |  |  |  |
|                          | CHEM             | 1020             | Chemistry I                                | 4               | С            | PN   |  |  |  |
|                          | MATH             | 2200             | Calculus I *                               | 4               | С            | Q  |  |  |  |
|                          | ENGL             | 1010             | College Composition and Rhetoric           | 3               | С            | C1. Honors Program can substitute HP 1020.               |  |  |  |
|                          |                  |                  | Credit hours subtotal:                     | 14              |              |  |  |  |  |
| Freshman Spring Semester |                  |                  |  |                 |              |  |  |  |  |
|                          |                  | _                | USP US & Wyoming Constitution              | 3               | С            | V - Required for WY Substitute Teaching Permit.          |  |  |  |
|                          | EDST             | 2450             | Foundations of Development and Learning ** | 3               | С            | H- Prerequisite: Minimum UW GPA of 2.50.                 |  |  |  |
|                          | PHYS             | 1310             | College Physics I ***                      | 4               | С            | Can substitute PHYS 1210 (Eng Physics I).                |  |  |  |
|                          | MATH             | 2205             | Calculus II                                | 4               | С            |  |  |  |  |
|                          |                  |                  | Credit hours subtotal:                     | 14              |              |  |  |  |  |
| Sopho                    | more             | Fall S           | Semester                                   |                 |              |  |  |  |  |
|                          | COSC             | 1010             | Introduction to Computer Science I         | 4               | С            | Can substitute COSC 1030 (Computer Science I)            |  |  |  |
|                          | EDST             | 2480             | Diversity and the Politics of Schooling    | 4               | С            | H - Must meet all prerequisites for Phase I. #           |  |  |  |
|                          | MATH             | 2210             | Calculus III                               | 4               | С            |  |  |  |  |
|                          | PHYS             | 1320             | College Physics II ****                    | 4               | С            | Can substitute PHYS 1220 (Eng Physics II)                |  |  |  |
|                          |                  |                  | Credit hours subtotal:                     | <u>16</u>       |              |  |  |  |  |
| Sopho                    | more             | Sprin            | ng Semester                                |                 |              |  |  |  |  |
|                          | ASTR             | 1050             | Survey of Astronomy                        | 4               | С            | Can substitute ASTR 1000 (Descriptive Astronomy).        |  |  |  |
|                          |                  |                  |  |                 |              |  |  |  |  |
|                          | ITEC             | 2360             | Teaching with Technology **                | 3               | С            | Prerequisite of a 2.5 cumulative UW gpa.                 |  |  |  |
|                          | PHYS             | 2320             | Physics IV: Modern Physics                 | 3               | С            |  |  |  |  |
|                          | PHYS             | 2310             | Physics III: Wave & Optics                 | 4               | С            | Prerequisite: PHYS 1220 or 1320                          |  |  |  |
|                          |                  |                  | Elective                                   | 3               | С            | Toward min. of 120 total credits required for graduation |  |  |  |
|                          |                  |                  | Credit hours subtotal:                     | <u>17</u>       |              |  |  |  |  |

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:

The College of Education maintains rigorous admission standards to ensure the quality of preparation for future educators. This plan assumes students are able to start taking 1000-level courses the first semester of college. All professional education courses and all major content courses must be completed with a grade of C or higher. A minimum 2.50 gpa is required in major content. 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: http://www.uwyo.edu/ste/teacher-preparation-and-advising-office/admission%20requirements.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.

Notes continued on next page(s).

# University of Wyoming Sample Four-Year Degree Plan Catalog Year: 2018-19

|          |        |        | Physics Education, BA nt Major in Physics   |                 |              | WUW  |
|----------|--------|--------|---|-----------------|--------------|--|
| Sequence | Course | Course | Course Title                                | Credit<br>Hours | Min<br>Grade | Notes  |
| Junior   | Fall   | Seme   | ster  |                 |              |  |
|          | EDEX   | 2484   | Introduction to Special Education           | 3               | С            | Admission to Phase I of the program required. #                                  |
|          | MATH   | 2310   | Applied Differential Equations I            | 3               | С            |  |
|          | LIFE   | 1010   | General Biology                             | 4               | С            | PN   |
|          | PHYS   | 4410   | Electricity and Magnetism I                 | 3               | С            |  |
|          |        |        | Physics Elective (2000-level or above) **** | 3               | С            |  |
|          |        |        | Credit hours subtotal:                      | <u>16</u>       |              |  |
| Junior   | · Spri | ng Sei | mester                                      |                 |              |  |
|          | EDST   | 3000   | Teacher as Practitioner                     | 6               | С            | C2. Admission to Phase II required. #  |
|          | EDST   | 3550   | Educational Assessment                      | 2               | С            | Prerequisites: EDST 2480; USP Q; 2.75 UW cumulative GPA.                         |
|          | PHYS   | 4210   | Classical Mechanics I                       | 3               | С            |  |
|          |        |        | Upper Division Physics Elective             | 3               | С            |  |
|          |        |        | Credit hours subtotal:                      | <u>14</u>       |              |  |
| Senior   | · Fall | Seme   | ster  |                 |              |  |
| <b>A</b> | EDSE   | 3275   | Methods I: Secondary Biology Education      | 3               | С            | Admission to Phase IIIa of the program required. $\#$                            |
| <b>A</b> | EDSE   | 4275   | Methods II: Secondary Biology Education     | 4               | С            | C3; Admission to Phase IIIa of the program required. $\#$                        |
|          | PHYS   | 4310   | Quantum Mechanics                           | 3               | С            | Can substitute ASTR 4610 (Intro to Astrophysics).                                |
|          | PHYS   | 4510   | Thermodynamics and Statistical Mechanics    | 3               | С            |  |
|          |        |        | Elective                                    | 3               | С            | Toward min. of 120 total credits required for graduation                         |
|          |        | -      | Credit hours subtotal:                      | <u>10</u>       |              |  |
| Senior   | Spri   | ng Sei | mester                                      |                 |              |  |
| <b>A</b> | EDEL   | 4500   | Residency in Teaching                       | 15              | S            | Offered spring semester only. Admission to Phase IIIb of the program required. # |
|          |        |        | Credit hours subtotal:                      | <u>15</u>       |              |  |
|          |        |        | TOTAL CREDIT HOURS                          | <u>116</u>      |              |  |

#### College of Education requirements continued:

# Bachelors degrees in the College of Education operate 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. A minimum 2.75 cumulative UW gpa is required for Phase II, and Phases IIIa/IIIb of the program, and to meet College of Education graduation requirements. Specific information about these requirements can be found on the program sheets for each content area that are located at: http://www.uwyo.edu/ste/teacher-preparation-and-advising-office/majors-and-program-sheets/.

**Concurrent Majors:** All Secondary Education degree programs in the College of Education include a concurrent major in the student's content area.

## Secondary Physics Education with Concurrent Major in Physics Program notes:

- \* Requires MATH ACT  $\geq$  27, MATH SAT  $\geq$  600, Math Placement Exam  $\geq$  5, or  $\geq$  C in MATH 1405 or 1450.
- \*\* The course prerequisite of a 2.5 cumulative UW gpa is waived for new, incoming freshman having declared Education as their major.
- \*\*\* 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.

Revised: 9/2018