

**COURSE – 6 Electromagnetic Theory and Spectroscopy**  
**Paper code PHY552**

**Credits - 4**

**BLOCK – I ELECTRO MAGNETIC THEORY**

- Unit –1 : Electrostatic Field
- Unit –2 : Magneto Statics
- Unit –3 : Electro Dynamics
- Unit –4 : EM Waves in Matter
- Unit –5 : Electro Magnetic Radiation
- Unit –6 : Lienard-Wiechert Potentials
- Unit –7 : Radiated Power

**BLOCK – II ATOMIC SPECTRA**

- Unit –8 : Fine Structures
- Unit –9 : Zeeman, Paschen-back and stark Effects
- Unit –10 : Vector Atom Model L-s and Jj Coupling of Two Electron States
- Unit –11 : Two Electron System, Lande ‘G’ Factor

**BLOCK – III MOLECULAR SPECTRA**

- Unit –12 : Rotational Spectra of Diatomic Molecules
- Unit –13 : Vibrational Spectra
- Unit –14 : Electronic Spectra
- Unit –15 : Franck-Condon Principle, Dissociation Enalgies
- Unit –16 : Frank Condon Principle