Physics, BA

Requirements

The Bachelor of Arts with a major in physics requires a minimum of 120 s.h., including at least 44 s.h. of work for the major (minimum of 24 s.h. in physics plus 20 s.h. in supporting coursework). The BA program requires fewer physics courses than the BS program does, giving students a wider choice of electives. Students must maintain a grade-point average of at least 2.00 in all courses for the major and in all UI courses for the major. They must also complete the College of Liberal Arts and Sciences GE CLAS Core.

The major is designed for students who wish to build a foundation of knowledge in physics but do not plan a research-oriented career in the discipline. The BA program is also good preparation for students interested in secondary school science teaching; see the section titled "Teacher Licensure." Bachelor of Arts students majoring in physics who are interested in science teaching and in earning a graduate degree may enroll in a combined degree program offered by the College of Liberal Arts and Sciences and the College of Education; see "BA/MAT (Science Education Subprogram)" under Combined Programs [p.] in this section of the catalog.

Students who earn a BA in physics may not earn a BS in applied physics or a BS in physics.

The BA with a major in physics requires the following courses or their equivalents. Substitutions may be allowed by exception through the department.

Requirements	Hours
Mathematics Courses	8
Physics Courses	15-19
Elective Physics Courses	9-10
Supporting Coursework	12

Mathematics Courses

Course #	Title	Hours
Both of these:		
MATH:1850	Calculus I	4
MATH:1860	Calculus II	4
Or both of these:		
MATH:1550	Engineering Calculus I	4
MATH:1560	Engineering Calculus II	4

Physics Courses

Course #	Title	Hours
These three courses:		
PHYS:1701	Physics I	4
PHYS:1702	Physics II	4
PHYS:2703	Physics III	4
Or these two courses:		
PHYS:1611	Introductory Physics I	4
PHYS:1612	Introductory Physics II	4
Both of these:		
PHYS:2704	Physics IV	4
PHYS:3756	Intermediate Laboratory	3

Elective Physics Courses

Course #	Title	Hours
Three of these:		
PHYS:3710	Intermediate Mechanics	3
PHYS:3741	Introduction to Quantum Mechanics I	3
PHYS:3811	Electricity and Magnetism I	3
PHYS:3850	Electronics	4
PHYS:4720	Introductory Optics	3
PHYS:4726	Electro Optics	3
PHYS:4728	Introductory Solid State Physics	3
PHYS:4731	Plasma Physics I	3
PHYS:4740	Elementary Particles and Nuclear Physics	3
PHYS:4750	Advanced Laboratory	3
PHYS:4761	Mathematical Methods of Physics I	3
PHYS:4762	Mathematical Methods of Physics II	3
PHYS:4820	Optical Signal Processing	3
PHYS:4860	Computational Physics	3
PHYS:4905	Special Topics in Physics	arr.

Supporting Coursework

Students should work with their academic advisor to select courses that fit with their plan of study. Students wishing to pursue subject areas that are not in the following list may do so with the approval of the director of undergraduate studies.

Course #	Title	Hours
Coursework from one these STEM subject areas or from coursework required for teacher licensure		12
actuarial science (prefix ACTS)		
biochemistry and molecular biology (prefix BMB)		
biology (prefix BIOL)		
chemistry (prefix CHEM)		
computer science (prefix CS)		
earth and environmental sciences (prefix EES)		
engineering (subject to departmental approval)		
geography (prefix GEOG)		
mathematics (prefix MATH), except MATH:1210		
physics (prefix PHYS)		
psychology (prefix PSY)		
statistics (prefix STAT)		

In planning this work, they should be guided by the College of Liberal Arts and Sciences maximum hours rule: students earning a BA may apply a maximum of 56 s.h. earned in one department to the minimum 120 s.h. required for graduation, whether or not the coursework is accepted toward the requirements for the major. Students who earn more than 56 s.h. from one department may use the additional semester hours to satisfy requirements for the major (if the department accepts them), and the grades they earn become part of their grade-point average, but they cannot apply the

additional semester hours to the minimum 120 s.h. required for graduation.

Teacher Licensure

Students interested in teaching in elementary and/or secondary schools should seek admission to the Teacher Education Program (TEP) in the College of Education.

To qualify for licensure in secondary teaching, students in the TEP complete a degree in education as well as a related College of Liberal Arts and Sciences degree. See Apply on the College of Education website for details on requirements and deadlines for applying to the College of Education and about TEP choices of majors leading to licensure.

Double Major in Physics and Astronomy

Students working toward a Bachelor of Arts with a double major in physics and in astronomy must complete all requirements for both majors and must earn a minimum of 56 s.h. outside the Department of Physics and Astronomy in order to graduate. Students interested in earning a double major should consult with their advisors. See Requirements for a Bachelor's Degree on the College of Liberal Arts and Sciences website.