



## Level Five

### Electromagnetism Laboratory

Course Code	Course Name	Credit Hours	Lec	Lab	Tut	Prerequisites	Co-requisites
PHY 381	Electromagnetism Laboratory	2	0	3	0	PHY 220	PHY 321

#### *Syllabus:*

- Determining the capacitance of a plate capacitor
- Dielectric Constant of Different Materials
- Parallel and Series Connection of Capacitors
- The RC Circuit
- Measuring the Magnetic Field for a Straight Conductor and on Circular Conductor Loops
- The Magnetic Field of an Air Coil
- Electron Charge-to-Mass Ratio
- RL Circuits
- Alternating Current with Coil and Ohmic Resistors
- Determining the Capacitive Reactance of a Capacitor in an AC Circuit
- Refraction of Microwaves
- Interference of Microwaves
- Absorption of Microwaves
- Polarization of Microwaves in Front of a Horn Antenna
- Electromagnetic Oscillations and Waves Decimeter Waves

#### *References:*

- Special Notes written by Dr. Abdelaziz Sabik