PHYSICS (B.S.)

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/#j3)) and:

Code	Title	Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
CS 120	Computer Science I	4
MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 275	Calculus III	3
MATH 310	Ordinary Differential Equations	3
MATH 330	Linear Algebra	3
PHYS 200	Welcome to the Physics Major	1
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
PHYS 213	Engineering Physics III	3
PHYS 305	Modern Physics	3
PHYS 321	Analytical Mechanics	3
PHYS 341	Electromagnectic Fields I	3
PHYS 351	Introductory Quantum Mechanics I	3
PHYS 400	Seminar	2
Emphases		
Select one of the following emphases:		24-35
General Physics (p. 1)		
Applied Physics (p. 1)		
Total Hours		**80-91**

A. General Physics Emphasis

Code	Title	Hours
PHYS 333	Statistical Thermodynamics	3
PHYS 342	Electromagnetic Fields II	3
PHYS 371	Mathematical Physics	3
PHYS 411	Advanced Physics Lab	4
Select 11 credits of physics electives numbered 400 or above, including at least 9 credits of non-lab courses		11
Total Hours		**24**

Courses to total 120 credits for this degree

B. Applied Physics Emphasis

Code	Title	Hours
PHYS 411	Advanced Physics Lab	4
Select 4 credits from the following:		4
PHYS 490	Research	
PHYS 492	Senior Research	
In addition to the specific Applied Physics requirements, select six 3-credit courses numbered 300 or above from the following subject prefixes: [1]		18
BE		
BIOL		
CE		
CHE		
CHEM		
CS		
ECE		
ENGR		
GEOE		
GEOG		
GEOL		
HYDR		
MATH		
ME		
NE		
PHYS		
STAT		
In addition to the specific Applied Physics requirements and electives chosen above, select three 3-credit courses numbered 400 or above from the following subject prefixes: [1]		9
BE		
BIOL		
CE		
CHE		
CHEM		
CS		
ECE		
ENGR		
GEOE		
GEOG		
GEOL		
HYDR		
MATH		
ME		
NE		
PHYS		
STAT		
Total Hours		**35**

1

These cannot be PHYS 490 or other research courses. They should be standard 3-credit lecture courses.

Courses to total 120 credits for this degree

General Physics Emphasis

Fall Term 1		Hours
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
PHYS 200	Welcome to the Physics Major	1
MATH 144	Precalculus II: Trigonometry	1
Humanistic and Artistic Ways of Knowing Course		3

Oral Communication Course		3
Elective Course		1
	Hours	**15**
Spring Term 1		
CS 120	Computer Science I	4
ENGL 102	Writing and Rhetoric II	3
MATH 170	Calculus I	4
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
	Hours	**15**
Fall Term 2		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
MATH 175	Calculus II	4
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
Social and Behavioral Ways of Knowing Course		3
	Hours	**15**
Spring Term 2		
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
MATH 275	Calculus III	3
PHYS 213	Engineering Physics III	3
PHYS 305	Modern Physics	3
Elective Course		1
	Hours	**15**
Fall Term 3		
MATH 310	Ordinary Differential Equations	3
PHYS 321	Analytical Mechanics	3
PHYS 341	Electromagnectic Fields I	3
PHYS 371	Mathematical Physics	3
American Diversity Course		3
	Hours	**15**
Spring Term 3		
MATH 330	Linear Algebra	3
PHYS 342	Electromagnetic Fields II	3
PHYS 351	Introductory Quantum Mechanics I	3
Humanistic and Artistic Ways of Knowing Course		3
International Course		3
	Hours	**15**
Fall Term 4		
PHYS 333	Statistical Thermodynamics	3
PHYS 400	Seminar	1
400 level Physics, Major Elective Course		3
400 level Physics, Major Elective Course		3
Social and Behavioral Ways of Knowing Course		3
Elective Course		2
	Hours	**15**
Spring Term 4		
PHYS 411	Advanced Physics Lab	4
PHYS 400	Seminar	1
400 level Physics, Major Elective Course		3
400 level Physics, Major Elective Course		2
Senior Experience Course		3
Elective Course		2
	Hours	**15**
	Total Hours	**120**

Applied Physics Emphasis

Fall Term 1		**Hours**
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
MATH 144	Precalculus II: Trigonometry	1
PHYS 200	Welcome to the Physics Major	1
Humanistic and Artistic Ways of Knowing Course		3
Oral Communication Course		3
Humanistic and Artistic Ways of Knowing Course		3
	Hours	**17**
Spring Term 1		
CS 120	Computer Science I	4
ENGL 102	Writing and Rhetoric II	3
MATH 170	Calculus I	4
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
	Hours	**15**
Fall Term 2		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
MATH 175	Calculus II	4
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
Social and Behavioral Ways of Knowing Course		3
	Hours	**15**
Spring Term 2		
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
MATH 275	Calculus III	3
PHYS 213	Engineering Physics III	3
PHYS 305	Modern Physics	3
	Hours	**14**
Fall Term 3		
MATH 310	Ordinary Differential Equations	3
PHYS 321	Analytical Mechanics	3
PHYS 341	Electromagnectic Fields I	3
American Diversity Course		3
Elective Course		1
	Hours	**13**
Spring Term 3		
MATH 330	Linear Algebra	3
PHYS 351	Introductory Quantum Mechanics I	3
300-level Subject Elective, Major Elective Course		3
300-level Subject Elective, Major Elective Course		3
International Course		3
	Hours	**15**
Fall Term 4		
PHYS 400	Seminar	1
PHYS 490	Research	3
300-level Subject Elective, Major Elective Course		3
300-level Subject Elective, Major Elective Course		3
400-level Subject Elective, Major Elective Course		3
Social and Behavioral Ways of Knowing Course		3
	Hours	**16**
Spring Term 4		
PHYS 400	Seminar	1
PHYS 411	Advanced Physics Lab	4
PHYS 492	Senior Research	1
300-level Subject Elective, Major Elective Course		3
400-level Subject Elective, Major Elective Course		3

400-level Subject Elective, Major Elective Course	3
Hours	**15**
Total Hours	**120**

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

General Emphasis

1. Students are thoroughly trained in the various sub-disciplines of physics. They have mastered the principles of mechanics, quantum mechanics, electromagnetic fields, thermal statics, and some advanced topics in physics, such as astrophysics and computational physics.
2. Students can communicate effectively, both orally and in writing, their scientific observations and their interpretations of physical laws.
3. Students are intellectually prepared to partake in physics research in a meaningful way.

Applied Emphasis

1. Students are trained in the various sub-disciplines of physics relevant to their interests and have explored advanced topics in physics and engineering.
2. Students can communicate effectively, both orally and in writing, their scientific observations and their interpretations of physical laws.
3. Students are intellectually prepared to participate in applied physics research in a meaningful way.