Syllabus :

CO1: Static Electric Fields: Coordinate systems, Charge distributions, Coulomb's Law & Electric field intensity, electric flux density, Gauss's Law & applications Divergence, Divergence theorem, Potential and Potential difference, Potential gradient. Boundary conditions on E and D. Electric current, current densities, equation of continuity.

CO2: Static Magnetic Fields: Biot - Savart's Law and applications, Ampere's circuital law, differential form of Ampere's circuital law, Curl, Stoke's theorem, Lorentz force equation, force on a current element in magnetic field, Boundary conditions on B and H.

CO3: Electromagnetic Waves: Faraday's law of Induction, Maxwell's Equations in Differential and integral forms. Wave equation for free space, Uniform plane wave-general solution and propagation. Wave equations for conducting medium. Wave equations in phasor form, wave propagation in loss less medium, Poynting vector.

CO4: Transmission lines: General Solution, input impedance, infinite line, wavelength, velocity, Reflection Coefficient, Open and short-circuited lines, lossless line, standing wave ratio, input impedance, open and short-circuited lossless lines, Impedance matching.

Text Books :1. W H.Hayt& J A Buck : "Engineering Electromagnetics" TATA McGraw-Hill, 7th Edition 2007. 2. EC.Jordan, "EM waves and Radiating Systems", International Edition, 2011 3. John D Ryder , "Netwotk Lines and fields", 2nd Edition, PHI. 4. Mathew no Sadiku, "Elements of Electromagnetics ", Oxford University Press, 2003. 5. G S N Raju, "Electromagnetic Waves and Transmission LInes", Pearson, 2008.

Reference Books :1. David K.Cheng: "Field and Wave Electromagnetics - Second Edition-Pearson Edition, 2004. 2. Joseph A Ed minister, "Theory and problems of Electromagnetics", 2nd edition, Scham's Outline series, Mc-Graw Hill International. 3. Constantine A. Balanis," Advanced Engineering Electromagnetics" John Wiley.