

PHYS 2213: Principles of Physics III

2 Credit Hours

Prerequisite: Grades of "C" or better in MATH 2202, and PHYS 2211

This is the third course in the 3-semester introductory sequence. Students will learn about pressures produced by fluids and fluid flow. They will also learn the laws of thermodynamics and their applications to physical systems. Students will also examine the behavior of light interacting with lenses and mirrors, and will understand the behavior of sound in air.

PHYS 2900: Undergraduate Research Experience in Physics

3 Credit Hours

Prerequisite: MATH 1113

This is a course-based undergraduate research experience (CURE). Students will learn to perform research, including how to conduct background research, write a review, data analysis, and interpretation. Students will also engage in scientific discussion and draw conclusions. Students will disseminate their findings via an oral or poster presentation at a conference. Students will learn about ethics and biases in science and how to convey science to a broader audience.

PHYS 3011: Introduction to Heat, Light, Sound, and Fluid

2 Credit Hours

Prerequisite: Grades of "C" or higher in MATH 2202 and PHYS 2211

This course is a survey of topics that includes heat, geometric optics, fluid flow, and sound. Students will develop conceptual understandings and solve real-world problems using special functions. Students will apply laws of conservation to fluid flow and heat flow using mathematical analysis. Students will study the behavior of light in interaction with lenses and mirrors and discuss the physical description of sound and resonant systems using special functions.

PHYS 3110: Directed Methods

1-4 Credit Hours

Prerequisite: Grades of "C" or better in PHYS 2211 and PHYS 2211L and permission of instructor

This course will allow students to gain in-depth skills with a specific set of research methodologies through direct involvement in faculty-led research or scholarship. Course content and instructional methodologies will be identified by the faculty's needs and expectations.