

Dept. of Physics

Course Outcome

B. Sc. Physics, 3 years (Six Semesters) Course

Students will develop the following concepts –

Semester I

Differential Equations, Vector Calculus, Orthogonal Curvilinear Coordinates, Elasticity, Special Theory of Relativity

Semester II

Electricity and Magnetism, Electric Field and Electric Potential, Magnetic Properties of Matter, Network theorems, Ballistic Galvanometer, Waves and Optics, Wave Motion, Superposition of Two Harmonic Waves, Velocity of Waves

Semester III

Mathematical Physics and thermal Physics, Fourier Series, Kinetic Theory of Gases Distribution of Velocities, Molecular Collisions, Real Gases, Physics of Thermodynamics, Zeroth and First Law of Thermodynamics, Entropy, Analog Systems and Applications, Bipolar Junction transistors, Amplifiers

Semester IV

Complex Analysis, Fourier Transforms, Laplace Transforms, Quantum Mechanics, Blackbody Radiation, Radioactivity, Digital systems and applications, Boolean algebra, Arithmetic Circuits

Semester V

Quantum mechanics and application, Time independent Schrodinger equation, Atoms in Electric & Magnetic Fields, solid state physics, Crystal Structure, Lattice Vibrations and Phonons

Semester VI

Electromagnetic theory, Maxwell Equations, EM Wave Propagation in Unbounded Media, Polarization of Electromagnetic Waves, Statistical Mechanics, Classical Statistics, Quantum Theory of Radiation, Bose-Einstein Statistics