

## Faculty of Engineering & Technology

### Electrical Circuits

#### Information :

**Course Code :** EED203

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Mechatronics Engineering

#### Instructor Information :

Title	Name	Office hours
Lecturer	Sayed Ahmed Zaki Ahmed	2
Assistant Lecturer	Rana Mohamed Abdel Rahman Saleh	
Teaching Assistant	Abeer Tharwat Said Awad	

#### Description :

Basic electrical quantities, Ohm's Law and Kirchhoff's Laws, resistance and source combinations, voltage and current division. Techniques of solving DC electric circuits: nodal analysis and mesh analysis. Theorems: superposition theorem. AC sinusoidal sources, time domain and frequency (phasor) domain, voltages and currents phasor diagrams, inductance and capacitance: voltage and current relationships, impedance and admittance, Techniques of solving AC electric circuits: nodal and mesh analysis, and superposition. Steady state power analysis: Real Power, maximum power transfer theorem, complex power, and power measurement. Three phase circuits; connections: Y-Y, Y- $\Delta$ ,  $\Delta$ - $\Delta$  and power measurements.