

# Physics (PHYS)

---

## Courses

### **PHYS 130 College Physics I\* (5 Hours)**

**Prerequisites** : MATH 171 or an appropriate score on a math placement test.

In this introductory course for pre-professional and general education, students will learn the fundamentals of selected areas of classical physics. Using the tools of algebra and trigonometry, the course develops the topics of translational and rotational motion, force, work, mechanical and thermal energy, linear and angular momentum, and fluid mechanics. The two-semester PHYS 130/131 sequence is designed to meet the requirements of area pre-professional programs. This is a transfer course that meets the college's requirements for associate's degree programs and meets transfer requirements of area colleges and universities. This course does not normally fulfill the requirement of engineering programs. The course includes an integrated laboratory component the completion of which is a necessary part of the total instructional package.

### **PHYS 131 College Physics II\* (5 Hours)**

**Prerequisites** : PHYS 130.

In this introductory course for pre-professional and general education, students will learn the fundamentals of selected areas of classical physics. Using the tools of algebra and trigonometry, the course develops the topics of electricity and magnetism, waves, optics, and some modern physics. The two-semester PHYS 130/131 sequence is designed to meet the requirements of area pre-professional programs. This is a transfer course that meets the college's requirements for associate's degree programs and meets transfer requirements of area colleges and universities. This course does not normally fulfill the requirements of engineering programs. The course includes an integrated laboratory component the completion of which is a necessary part of the total instructional package.

### **PHYS 191 Math and Physics for Games I\* (4 Hours)**

**Prerequisites** : (MATH 171 with a grade of "C" or higher or MATH 173 with a grade of "C" or higher or appropriate score on math placement test) and GAME 121.

This introductory course focuses on the mathematics and physics concepts needed to program a variety of video game scenarios. Students will learn to use vectors and matrix transformations to model the motion of physical objects in two and three dimensions. Students will also learn various computer programming methods in order to model these mathematical and physical concepts. MATH 191 and PHYS 191 are the same course; enroll in only one.

### **PHYS 220 Engineering Physics I\* (5 Hours)**

**Prerequisites or corequisites**: MATH 242.

Engineering Physics I (and associated laboratory experience) is the study of translational and rotational motion, force, work, mechanical and thermal energy, linear and angular momentum, mechanical waves, and fluid motion using the tools of algebra, trigonometry, and calculus.

### **PHYS 221 Engineering Physics II\* (5 Hours)**

**Prerequisites** : PHYS 220 and MATH 242.

Engineering Physics II (and associated laboratory experience) is the continuation of Engineering Physics I. It is the study of electricity, magnetism, electromagnetic waves, and optics using the tools of algebra, trigonometry, and calculus.