

Syllabus distribution of Physics (Hons & Gen) April 2024

1. Honours

Sem-II (H)

| Paper | Topic | Teacher |
|---------|---|------------------|
| UNIT-I | Preliminary Classical Mechanics 1. Introduction 2. Dynamics of system of particles, 3. Rotating frame of reference 4. Motion under central forces | SS SM |
| | 6. Mechanics of Continuum | SP |
| | 4. Motion under central forces, 5. Scattering | SM SS |
| UNIT-II | 1. Electric field and Electric Potential 2. Electrostatic energy and Capacitor 3. Method of Images 4. Dielectric properties of matter | UD TG |
| | 5. Lorentz Force 6. Magnetic Field 7. Magnetic Properties of matter | UD UD |
| Minor | Thermal Physics and Statistical Mechanics: Laws of Thermodynamics, Thermodynamical Potentials | SP |
| | Thermal Physics and Statistical Mechanics: Kinetic Theory of Gases, Theory of Radiation, Statistical Mechanics | SS |

Sem-IV (H)

| Paper | Topic | Teacher |
|-------|--|-------------------|
| C-8 | Mathematical Physics III: Complex Analysis | SS |
| | Mathematical Physics III: Integrals Transforms | SM |
| | Mathematical Physics III: Matrices, Eigen-values and Eigenvectors | SP |
| C-9 | Elements of Modern Physics: Unit 1, Unit 2 | SS |
| | Elements of Modern Physics: Unit 3 | UD |
| | Elements of Modern Physics Unit 4 | SP + UD |
| C-10 | Analog Systems and Applications | TG |
| GE-4 | Electricity and Magnetism: Vector Analysis, Electrostatics, Magnetism | UD |
| | Electricity and Magnetism: Electromagnetic Induction, Maxwell's equations and Electromagnetic wave propagation | SP |
| SEC-2 | Renewable energy and energy harvesting | UD+TG+SP SM+SS |

Sem-VI (H)

| Paper | Topic | Teacher |
|-------|---|---------------------|
| C-13 | Electromagnetic Theory: Maxwell Equations, EM Wave Propagation in Unbounded Media | SP |
| | Electromagnetic Theory: EM Wave in Bounded Media, Polarization of Electromagnetic Waves | UD |
| C-14 | Statistical Mechanics: Classical Statistical Mechanics, Bose-Einstein Statistics, Fermi-Dirac Statistics, Wave guides, Optical Fibres | SM |
| | Statistical Mechanics: Classical Theory of Radiation, Quantum Theory of Radiation | SS |
| DSE-3 | Communication Electronics | TG |
| DSE-4 | Experimental Techniques | SS+TG+UD +SP+ SM |