

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	Electromagnetic 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

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

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 Electromagnetic 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	Electromagnetic 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.