

PHYSICS (PHYS)

PHYS 100. Concepts of Physics

Credits: 3

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 100L.

Typically Offered: ONDEMAND

An introduction to physics with applications in everyday life. Material is presented from a conceptual rather than mathematical viewpoint. A few fundamental physical laws are studied and applied to explain a wide range of everyday phenomena. The course is designed for students who have a limited mathematical background.

PHYS 100L. Concepts of Physics Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of PHYS 100.

Typically Offered: ONDEMAND

PHYS 100L is designed to complement topics covered in PHYS 100. Two hours of lab per week.

PHYS 110. Introductory Astronomy

Credits: 3

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 110L.

Typically Offered: FALL

Brief history of ancient astronomy; the Copernican revolution and the beginning of modern astronomy (Copernicus, Kepler, Galileo, Newton); the appearance of the night sky, revolution and rotation of the Earth, celestial coordinate systems, the calendar and seasons; the nature of light and telescopes; structure and origin of the solar system; the Earth, atmospheric phenomena (rainbows, haloes, aurora, etc.) the Moon; the planets and their satellites; comets and solar system debris (asteroids and meteorites); distances and motions of the stars; formation of stellar spectra; the Sun; evolution of ordinary stars; evolution of massive stars and supernovae; neutron stars, pulsars and black holes; the Milky Way and other galaxies; the expanding universe, quasars and cosmology.

PHYS 110L. Introductory Astronomy Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 110.

Typically Offered: FALL

The lab will include topics that support the lecture (PHYS 110). Labs meet two hours per week.

PHYS 211. College Physics I

Credits: 3

Prerequisite: MATH 103 or equivalent.

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 211L.

Typically Offered: FALL

This non-calculus general physics course is recommended for pre-medical or pre-professional students. Topics: Newtonian mechanics and gravitation, work and energy, solids and fluids, heat and thermodynamics.

PHYS 211L. College Physics I Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 211.

Typically Offered: FALL

Three hours of lab per week.

PHYS 212. College Physics II

Credits: 3

Prerequisite: PHYS 211.

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 212L.

Typically Offered: SPRING

This non-calculus general physics course is recommended for pre-medical or pre-professional students. Topics: vibrations and waves, electricity and magnetism, light and optics, and an introduction to modern physics. The laboratory is a corequisite of this course.

PHYS 212L. College Physics II Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 212.

Typically Offered: SPRING

Three hours of lab per week.

PHYS 251. University Physics I

Credits: 4

Prerequisite: MATH 165.

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 251L.

Typically Offered: FALL

Classical physics using calculus for majors in mathematics, physical sciences and engineering. Topics may include: kinematics, mechanics, thermodynamics, waves, electricity and magnetism, and optics.

PHYS 251L. University Physics I Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 251.

Typically Offered: FALL

Three hours of lab per week.

PHYS 252. University Physics II

Credits: 4

Prerequisites: MATH 166 and PHYS 251.

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 252L.

Typically Offered: SPRING

Classical physics using calculus for majors in mathematics, physical sciences and engineering. Topics may include: kinematics, mechanics, thermodynamics, waves, electricity and magnetism, and optics.

PHYS 252L. University Physics II Lab

Credits: 1

Corequisite: Concurrent registration in, or previous successful completion of, PHYS 252.

Typically Offered: SPRING

Three hours of lab per week.