

BS in Physics

Physics – Bachelor of Science

The **physics major** prepares students for graduate study in physics or for employment opportunities in industry. The curriculum includes courses prescribed by leading graduate-level physics programs in the nation.

Students should include courses in mathematics and chemistry as general electives. Students must demonstrate proficiency in the general physics sequence to advance into 3000- and 4000-level courses.

Course requirements involve 68.5 semester hours including:

Physics Core Requirements	40
PHYS-2110,2120,2130 General Physics I,II,III	10
PHYS-3110 Intermediate Physics Lab.....	2
PHYS-3310 Theoretical Mechanics I	3
PHYS-3350 Thermal Physics	3
PHYS-3410 Electromagnetic Theory I	3
PHYS-3510 Modern Physics	3
PHYS-3800 Research Methods in Physics	1
PHYS-4110 Advanced Physics Lab	2
PHYS-4210 Mathematical Methods for Physicists.....	3
PHYS-4520 Quantum Mechanics I.....	3
PHYS-4800 Physics Senior Seminar	1
PHYS-4880 Topics in Physics	6
(Taken multiple times for a total of 6 hours)	
Departmental Requirements	28.5
CHEM-1050 Chemistry for Engineers.....	3.5
CS-1210 C++ Programming	2
EGEE-2050 Circuits and Instrumentation	4
MATH-1710,1720,2710 Calculus I,II,III.....	13
MATH-2740 Differential Equations	3
MATH-3610 Linear Algebra	3
BS Physics Curriculum Summary	
Proficiency requirements	0-6
Other General Education requirements	47.5
Physics major requirements	68.5
Electives.....	6-12
Total (minimum, not including proficiency)	128

Suggested Four-Year Curriculum for a BS major in Physics

First year:

BEGE-1720 Spiritual Formation.....	3
CHEM-1050 Chemistry for Engineers	3.5
COM-1100 Speech.....	3
CS-1210 C++ Programming.....	2
ENG-1400 English Composition.....	3
MATH-1710,1720 Calculus I,II	10
PEF-1990 Physical Activity and the Christian Life.	2
PHYS-2110 General Physics I	4
Total	30.5

Second year:

BEGE-2730 Old Testament Literature	3
BEGE-2740 New Testament Literature	3
EGEE-2050 Circuits and Instrumentation.....	4
GBIO-1000 Principles of Biology.....	3.5
GSS-1100 Politics and American Culture	3
MATH-2710 Calculus III.....	3
MATH-2740 Differential Equations	3
PHYS-2120,2130 General Physics II,III	6
PHYS-3310 Theoretical Mechanics	3
Total	31.5

Third year:

BEGE-3755 Theology I	3
BEGE-3765 Theology II	3
HUM-1400 Introduction to the Humanities	3
MATH-3610 Linear Algebra.....	3
PHYS-3110 Intermediate Physics Lab.....	2
PHYS-3350 Thermal Physics.....	3
PHYS-3410 Electromagnetic Theory	3
PHYS-3510 Modern Physics.....	3
PHYS-3800 Research Methods for Physics	1
Literature elective	3
Electives.....	6
Total	33

Fourth year:

PHYS-4110 Advanced Physics Lab.....	2
PHYS-4210 Mathematical Methods in Physics	3
PHYS-4520 Quantum Mechanics	3
PHYS-4800 Senior Seminar - Physics	1
Global awareness	3
History elective.....	3
Humanities elective.....	3
Physics Electives	6
Social science elective	3
Electives.....	6
Total	33