

Course Code: GEN-401

Course Name: Physics

Course Contents:

Physical Optics: Nature of light, interference of light, Michelson's interferometer, Diffraction of light, Diffraction grating, Diffraction of X-rays by crystal, Bragg's law, Polarization of Light and its application in optical activity.

Thermodynamics: Thermodynamics system, Heat, Temperature and internal energy, First law of thermodynamics and its applications, Specific heat, Second law of thermodynamics, Refrigerator, Entropy.

Spectroscopy: Atomic spectra, Spectrum of H-Atom, Rutherford and Bohr atomic model, X-rays, its production and applications, Laser.

Nuclear physics: Nuclear Compositions, Nuclear Properties, Stable Nuclei, Nuclear Magnetic Resonance, Binding Energy, Isotopes, Mass spectrograph.

Nuclear transformations: Radioactive Decay, Radioactivity and the Earth, Radiation Hazards, Half-Life life of radioactive material, Radiometric Dating, Radioactive Series, Nuclear Fission (Divide and conquer), Nuclear Reactor, Nuclear Fusion, Fusion Reactor.

Recommended Books: