

## 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
Lecturer	Youssef Ahmed Elsayed Kamaleldin Ahmed Awad	1
Assistant Lecturer	Ahmed Abdelfattah Abdelaziz Abdelfattah	
Assistant Lecturer	Ahmed Salah Rashad Ahmed Abdelhakk	
Teaching Assistant	Ahmed Taher Abdelhamed Mohamed Yousef	
Teaching Assistant	Mohamed Fathy Salem Mohamed	

#### 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.