Physics (PHYSICS)

PHYSICS 002A Mechanics and Thermodynamics (4)

Class Hours: *54 Lecture | 54 Laboratory*
Prerequisite(s): *MATH 064 or MATH 063*
Transfers to: *UC/CSU*
C-ID: *PHYS 105/100S*

Mechanics and Thermodynamics

PHYSICS 002A is the algebra-based study of vectors, particle kinematics and dynamics, work energy, simple harmonic motion rotational kinematics and dynamics, the kinetic theory of gases, the first and second laws of thermodynamics and gravitation.

PHYSICS 002B Electricity, Magnetism, Optics (4)

Class Hours: *54 Lecture | 54 Laboratory*
Prerequisite(s): *PHYSICS 002A*
Transfers to: *UC/CSU*
C-ID: *PHYS 110 & 100S*

Electricity, Magnetism, Optics and Modern Physics

PHYSICS 002B is the algebra-based study of electricity, magnetism, electromagnetism, eletric circuits, wave phenomena, geometrical and physical optics, special relativity and a survey of atomic, nuclear and particle physics.

PHYSICS 004A Classical Mechanics (4)

Class Hours: *54 Lecture | 54 Laboratory*
Corequisite(s): *MATH 001A*
Transfers to: *UC/CSU*
C-ID: *PHYS 205/200S*

Classical Mechanics

PHYSICS 004A is the 1st of a 3-semester sequence of calculus-based physics studying Newton's laws of motion, Lagrangian mechanics, Hamiltonian mechanics, kinematics, statics, dynamics, chaos theory, acoustics, fluid dynamics and continuum mechanics. Laboratory work is an integral part of the course.

PHYSICS 004B Electricity, Magnetism, Waves (4)

Class Hours: *54 Lecture | 54 Laboratory*
Prerequisite(s): *PHYSICS 004A*
Co-Requisite(s): *MATH 001B*
Transfers to: *UC/CSU*
C-ID: *PHYS 210*

Electricity, Magnetism, and Waves

PHYSICS 004B is the 2nd of a 3-semester sequence of calculus-based physics studying electrostatics, the electric field, Coulomb's law, Gauss's law, electric potential, capacitance, dielectrics, DC and AC circuit analysis, network theorems, the Lorentz force law, Ampere's law, the Biot-Savart law, Faraday's law, inductance, Maxwell Equations, magnetism, magnetic properties of matter, propagation of waves in elastic media, standing waves, interference, and electromagnetic waves. Laboratory work is an integral part of the course.

PHYSICS 004C Thermodynmics, Optcs, Mdr Phys (4)

Class Hours: *54 Lecture | 54 Laboratory*
Prerequisite(s): *PHYSICS 004B*
Advisory(s): *MATH 002A*
Transfers to: *UC/CSU*
C-ID: *PHYS 215/200S*

Thermodynamics, Optics, and Modern Physics

PHYSICS 004C is the 3rd of a 3-semester sequence of calculus-based physics studying optics, laws of thermodynamics, heat transfer, heat engines, entropy, theory of special relativity, photoelectric effect, Compton effect, Bohr Model for the hydrogen atom, elementary quantum, kinetic theory of gases, failures of classic physics and a survey of modern physics. Laboratory work is an integral part of the course.