SECOND YEAR

Electromagnetic Fields II	COE208
Prerequisite : COE206	(2-2-1-0)

Poisson and Laplace's equations. Steady magnetic field: Boit-savart law, amperes law, curl; stokes theorem; magnetic flux, magnetic flux density, scalar and vector magnetic potentials. Magnetic forces and materials: Force on moving charge, force on differential current elements. Force between current differential elements, force and torque on a closed circuit, magnetization and permeability, magnetic boundary conditions, magnetic condition, magnetic circuit. Time-varying fields and Maxwell's equations: Faraday's law, displacement current; Maxwell's equations in point form; Maxwell's equations in integral form, wave equations, wave propagation in different media.