

Department of Physics

Physics Course Descriptions

PHU 101 Astronomy

Cr Hr: 3 Prerequisite: None

This elective course is designed for the students of the College of Business to fulfil part of their science requirements. The material of the course is presented in a survey manner using only pre-calculus mathematics. The covered material includes spectroscopy, telescopes, the solar system and its formation theories, the life cycle of stars, galaxies and the general structure of the universe, and an introduction to cosmology.

PHU 102 Science of Energy and the Environment

Cr Hr: 3 Prerequisite: None

This elective course is designed for College of Business students to fulfil part of their science requirements. The material of the course is presented in an interactive manner with the students with a minimum use of mathematics. The course material covers topics ranging from basic energy concepts to fossil fuels, including oil and gas, renewable and nuclear energy sources and usage. The course also covers the environmental issues as they pertain to the Kingdom of Saudi Arabia, the Gulf region and globally.

PHU 103 Mechanics and Waves for Engineers

Cr Hr: 3 Co-requisite: MAT 101 (if not completed previously)

The material of this course requires knowledge of differential and integral calculus. The covered material includes the basics of vectors, kinematics, Newtonian Mechanics, energy and momentum conservation, harmonic motion, mechanical waves, and sound.

PHU 103 L Mechanics and Waves for Engineers Labs

Cr Hr: 1 Co-requisite: PHU 103 (if not completed previously)

This material constitutes the laboratory related to the course PHU 103.

PHU 124 Electromagnetism and Waves for Engineers

Cr Hr: 3 Prerequisite: PHU 103 & MAT 101

The material of this course requires knowledge of differential and integral calculus. The covered material includes the basics of electricity and magnetism, electromagnetic radiation, and optics.

PHU 124 L Electromagnetism and Waves for Engineers Labs

Cr Hr: 1 Co-requisite: PHU 124 (if not completed previously)

This material constitutes the laboratory related to the course PHU 124.

PHU 205 Mechanics for Life Sciences

Cr Hr: 3 Prerequisite: None

The material of the course is Algebra based. The covered material includes the basics of vectors, kinematics, Newtonian Mechanics, solids/fluids, harmonic motion and mechanical waves.

PHU 205 L Mechanics for Life Sciences

Cr Hr: 1 Co-requisite: PHU 205 (if not completed previously)

This constitutes the laboratory related to the course PHU 205.

PHU 216 Electromagnetism and Optics for Life Sciences

Cr Hr: 3 Prerequisite: PHU 205

The material of the course is Algebra based. The covered material includes the basics of electricity and magnetism, electromagnetic radiation, and optics.

PHU 216 L Electromagnetism and Optics for Life Sciences Labs

Cr Hr: 1 Co-requisite: PHU 216 (if not completed previously)

This material constitutes the laboratory related to the course PHU 216.