

## **PHYS – Physics**

### **PHYS 1111 – Introductory Physics I**

3.000 Credits

Prerequisites: ENGL 1101 with a minimum grade of C;  
MATH 1112 or MATH 1113 with a minimum grade of C

Corequisites: PHYS 1110L

The first course of two algebra and trigonometry based courses in the physics sequence. Topics include material from mechanics (kinematics, dynamics, work and energy, momentum and collisions, rotational motion, static equilibrium, elasticity theory, and simple harmonic motion), mechanical waves, theory of heat and heat transfer, and thermodynamics.

### **PHYS 1111L – Introductory Physics Lab I**

1.000 Credits

Prerequisites: ENGL 1101 with a minimum grade of C;  
MATH 1112 or MATH 1113 with a minimum grade of C

Corequisites: PHYS 1110

Selected laboratory exercises paralleling the topics in PHYS 1111. The laboratory exercises for this course include units of measurement, Newton's laws, work energy and power, momentum and collisions, one- and two-dimensional motion, circular motion and law of gravity, rotational dynamics and static equilibrium, elasticity theory, harmonic motion, theory of heat and heat transfer, thermodynamics, wave motion, and sound.

### **PHYS 1112 – Introductory Physics II**

3.000 Credits

Prerequisites: PHYS 1111; PHYS 1111L

Corequisites: PHYS 1112L

The second of two algebra and trigonometry based courses in the physics sequence. Topics include material from electricity and magnetism (electric charge, electric forces and fields, electric potential energy, electric potential, capacitance, magnetism, electric current, resistance, basic electric circuits, alternating current circuits, and electromagnetic waves), geometric optics (reflection and refraction), and physical optics (interference and diffraction).

### **PHYS 1112L – Introductory Physics Lab II**

1.000 Credits

Prerequisites: PHYS 1111; PHYS 1111L

Corequisites: PHYS 1112

Selected laboratory exercises paralleling the topics in PHYS 1112. The laboratory exercises for this course include material from electricity and magnetism, geometric optics, and physical optics.