PHYSICS, BACHELOR OF SCIENCE

College: College of Science and Health
Department: Physical Science
Student Type: Traditional Undergraduate
Degree: Bachelor of Science
Campus: Lisle Campus

Progression in the Physics Program

A student will progress in the Physics program by completing the introductory sequence of PHYS 2211 University Physics I, PHYS 2212 University Physics II, PHYS 2213 University Physics III, MATH 2210 Calculus I, and MATH 2211 Calculus II with a GPA of 2.500 or above and a grade of "C" or better in each of these courses. A transfer student must meet these requirements through equivalent transfer courses. Additionally, a transfer student must earn a GPA of 2.500 or above in all major classes (excluding labs) during the first semester at Benedictine in order to progress in the Physics program.

If it is determined at any time that a student cannot gain acceptance to the Physics program or cannot graduate with a Physics degree, the student will be required to change his or her major and seek academic advising outside of that program.

Requirements - Major

This program is designed to provide a rigorous introduction to the concepts of physics through a mix of theoretical and experimental coursework, which will prepare students for graduate studies, a career in engineering or applied physics.

The B.S. in Physics major must complete the following courses with a grade of "C" or better.

Code	Title	Hours
PHYS 2205	University Physics I Laboratory	1
PHYS 2206	University Physics II Laboratory	1
PHYS 2207	University Physics III Laboratory	1
PHYS 3208	Modern Physics Laboratory	1
PHYS 2211	University Physics I	3
PHYS 2212	University Physics II	3
PHYS 2213	University Physics III	3
PHYS 3214	Modern Physics	3
ENGR 2220	Statics	3
ENGR 3221	Dynamics	3
ENGR 3264	Electronics	3
PHYS 4313	Classical Thermodynamics	3
PHYS 4314	Physical Chemistry I Laboratory	1
PHYS 4315	Quantum and Statistical Mechanics	3
PHYS 4316	Physical Chemistry II Laboratory	1
PHYS 4398	Research	3
3000 or higher Physics Elective [1]		3
MATH 2210	Calculus I	4
or MATH 1170 & MATH 2200	Introduction to Calculus I and Applications of Calculus I	
MATH 2211	Calculus II	4
MATH 2212	Calculus III	4
MATH 2260	Differential Equations	4
CHEM 1127	Honors General Chemistry	4
or CHEM 1113 & CHEM 1123	General Chemistry I and General Chemistry II	
CHEM 1114	General Chemistry I Laboratory	1
or CHEM 1115	Honors General Chemistry I Laboratory	
CHEM 1124	General Chemistry II Laboratory	1
or CHEM 1125	Honors General Chemistry II Laboratory	
CMSC 2200	Computer Programming	3
Total Hours		**64**

[1] May substitute MATH 3361 Fourier Analysis & Boundary Value Problems

Only courses in which a student earns a grade of "C" or better may be counted toward the major.

Students majoring in Physics may not earn a degree in Engineering Science.

Physics Major with a Minor in Education

Requirements - Teaching License

Students who desire to be licensed to teach physics at the secondary level (grades 9-12) are to declare themselves as Physics majors and Education minors and register with the Benedictine University Education Program as teaching licensure candidates. Advising is then a joint responsibility of the Department of Physical Sciences and the School of Education.

Students must complete the requirement for a major in Physics as well as the requirements of the Teacher Licensure Program in Education which includes the Education minor (see Education [Elementary Education, Special Education and Minors in Education and Special Education] section (http://catalog.ben.edu/lisle-undergraduate/academic-programs/education/)).

Objectives

Students in the Physics program will achieve the following student learning outcomes (SLO):

Student Learning Outcome 1: Students completing Benedictine University physics classes will demonstrate knowledge in major fields of physics.
• University SLO: 1. Disciplinary Competence and Skills

Student Learning Outcome 2: Benedictine University physics students will demonstrate the ability to solve physics problems.
• University SLO: 2. Critical and Creative Thinking Skills

Student Learning Outcome 3: Benedictine University physics students will be engaged with physics outside of the classroom.
• University SLO: 3. Communication Skills