

### Physics Major (70 credit hours)

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The purpose of study in physics is to obtain an understanding of the nature and order of the physical world while being exposed to the logical application of scientific methods in discovering this order. This study is recommended for physics majors and minors as preparation for graduate school, secondary-level teaching, or other employment, and for chemistry, biology, mathematics, computer science, and pre-medical students to supplement and complement their major fields of study. Students considering a career in secondary education may wish to pursue the physical science major, which is designed more to their needs.

#### Major Requirements:

- CHEM 2110, General Chemistry I, 4 credit hours
  - ENGR 2030, Circuit Analysis, 3 credit hours
  - ENGR 2070, Engineering Thermodynamics, 3 credit hours
  - ENGR 2310, Introduction to Programming, 3 credit hours
  - ENGR 3030, Signals and Controls, 3 credit hours
  - MATH 2010, Calculus I, 4 credit hours
  - MATH 2020, Calculus II, 4 credit hours
  - MATH 3010, Linear Algebra with Differential Equations, 4 credit hours
  - MATH 3020, Calculus III, 4 credit hours
  - MATH 3100, Differential Equations, 3 credit hours
  - PHYS 2240, General Physics I, 4 credit hours
  - PHYS 2250, General Physics II, 4 credit hours
  - PHYS 3100, Modern Physics Laboratory, 2 credit hours
  - PHYS 3130, Modern Physics, 2 credit hours
  - PHYS 4130, Quantum Theory, 4 credit hours
  - PHYS 4210, Electricity and Magnetism, 3 credit hours
  - PHYS 4220, Classical and Statistical Physics with Computational Methods, 3 credit hours
  - PHYS 4340, Advanced Quantum and Electromagnetic Theory, 3 credit hours
  - PHYS 4350, Cosmological Theory, 3 credit hours
  - PHYS 4410, Statistical Mechanics, 3 credit hours
  - PHYS 4510, Senior Physical Science Practicum I, 1 credit hour
  - PHYS 4520, Senior Physical Science Practicum II, 1 credit hour
  - PHYS 4910, Science Seminar I, 1 credit hour
  - PHYS 4920, Science Seminar II, 1 credit hour
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- CHEM 2110, General Chemistry I, is a Scientific Ways of Knowing course in the Liberal Arts Program.
  - MATH 2010, Calculus I, is a Quantitative Reasoning course in the Liberal Arts Program.
  - PHYS 3100, Modern Physics, is a Writing Intensive course in the Liberal Arts Program.
  - PHYS 4910/4920, Science Seminar I/II, is both a Speaking & Writing Intensive course in the Liberal Arts Program.

**NOTE:** All students must complete 120 total credit hours to graduate from Anderson University.

Questions? Please contact the [Department of Physical Sciences & Engineering](#).

Proposed course sequence:

Freshman: CHEM 2110, MATH 2010; ENGR 2310, MATH 2020, PHYS 2240  
 Sophomore: MATH 3010, PHYS 2250, ENGR 2070; MATH 3020, PHYS 3100, PHYS 3130  
 Junior: PHYS 4130, 4210; PHYS 4340, ENGR 2030, MATH 3100  
 Senior: PHYS 4220, 4510, 4910, ENGR 3030; PHYS 4350, 4520, 4920

Physics Major Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
CHEM 2110	4 Hours	ENGR 2310	3 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	PHYS 2240	4 Hours
LART 1050	1 Hour	ENGL 1120	3 Hours
Personal Wellness	2 Hours	Additional Class	3 Hours

SEMESTER 3		SEMESTER 4	
MATH 3010	4 Hours	MATH 3020	4 Hours
PHYS 2250	4 Hours	PHYS 3100	2 Hours
ENGR 2070	3 Hours	PHYS 3130	2 Hours
Foreign Language	4 Hours	Global/Intercultural Ways of Knowing	3 Hours
		COMM 1000	3 Hours

SEMESTER 5		SEMESTER 6	
PHYS 4130	4 Hours	PHYS 4340	3 Hours
PHYS 4210	3 Hours	ENGR 2030	3 Hours
BIBL 2000	3 Hours	MATH 3100	3 Hours
Aesthetic Ways of Knowing	3 Hours	Civic Ways of Knowing	3 Hours
Additional Class	3 Hours	Social & Behavioral Ways of Knowing	3 Hours

SEMESTER 7		SEMESTER 8	
PHYS 4220	3 Hours	PHYS 4350	3 Hours
PHYS 4510	1 Hour	PHYS 4410	3 Hours
PHYS 4910	1 Hour	PHYS 4520	1 Hours
ENGR 3030	3 Hours	PHYS 4920	1 Hour
Christian Ways of Knowing	3 Hours	Additional Class	3 Hours
Additional Class	3 Hours	Additional Class	3 Hours
Additional Class	3 Hours		