Faculty of Engineering & Technology

Engineering Mechanics

Information :

Course Code :	EMP130	**Level :**	Undergraduate	**Course Hours :**	4.00- Hours

Department : Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Assistant Lecturer	Mohamed Ahmed Reda Abas Ahmed	
Teaching Assistant	Ammar Emad Hamdy Afifi	

Description :

Statics: Applications on space vectors, Resultant of forces, Moment of a force, Equivalent couples, Equivalent systems, Equations of equilibrium of a rigid body, Friction, Types of supports, Equilibrium of plane systems (Trusses and frames), Equilibrium of space systems acting on rigid bodies, The mass center of a system of particles and laminas of different shapes, The mass moment of inertia of system of particles and laminas.
Dynamics: Kinematics of Particles: Introduction and kinematics of rectilinear motion, Curvilinear motion and relative motion, Tangential & normal, radial & transverse accelerations. Kinetics of Particles: Newton's second law, Angular Momentum, Principle of work and kinetic energy, Conservation of energy, Principle of impulse and momentum, Direct and central impact, Systems of particles. Introduction to dynamics of rigid Bodies.