

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 |
| Lecturer | Youssef Ahmed Elsayed Kamaleldin Ahmed Awad | 1 |
| Assistant Lecturer | Ahmed Salah Rashad Ahmed Abdelhakk | |
| Assistant Lecturer | MOHAMMED TAHER ABDELHAMID MOHAMMED YOUSSEF | |
| 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.