

PHYSICS (PHYS)

PHYS 120 Introduction to Engineering (2 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 2

Introduction to engineering disciplines and careers, role of engineers in society, engineering approach to design process and problem solving.

Typical offering schedule: fall

PHYS 140 Survey of Physics (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Lab hours: 2

Prerequisite: MATH 091 with minimum grade of C or Academic placement measures.

This course is designed for non-science majors with an interest in physics. This course emphasizes the relevance of physics to twenty-first century living. The guiding principle in selecting topics for this course is to present basic concepts that are relevant to an informed individual in today's society. The student will be involved not only in the body of knowledge that is physics, but also in the method that is physics. This class consists of three classroom hours and two lab hours per week for a total of four credits. IAI Code: P1 900L. Typical offering schedule: spring

PHYS 141 Introductory Physics I (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Lab hours: 2

Prerequisite: MATH 166 or MATH 170 with minimum grade of C or Academic placement measures.

Includes the study of the basic principles of statics, kinematics, Newton's laws, energy, momentum, simple harmonic motion, fluids and thermodynamics. IAI Code: P1 900L. Typical offering schedule: fall

PHYS 142 Introductory Physics II (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Lab hours: 2

Prerequisite: MATH 166 or MATH 170 and PHYS 141 with minimum grade of C or Academic placement measures.

Includes the study of waves, electricity, magnetism, circuits, electromagnetic radiation, optics, and modern physics. Typical offering schedule: spring

PHYS 143 General Physics I (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Lab hours: 2

Prerequisite: MATH 250 or concurrent enrollment or Academic placement measures.

Includes the study of Newtonian mechanics, conservation principles, rotational motion, simple harmonic motion. This course is designed for students majoring in Engineering, Mathematics, Physics, and Chemistry. IAI Codes: P2 900L, PHY 911. Typical offering schedule: fall

PHYS 144 General Physics II (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Lab hours: 2

Prerequisite: MATH 255 and PHYS 143 with minimum grade of C.

Includes the study of wave motion, electricity, magnetism, DC and AC electric circuits, electromagnetic radiation, and optics. This course is designed for students majoring in Engineering, Mathematics, Physics, and Chemistry. IAI Code: PHY 912. Typical offering schedule: spring

PHYS 145 General Physics III (4 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 4

Prerequisite: PHYS 144 and MATH 255 with minimum grade of C.

General Physics III includes the study of thermodynamics, special relativity, quantum mechanics, atomic physics, nuclear physics, elementary particle physics, and solid state physics. This course is designed for students majoring in Engineering, Mathematics, Physics, and Chemistry. IAI Code: PHY 913. Typical offering schedule: annual

PHYS 221 Mechanics I (Statics) (3 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Prerequisite: PHYS 143 with minimum grade of C and MATH 255 with minimum grade of C or concurrent enrollment or Academic placement measures.

A vector algebra approach to understanding the principles of statics and the problem-solving techniques of both particle and rigid body systems in three dimensions. Topics include rigid body equilibrium and equivalent systems of force, centroids, analysis of structures, and friction. IAI Code: EGR 942. Typical offering schedule: fall

PHYS 222 Mechanics II (Dynamics) (3 Credit Hours)

Type of credit: Baccalaureate/Transfer

Lecture hours: 3

Prerequisite: PHYS 221 with minimum grade of C.

A course which begins with the study of particle motion and extends into rigid body motion. The kinematics of motion are explored and dynamic, kinematic, and impulse/momentum concepts are used to solve the equations of motion. IAI Code: EGR 943. Typical offering schedule: spring