

PES 299**Internship for Personal Trainers**

Prerequisite: Concurrent enrollment in PE 298 and consent of program coordinator

15 lab hrs per week: 3 hrs credit

This course is designed to provide real-world experience. Students are supervised in Fitness Center arranged by the program coordinator.

Physical Science**PHYS 111 (IAI: P9 900L)****Physical Science**

Prerequisite: Placement into ENG 099 or higher

3 lectures, 2 lab hrs per week: 4 hrs credit

This is an introductory lab course focusing on everyday experiences in physics, chemistry, and astronomy. Basic ideas of motion, matter, and energy are explored and related to astronomy and the importance of scientific discoveries to our society.

PHYS 112 (IAI: PI 905L)**Earth Science**

Prerequisite: Placement into ENG 099 or higher

3 lectures, 2 lab hrs per week: 4 hrs credit

Earth Science is an introductory lab course which surveys topics in geology, meteorology, and environmental science. The geology portion includes rocks, streams, glaciers, earthquakes, plate tectonics, volcanism, and mountain building. The meteorology portion focuses on the atmosphere, weather and climate. Human influence on the environment is emphasized.

Applied Physics**APHYS 100****Applied Physics**

Prerequisite: AMATH 100 or MATH 090

2 lectures per week: 2 hrs credit

This course surveys the physical principles of mechanics and is intended for students in apprentice certificate programs. Topics include metric system measurements, motion, Newton's laws, forces and equilibrium, simple machine elements, conservation laws, rotational motion, matter, and heat.

Physics**PHYSI 101 (IAI: PI 900L)****Conceptual Physics**

Prerequisite: Placement into ENG 099 or higher; placement into Math 090 or higher or completion of Math 085 with C or better.

3 lectures, 2 lab hrs per week: 4 hrs credit

This course is a one semester conceptual study of the major topics and concepts of physics. Topics include description of motion, Newton's laws of motion and universal gravitational law, the planets and Kepler's laws, energy, impulse and momentum, fluid mechanics, temperature, heat and laws of thermodynamics, electricity and magnetism, wave motion, sound waves and acoustic music, EM waves and optics, introduction to modern physics and cosmology, and solid-state physics.

PHYSI 120 (IAI: PI 900L)**College Physics I**

Prerequisite: MATH 151 or equivalent with a grade of C or better

3 lectures, 2 lab hrs per week: 4 hrs credit

This lab course is the first of a two-semester college algebra-based sequence designed to meet the needs of life and health science, liberal arts, and pre-professional students. Topics include vector algebra, Newton's laws of motion, description of motion and motion with constant acceleration, projectile motion, circular motion, work and conservation of energy, impulse and linear momentum, torque and angular momentum, fluids, elasticity and oscillations, waves and sound, and thermal physics and thermodynamics.

PHYSI 130**College Physics II**

Prerequisite: PHYSI 120 AND MATH 151 or equivalent with a grade of C or better

3 lectures, 2 lab hrs per week: 4 hrs credit

This lab course is the second of a two-semester college algebra-based sequence designed to meet the needs of life and health science, liberal arts, and pre-professional students. Topics include electric forces and fields, electric potential, capacitors and dielectrics, electric current and circuits, magnetic forces and fields, electromagnetic induction, alternating current and circuits, electromagnetic waves and optics, reflection and refraction of light, optical instruments, interference and diffraction, quantum and particle physics and relativity.

PHYSI 210 (IAI: P2 900L; PHY 91 I)**University Physics I**

Prerequisite: MATH 171 with a grade of C or better

3 lectures, 3 lab hrs per week: 4 hrs credit

University Physics I is the first course in a three-semester calculus-based sequence designed for pre-engineering, science, and mathematics majors. Topics include measurement and vectors, motion in one dimension, motion in two and three dimensions, Newton's laws of motion and applications of Newton's laws, work and kinetic energy, conservation of energy and momentum, rotation and angular momentum, gravity, static equilibrium and elasticity, fluid mechanics, and oscillations.