

# MAJOR IN NATURAL SCIENCES, PHYSICS EDUCATION CONCENTRATION

All Physics Education majors must maintain a 2.75 GPA and receive a C or better in all content and education courses for licensure. All course work must be completed prior to Student Teaching (AUCC 4A/4B/4C requirement). Admission into the teacher licensure program is required for phase II education courses and above.

## Major Completion Map

### Distinctive Requirements for Degree Program:

#### Freshman

Semester 1		Critical	Recommended	AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)		X	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)		X	3A	1
CO 150	College Composition (GT-CO2)	X		1A	3
MATH 160	Calculus for Physical Scientists I (GT-MA1)		X	1B	4
Diversity, Equity, and Inclusion ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion</a> )		X		1C	3
MATH 117, MATH 118 may be necessary for some students to fulfill pre-calculus requirements.		X			
<b>Total Credits</b>					<b>15</b>

Semester 2		Critical	Recommended	AUCC	Credits
CHEM 113	General Chemistry II		X		3
CHEM 114	General Chemistry Lab II		X		1
CS 150B	Culture and Coding: Python (GT-AH3)	X		3B	3
MATH 161	Calculus for Physical Scientists II (GT-MA1)		X	1B	4
PH 141	Physics for Scientists and Engineers I (GT-SC1)		X	3A	5
CHEM 111, CHEM 112 must be completed by the end of Semester 2.		X			
MATH 124, MATH 125, MATH 126 may be necessary for some students to fulfill pre-calculus requirements.		X			
<b>Total Credits</b>					<b>16</b>

Semester 3		Critical	Recommended	AUCC	Credits
EDUC 275	Schooling in the United States (GT-SS3)		X	3C	3
LIFE 102	Attributes of Living Systems (GT-SC1)		X	3A	4
PH 142	Physics for Scientists and Engineers II (GT-SC1)		X	3A	5
Select one group from the following:					4
Group A:					
AA 100	Introduction to Astronomy (GT-SC2)			3A	
AA 101	Astronomy Laboratory (GT-SC1)			3A	
Group B:					
GEOL 120	Exploring Earth - Physical Geology (GT-SC2)			3A	
GEOL 121	Introductory Geology Laboratory (GT-SC1)			3A	
MATH 160, PH 141 must be completed by the end of Semester 3.		X			
<b>Total Credits</b>					<b>16</b>

Semester 4		Critical	Recommended	AUCC	Credits
EDUC 340	Literacy and the Learner	X			3
LIFE 103	Biology of Organisms-Animals and Plants (GT-SC1)		X	3A	4
MATH 261	Calculus for Physical Scientists III		X		4
PH 314	Introduction to Modern Physics	X		4B	4
CO 150, MATH 161 and PH 314 must be completed by the end of Semester 4.		X			
<b>Total Credits</b>					<b>15</b>

<i>Junior</i>					
<b>Semester 5</b>		<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
EDUC 350	Instruction I-Individualization/Management	X			3
EDUC 386	Practicum-Instruction I	X			1
EDUC 461A	Secondary Science and Technology Education I	X			3
PH 245	Introduction to Electronics		X		3
STAT 301	Introduction to Applied Statistical Methods				3
Advanced Writing ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing</a> )				2	3
<b>Total Credits</b>					<b>16</b>
<b>Semester 6</b>		<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
EDUC 461B	Secondary Science and Technology Education II	X			3
PH 315	Modern Physics Laboratory	X			2
PH 361	Physical Thermodynamics	X			3
Science/Math Electives					7
PH 315 & PH 361 must be taken by Semester 6.					X
<b>Total Credits</b>					<b>15</b>
<i>Senior</i>					
<b>Semester 7</b>		<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
EDUC 450	Instruction II-Standards and Assessment	X			4
EDUC 486E	Practicum: Instruction II	X			1
PH 353	Optics and Waves				4
Arts and Humanities ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities</a> )				3B	3
Historical Perspectives ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives</a> )				3D	3
<b>Total Credits</b>					<b>15</b>
<b>Semester 8</b>		<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
EDUC 485B	Student Teaching: Secondary	X		4A,4C	11
EDUC 493A	Seminar: Professional Relations	X		4C	1
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.					X
<b>Total Credits</b>					<b>12</b>
<b>Program Total Credits:</b>					<b>120</b>