

SYLLABUS :-

Introduction to Mechanisms, Vector methods in plane kinematics, Matrix Methods in Kinematics, analysis of space mechanisms, Mobility analysis of Mechanisms, Rigid body guidance, uncton Generation, Path generation, Dynamics of Mechanisms, Optimal Synthesis. Introduction to Robot, Manipulator Dynamics and Controls, Computer-Aided Methods for setting and solving Mathematical models of active mechanisms. Methods based on Newton-Euler formulations, Lagrange-Euler formulations, Apple's equations, Kane dynamics and Bond Graphs, Drives and control devices for manipulators, various considerations in control system design for manipulation, current amplification and voltage amplification and compensation techniques. Adaptive controls and model based controls, controls by impedance adjustments, Dynamical methods for the evaluation and choice of industrial manipulator.