

## Faculty of Engineering & Technology

## **Properties of Materials**

Information :

Course Code : EMP223	Level	:	Undergraduate	Course Hours :	2.00- Hours
Department : Mechatronics Engineering					
Instructor Information :					
Title	Name				Office hours
Lecturer	SAMAH ELSAYED ELMETWALLY ELKHATIB				2

Moustafa Raafat Aziz Shousha

## **Description :**

Assistant Lecturer

Introduction to materials, Crystal structure of solids, Relationship of crystal structures to properties of metallic materials and their applications, Deformation of crystal structures, Mechanical Properties of materials, Static Failure, Fatigue, Construction and use of phase diagrams in materials systems, Heat treatment of steels, Types of polymers: ceramics, glasses, and semi conducting materials and their applications, load-stress relations, Generalized concepts of stress, strain and material relations, Stress concentrations, Basics of material selection.