

Physics (PHY)

Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

PHY 1031 Concepts in Physics 4 Credit Hours

Equivalent: PHY 1030

ESL Placement Level: For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

This is a non-mathematical introduction to basic concepts in physics and their interrelationships. These ideas will be applied to everyday phenomena, current technology, and the entire universe. A laboratory is integral to the course. **BILLABLE CONTACT HOURS:** 5

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 1610 College Physics I4 Credit Hours

ESL Placement Level: For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

Prerequisite: MAT 1540 or MAT 1560 or higher.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will investigate the physical aspects of mechanics, sound, and heat. The student will perform measurements and experiments in mechanics and thermodynamics. **BILLABLE CONTACT HOURS:** 6

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 1620 College Physics II4 Credit Hours

ESL Placement Level: For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

Prerequisite: PHY 1610

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will study electricity, magnetism, optics, and selected topics in atomic physics. The student will perform measurements and experiments in electricity, magnetism, and optics. **BILLABLE CONTACT HOURS:** 6

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 2400 Engineering Physics I 5 Credit Hours

Equivalent: PHY 1540

ESL Placement Level: For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

Prerequisite: MAT 1730 or higher.

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

Prior physics in high school or college, or consent of instructor, is recommended. The student will define basic terms, explain theories, and apply them to the solution of problems in mechanics and thermodynamics using calculus where required. The student will obtain various types of data, reduce this data, express the reliability of the results, and write technical reports. **BILLABLE CONTACT HOURS:** 7

GE Outcomes: Critical Thinking, Scientific Literacy

PHY 2500 Engineering Physics II 5 Credit Hours

ESL Placement Level: For English-as-a-Second-Language (ESL) students, placement in ESL 2520.

Prerequisite: PHY 2400

Note: Prerequisites for courses in this department are not automatically waived for College Guest students and students with a bachelor's degree or higher from a U.S. institution.

The student will define basic terms, explain theories, and apply them to the solution of problems in electricity and magnetism using calculus and elementary differential equations where required. The student will obtain various types of data, reduce this data, express the reliability of the results, and write technical reports. **BILLABLE CONTACT HOURS:** 7

GE Outcomes: Critical Thinking, Scientific Literacy