

Bachelor of Arts

Major in Physics

The BA with a major in physics is designed for students planning to teach physics in public school, taking a double major or desiring a liberal arts education with a science concentration. Students who expect to teach physics in secondary schools should elect the Bachelor of Arts program and include all courses required by the State of Texas for teacher certification. These requirements are listed under the Department of Teacher Education and Administration in the College of Education section.

The Bachelor of Arts with a major in physics is designed to support a wide range of career opportunities by providing for the development of strong analytical thinking and problem-solving techniques.

The Bachelor of Arts program is recommended for students taking a double major or combining physics with another major concentration. For example, a major in physics may be combined with a major in engineering technology, computer science, mathematics, chemistry or biology. Also students majoring in physics may choose to group courses toward career interest areas such as technology assessment^a, investment analysis^b, or medical science^c.

^a **recommended courses:** PSCI 2300, 3200, 3300; ECON 1100, 1110, 3550, 3560

^b **recommended courses:** FINA 3770, 4200, 4210, 4310, 4410; ACCT 2020, 2030

^c **recommended courses:** BIOL 1710/1730, 1720/1740, 3800/3810, 4200; CHEM 1410/1430, 1420/1440, 3600

Major in Physics

Following is one suggested four-year degree plan. Students are encouraged to see their adviser each semester for help with program decisions and enrollment.

BA with a Major in Physics

FRESHMAN YEAR

FALL	HOURS
CHEM 1410, General Chemistry ¹⁰	3
CHEM 1430, Laboratory for General Chemistry	1
ENGL 1310, College Writing I	3
MATH 1710, Calculus I ⁴	4
PHYS 1710, Mechanics	3
PHYS 1730, Laboratory in Mechanics Wellness ¹¹	1
	<u>2-3</u>
Total	17-18

FRESHMAN YEAR

SPRING	HOURS
CHEM 1420, General Chemistry ¹⁰	3
CHEM 1440, Laboratory for General Chemistry	1
ENGL 1320, College Writing II ⁶	3
MATH 1720, Calculus II	3
PHYS 2220, Electricity and Magnetism	3
PHYS 2240, Laboratory in Wave Motion, Electricity, Magnetism and Optics	1
Oral Communication ²	<u>3</u>
Total	17

SOPHOMORE YEAR

FALL	HOURS
ENGL 2210, World Literature I	3
LANG 2040, Foreign Language (intermediate) ³	3
MATH 2700, Linear Algebra and Vector Geometry, or 2730, Multivariable Calculus	3
PHYS 3010, Modern Physics ²⁰	3
PHYS 3030, Laboratory in Modern Physics	1
PHYS 3210, Classical Mechanics	<u>3</u>
Total	16

SOPHOMORE YEAR

SPRING	HOURS
ENGL 2220, World Literature II	3
LANG 2050, Foreign Language (intermediate) ³	3
MATH 3410, Differential Equations I ⁵⁸	3
CSCI ¹	3
PHYS Option (advanced)	<u>3</u>
Total	15

JUNIOR YEAR

FALL	HOURS
HIST 2610, United States History to 1865 ¹²	3
PSCI 1040, American Government	3
PHYS Option (advanced)	3
PHYS Option (advanced)	3
Elective (advanced) ^{15,16}	3
Visual and Performing Arts ⁷	<u>3</u>
Total	18

JUNIOR YEAR

SPRING	HOURS
ECON 1110, Principles of Macroeconomics	3
HIST 2620, United States History Since 1865 ¹²	3
PSCI 1050, American Government	3
PHYS Option (advanced)	3
Free Elective ¹⁶	<u>3</u>
Total	15

SENIOR YEAR

FALL	HOURS
Natural and Life Science ⁹	4
Elective (advanced) ¹⁶	3
Elective (advanced) ¹⁶	4
PHYS Option (advanced)	3
Understanding of Ideas and Values ⁸	<u>3</u>
Total	17

SENIOR YEAR

SPRING	HOURS
Elective (advanced) ¹⁶	3
PHYS Option (advanced)	1
PHYS Option (advanced)	3
Elective (advanced) ¹⁶	3
Elective (advanced) ¹⁶	3
Understanding of Ideas and Values ⁸	<u>3</u>
Total	16

Actual degree plans may vary depending on availability of courses in a given semester.

*Some courses may require prerequisites not listed.
See Arts and Sciences folding key (#2) for footnotes.*

Supplemental Information for BA with a Major in Physics

1. Minimum of 128 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Arts degree as specified in the College of Arts and Sciences section of this catalog.
2. Minimum of 31 hours of physics.
3. Required courses: PHYS 1710/1730, 2220/2240, 3010/3030 and 3210, plus 12 hours chosen from: PHYS 3220, 3310, 3420, 4110, 4160, 4210, 4220, 4310, 4420 and 4500; MATH 1710, 1720, 2700 or 2730, and 3410; and CHEM 1410 or 1413/1430 and 1420 or 1423/1440.
4. Students also must satisfy the general requirements of the “Arts and Sciences Core Curriculum” in the College of Arts and Sciences section and the “University Core Curriculum Requirements” in the Academics section of this catalog.
5. Physics Options: PHYS 3220, 3420(4), 4050, 4150 or 4160, 4220, 4420, 4500, 4550, 4600, 4710.
6. Advanced-level courses in physics are offered on a two-year cycle. Planning for physics courses must be done by using the frequency of offering schedule below:
 - Fall (each year): PHYS 3420
 - Spring (even years): PHYS 3220, 4150
 - Fall (even years): PHYS 3010/3030, 3210, 3310, 4210, 4600
 - Spring (odd years): PHYS 4160, 4420, 4310
 - Fall (odd years): PHYS 3010/3030, 3210, 3310