

DMX3302 Engineering Mechanics

Level	3
Course Code	DMX3302
Course Title	Engineering Mechanics
Credit value	3
Core/Optional	Core
Course Aim/s	To provide basic principles of Engineering Mechanics and its applications
Course Learning Outcomes (CLO):	<p>At the completion of this course student will be able to:</p> <p>CLO1: Differentiate between the kinematics and kinetics in particle and rigid body dynamics.</p> <p>CLO2: Apply principles of dynamics to analyse two and three dimensional motion of particles and rigid bodies</p> <p>CLO3: Analyze distributed force systems and structures with the aid of principles of statics.</p> <p>CLO4: Describe the effects of co-planar external loads subjected by beams, and draw shear force and bending moment diagrams.</p> <p>CLO5: Use phenomenon of friction in the analysis of static and dynamic of rigid body problems.</p> <p>CLO6: Demonstrate basic knowledge of free & forced vibration of a particle & rigid bodies.</p>
Content	<p>Outline Syllabus:</p> <p>Unit 01 : Dynamics of Particles Unit 02 : Dynamics of Rigid Bodies Unit 03 : Statics Unit 04: Shear Force & Moment Equations and Diagrams Unit 05 : Friction Unit 06 : Mechanical Vibrations</p> <p>Laboratory work:</p> <ol style="list-style-type: none"> 1. Determine stress – strain relationship of different materials 2. Determine the forces in loaded frames 3. Measurement of friction coefficients in different materials 4. Determine the centre of gravity of different shapes