

Faculty of Engineering & Technology**Solid State Physics****Information :****Course Code :** EMP221**Level :** Undergraduate**Course Hours :** 3.00- Hours**Department :** Electrical Power Engineering**Instructor Information :**

Title	Name	Office hours
Lecturer	MOHAMED EHAB AHMED FAKHERELDIN BAKR	
Assistant Lecturer	REHAM MILAD KAMEL SAMAN	
Assistant Lecturer	Nada El Said Abdallah Hassan Salem	

Description :

Semiconductor material properties: Crystal structure of solids, Introduction to quantum mechanics, Introduction to the quantum theory of solids, Semiconductor in equilibrium, Carrier transport phenomena, Non-equilibrium excess carriers in semiconductors. pn junction: Basic structure, reverse applied bias, junction breakdown, pn junction current, Generation/recombination currents, and Small-signal model of the pn junction.