

MEE203 Applied Mechanics (2+0+0 2 Units)

- **Statics:** Principles of mechanics. Forces, Moment Couples, Laws of Mechanics. Coplanar forces and their resultants. First and Second Moments of area. Centroids. Distributed line loads and their resultants. Application of vectors to resolution of forces. Equilibrium of particles. Free body diagrams, friction.
- **Dynamics:** Kinematics of particles and rigid body kinematics in plane motion. Application of Newton's laws of motion. Rigid body translation, rotation about fixed axis and the velocity and acceleration of general plane motion. Relative motion of two particles. Dependent motion of particles. Instantaneous centre of rotation. Kinetics of particles, kinetic energy; principles of work and energy, impulse and momentum analysis, moment of inertia, Simple harmonic motions