MAJOR IN NATURAL SCIENCES, PHYSICS EDUCATION CONCENTRATION

Requirements
Effective Fall 2023

Freshman

		AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	3A	1
CHEM 113	General Chemistry II		3
CHEM 114	General Chemistry Lab II		1
CO 150	College Composition (GT-CO2)	1A	3
CS 150B	Culture and Coding: Python (GT-AH3)	3B	3
MATH 160	Calculus for Physical Scientists I (GT-MA1)	1B	4
MATH 161	Calculus for Physical Scientists II (GT-MA1)	1B	4
PH 141	Physics for Scientists and Engineers I (GT-SC1)	3A	5
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)		1C	3
	Total Credits		**31**

Sophomore

EDUC 275	Schools, Society, and Self (GT-SS3)	3C	3
EDUC 340	Literacy and the Learner		3
LIFE 102	Attributes of Living Systems (GT-SC1)	3A	4
LIFE 103	Biology of Organisms-Animals and Plants (GT-SC1)	3A	4
MATH 261	Calculus for Physical Scientists III		4
PH 142	Physics for Scientists and Engineers II (GT-SC1)	3A	5
PH 314	Introduction to Modern Physics	4B	4
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	Geology and Society (GT-SC2)	3A	
GEOL 121	Experiential Geoscience Laboratory (GT-SC1)	3A	
	Total Credits		**31**

Junior

EDUC 350	Instruction I-Individualization/Management		3
EDUC 386	Practicum-Instruction I		1
EDUC 461A	Secondary Science and Technology Education I		3
EDUC 461B	Secondary Science and Technology Education II		3
PH 245	Introduction to Electronics		3
PH 315	Modern Physics Laboratory		2
PH 361	Physical Thermodynamics		3
STAT 301	Introduction to Applied Statistical Methods		3
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)		2	3

Science/Math Electives[1]			7
	Total Credits		**31**
Senior			
EDUC 450	Instruction II-Standards and Assessment		4
EDUC 485B	Student Teaching: Secondary	4A,4C	11
EDUC 486E	Practicum: Instruction II		1
EDUC 493A	Seminar: Professional Relations	4C	1
PH 353	Optics and Waves		4
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)		3B	3
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		3D	3
	Total Credits		**27**
	Program Total Credits:		**120**

[1] Select course(s) in consultation with advisor.

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
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)		X		1C	3
MATH 117, MATH 118 may be necessary for some students to fulfill pre-calculus requirements.		X			
	Total Credits				**15**
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			
	Total Credits				**16**

Sophomore

Semester 3		**Critical**	**Recommended**	**AUCC**	**Credits**
EDUC 275	Schools, Society, and Self (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	Geology and Society (GT-SC2)			3A	
GEOL 121	Experiential Geoscience Laboratory (GT-SC1)			3A	
MATH 160, PH 141 must be completed by the end of Semester 3.		X			
	Total Credits				**16**
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			
	Total Credits				**15**
Junior					
Semester 5		**Critical**	**Recommended**	**AUCC**	**Credits**
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 (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)				2	3
	Total Credits				**16**
Semester 6		**Critical**	**Recommended**	**AUCC**	**Credits**
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			
	Total Credits				**15**
Senior					
Semester 7		**Critical**	**Recommended**	**AUCC**	**Credits**
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 (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)				3B	3
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)				3D	3
	Total Credits				**15**
Semester 8		**Critical**	**Recommended**	**AUCC**	**Credits**
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			
	Total Credits				**12**
	Program Total Credits:				**120**