

B.SC PHYSICS
COURSE OUTCOMES

COURSE- MECHANICS [PHYS101]

Course Outcomes

Learners will be able to

CO-1: Understand the behaviour of physical bodies and concepts related to the motion of all the objects around us in our daily life.

CO-2: Differentiate Inertial and noninertial frames of references; understand theory of relativity and inverse square force field

COURSE- ELECTRICITY, MAGNETISM & EMT[PHYS102]

Course Outcomes

Learners will be able to

CO-1: Understand the fundamental properties of charged particles and electric fields, phenomena of electricity, magnetism, electromagnetic induction and electrical circuits.

CO-2: Solve the problems related to these.

COURSE- STATISTICAL & THERMAL PHYSICS[PHYS201]

Course Outcomes

Learners will be able to

CO-1: Use the statistical physics methods, such as Boltzmann distribution, Fermi-Dirac and Bose-Einstein distributions to solve problems in some physical systems. Make connections between applications of general statistical theory in various branches of physics.

CO-2: Solve problems related to conversion of heat into work or the vice versa and principle of operation of engines and refrigerators

COURSE- WAVES & OPTICS[PHYS202]

Course Outcomes

Learners will be able to

CO-1: Get knowledge of vibration, wave motion and wave theory of light and optical phenomena based on the wave description of light.

CO-2: Understand the principles of polarization, interference and diffraction.

COURSE- COMPUTATIONAL PHYSICS[PHYS204 SEC]

Course Outcomes

Learners will be able to

CO-1: Get an introduction to computational methods in solving problems in physics.

CO-2: Learn and understand programming language Fortran, LaTeX. Use of spreadsheet in Physics and introduction to visualization tool GNUplot

COURSE-ELECTRICAL CKTS &NETWORK SKILLS [PHYS205 SEC]

Course Outcomes

Learners will be able to

CO-1: Get a comprehensive understanding of electronic devices and circuits

CO-2: Understand connections of various circuits

COURSE-ELEMENTS OF MODERN PHYSICS [PHYS 301]

Learners will be able to

Course Outcomes

CO-1:Get an overview of physics concepts developed after 1900; quantization of charge photoelectric effect,Compton scattering wave-particle duality, and uncertainty principle.

CO-2: Understand quantum problems including the quantum particle in a box, a well, the simple harmonic oscillator, and the transmission and reflection of waves and energy.

COURSE- QUANTUM MECHANICS[PHYS305]

Course Outcomes

Learners will be able to

CO-1: Understand Formation of Quantum mechanics and application of basic equations in quantum mechanics to various states.

CO-2: Learn advanced computational techniques and apply them to solve various problems related to quantum mechanics using Python/Scilab

COURSE-RADIATION SAFETY [PHYS307 SEC]

Course Outcomes

Learners will be able to

CO-1: Classify radiation and radioactivity, its properties, units of measurements

CO-2: Identify the biological effects of radiation and its application for radiation safety and for radiation treatment

COURSE- RENEWABLE ENERGY & ENERGY HARVESTING [PHYS310 SEC]

Course Outcomes

Learners will be able to

CO-1: Get an overview of the energy, energy type, renewable and non renewable sources of energy

CO-2: Understand the various energy power plants and production of electricity