

## Faculty of Engineering & Technology

## **Electromagnetic Fields**

Information :					
Course Code :	EED331	Level :	Undergraduate	Course Hours :	3.00- Hours
Department : Communication and Computer Engineering					
Description :					
Different coordinate systems. It is divided in two parts: Stationary electric field: force between electric charges. Coulomb's law. The electric field arising from different charge distribution- definition of electric flux and electric flux density- Gauss' law, and divergence theorem- electrostatic potential - gradient of potential electric dipole- Laplace's and Poisson's equations- stored energy and capacitors- material electrical properties. Stationary magnetic fields: magnetic flux and flux density- Ampere' law- magnetic field intensity- field of wire carrying current- magnetic flux of solenoid- inductance- magnetic circuit- curl of a vector . Ácurl of magnetic field- divergence of magnetic flux density- Stoke' theorem- magnetic field energy- magnetic materials.					