

Programme Name – Bachelor of Science

1. BSc First Semester

Paper Name : MECHANICS

1. Understanding of Vector Algebra and Vector Calculus.
2. Understand the physical interpretation of gradient, divergence and curl.
3. Study of gravitational field and potential and understanding of Kepler's laws of Planetary motion.
4. Understanding of different frames of references and conservation laws.
5. Understand the dynamics of rigid body and concept of moment of inertia. Study of moment of inertia of different bodies and its applications.
6. Study the properties of matter, response of the classical systems to external forces and their elastic deformation and its applications.
7. Comprehend the dynamics of Fluid and concept of viscosity and surface tension along with its applications and basic idea of waves and oscillations through Simple harmonic motion.

2. BSc Second Year

Paper Name : THERMAL PHYSICS AND STATISTICAL MECHANICS

1. Understanding of Thermodynamical systems and processes.
2. Study of various laws of thermodynamics and their applications.
3. Study of kinetic theory of Gases.
4. Understanding of various theories of radiation.

Paper Name : OPTICS

1. Understanding of geometrical optics: systems and instruments.
2. Study of various optical phenomenon on the basis of wave theory of light, such as interference, diffraction and polarization.

Paper Name : SOLID STATE PHYSICS

1. Understanding of different crystal structure systems.
2. Study of direct and reciprocal lattice and their dynamics.
3. Understanding of elementary band theory and free electron theory of metals

3. BSc Third Year

Paper Name : QUANTUM MECHANICS

1. Understanding of the origin of quantum concept in physics.
2. Study of Schrodinger Wave Equation and its application for 1D, 2D and 3D systems.

Paper Name : MODERN PHYSICS

1. Detailed study of various Atomic Models.
2. Understanding of X-Ray and Optical Atomic spectra.
3. Understanding of basic nuclear physics.
4. Understanding radioactivity mechanisms and respective detectors.

Paper Name : BASIC ELECTRONICS

1. Understanding of working and various applications of semiconductor diodes.
2. Study of basic and advanced power supplies.
3. Understanding the usage of transistor as an amplifier for various applications.
4. Understanding the working of Digital Circuits.