

PHYSICS (PHYS)

PHYS 1000 - Physics of Everyday Life (4 Credits)

Physical principles including mechanics, heat, waves, and electricity are presented with emphasis on practical applications of these concepts. Completion of this course satisfies one laboratory science requirement in the liberal arts and general studies programs. Basic algebra is used in this course.

Lecture: 3 hours, Lab: 2 hours

Course completes the following requirements:

Gen.Ed. Ability 2A
Gen.Ed. Ability 3B
Lab Science Requirement
Mathematics and Science

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 1030 - General Physics I (4 Credits)

Mechanics and heat are studied as the basic topics of this course. One lecture hour is used as a help session.

Lecture: 3 hours, Lab: 3 hours, Other: 1 hour

Course completes the following requirements:

Gen.Ed. Ability 3B
Gen.Ed. Ability 4B
Lab Science Requirement
Mathematics and Science

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 1040 - General Physics II (4 Credits)

Sound, electricity and magnetism, light, atomic and nuclear theories and their applications are studied in this course.

Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): PHYS 1030

Course completes the following requirements:

Lab Science Requirement

PHYS 1070 - Introduction to Renewable Energy (3 Credits)

This course will introduce renewable energy resources and their applied technologies to the student. Students will learn the physics of energy, as well as, the geology of energy. Topics covered will include, solar, geothermal, tidal, and wave energy, as well as, hydro-electric energy.

Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): (MATH 0600 or MATH 0101 or Math Accuplacer) or (Bachelor Degree or higher)

PHYS 1110 - Radiographic Physics (4 Credits)

This course covers the fundamentals of electrical and radiation physics. Student gain an understanding of the basic principles underlying the operation of X-ray equipment and auxiliary devices. Note: Open only to students currently enrolled in Radiography program.

Lecture: 3 hours, Lab: 2 hours

Course completes the following requirements:

Gen.Ed. Ability 3A
Gen.Ed. Ability 3B
Lab Science Requirement
Mathematics and Science

PHYS 1150 - University Physics I (3 Credits)

This course introduces Newtonian mechanics; including kinematics and dynamics of a particle, rotation of rigid bodies, oscillatory motion, and conservation principles. [Need passing credit in PHYS 1150 and 1151 to fulfill general education requirement.]

Lecture: 3 hours, Other: 1 hour

Prerequisite(s): MATH 2141 (may be taken concurrently) or MATH 1910

Course completes the following requirements:

Gen.Ed. Ability 2A
Gen.Ed. Ability 3B
Mathematics and Science

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 1151 - University Physics I Laboratory (1 Credit)

This course includes laboratory experiments in the fields of mechanics; including kinematics and dynamics of a particle, rotation of rigid bodies, oscillatory motion, and conservation principles, which are covered in PHYS 1150.

Lab: 3 hours

Prerequisite(s): PHYS 1150 (may be taken concurrently) and (MATH 2141 (may be taken concurrently) or MATH 1910)

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 1500 - University Physics II (3 Credits)

This course is an introduction to electricity and magnetism. Topics covered include electric charges, electric fields and Gauss' law; magnetic fields and Ampere's law, capacitance and inductance, DC and AC circuits, Maxwell's equations and electromagnetic waves.

Lecture: 3 hours, Other: 1 hour

Prerequisite(s): (MATH 2141 or MATH 1910) and (PHYS 1150)

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 1501 - University Physics Lab II

(1 Credit)

This course includes laboratory experiments in the fields of electricity and magnetism; including electrical charges, electric and magnetic fields and basic circuits, which are covered in PHYS 1500.

Lab: 3 hours

Prerequisite(s): (MATH 2141 or MATH 1910) and (PHYS 1500 (may be taken concurrently))

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 2000 - University Physics III

(3 Credits)

This is a calculus-based physics course that covers topics in oscillations, waves, acoustics, ray and wave optics, kinetic theory of gases, and thermodynamics. This course includes an hour of recitation.

Lecture: 3 hours, Other: 1 hour

Prerequisite(s): (MATH 2141 or MATH 1910) and (MATH 2142 or MATH 1920) and (PHYS 1150)

Course completes the following requirements:

Mathematics and Science

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 2001 - University Physics III Lab

(1 Credit)

This course deals with laboratory experiments in simple harmonic motion, sound waves, reflection and refraction of light, lenses, prisms, diffraction and interference of light.

Lab: 3 hours

Prerequisite(s): PHYS 2000 (may be taken concurrently)

Course completes the following requirements:

Mathematics and Science

URI/RIC Transfer General Education Transfer Opportunity: Yes

PHYS 2500 - Applications in Science and Math^

(1 Credit)

This capstone course is intended for students in their final semester of the Science program. It allows students an opportunity to demonstrate and integration of knowledge and abilities acquired in previous science and mathematics courses with added intent of developing new insights. Students read selected articles, such as those that come from scientific journals, in a variety of fields and then have the opportunity to collaborate with their peers honing writing, synthesis and presentation skills.

Lecture: 2 hours