

# PRINCIPAL SUBJECT AREA

## PHYSICS

### 100 LEVEL COURSES

#### PH 101 General Physics I (3 credits)

Mechanics: Laws of Motion, Work and Energy, Impulse, Momentum and Center of mass, Rotational Motion, Gravitation, Fluids, Special Relativity.

Thermal Physics: Kinetic theory and Thermodynamics.

Wave mechanics: Oscillatory and wave motion. Sound waves.

Optics: Interference, Diffraction, Polarization and Scattering of light. Lasers.

Recommended Texts:

1. Serway, R.A., *Physics for Scientists and Engineers* (2000), Saunders College Pub.
2. Resnik, R., Halliday, D., and Walker, J., *Fundamentals of Physics* (2000), John Wiley & Sons, Inc. New York.
3. Tipler, P.A., *Physics for Scientists and Engineers* (2000), Worth Pub.

#### PH 102 General Physics II (3 credits)

Electrical and magnetic phenomena: Electric field, Magnetic field, Sources of Magnetic Field, Magnetism in Matter, Electromagnetic Induction, Transient Circuits and Alternative Currents.

Modern physics: Introductory Quantum Physics, Atomic Physics, Nuclear Physics, Elementary particles.

Molecules and Solids: Molecules, Solids, Properties of materials.

Recommended Texts:

1. Serway, R.A., *Physics for Scientists and Engineers* (2000), Saunders College Pub.
2. Resnik, R., Halliday, D., and Walker, J., *Fundamentals of Physics* (2000), John Wiley & Sons, Inc. New York.
3. Tipler, P.A., *Physics for Scientists and Engineers* (2000), Worth Pub.

#### PH 103: Elementary Physics Laboratory I (1 credit)

#### PH 104: Elementary Physics Laboratory II (1 credit)