Physics Major (BS)

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About

Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

Program: Physics
Type: Bachelor of Science

MAJOR (B.S.) (88 credits)

The BS program consists of a rigorous and focused curriculum that provides a deep background in fundamental physics. The BS is excellent preparation for the student who aspires to graduate studies in Physics, but also provides comprehensive training in problem solving and critical thinking that are applicable to a wide range of career paths.

Required Courses:

Item #	Title	Credits
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab:Modern Physics	1
PHY 3310	Electronics	3
PHY 3311	Electronics Lab	1
PHY 4200	Mathematical Physics I	3
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
PHY 4100	Mechanics I	3
PHY 4102	Mechanics II	3
PHY 4301	Experimental Methods I	2
PHY 4000	Elec & Magnetism I	3
PHY 4001	Elec & Magnetism I Lab	1
PHY 4002	Elec & Magnetism II	3
PHY 4003	Elec & Magnetism II Lab	1
PHY 4202	Mathematical Physics II	3
PHY 5100	Quantum Mechanics	3
PHY 5200	Thermo/Statistical Mech	3
PHY 5300	Subatomic Physics	3
	PHY Electives for B.S.	6
	Science Electives for Physics B.S.	3

Category Descriptions

PHY Electives for B.S.

Credits: 6

Select 2 Classes in PHY 3000:6700 for a total of 6 credits.

Science Electives for Physics B.S.

Credits: 3

Select 4 Credits in AST 2000:5999, BIO 1205:5999, CHM 2211:5999, CSC 1051:5999, MAT 2300:5999, MET 1221:5999, PHY 3000:5999