

MECHANISMS AND ROBOTICS LAB (Virtual Lab) (Lab Elective-II)

II Semester

Course Code: 19ME21M4

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0	3	1.5

Course Outcomes: At the end of the course, the student will be able to

CO1: Identify the geometric relationship between input and output motion parameters of robotic arms.

CO2: Formulate the transformation matrix through which a relationship is established between different links of the manipulator.

CO3: Create the workspace through a 3D graph plot of manipulator position for various inputs.

CO4: Assess the robot motion for various inputs of the joint angular value.

CO5: Interpret the simulation of mechanisms for different input parameters.

List of Experiments:

1. Forward kinematics of movemaster RM-501
2. Forward kinematics of PUMA 560
3. Inverse kinematics of PUMA 560
4. Simulation of KGP 50
5. Oldham coupling mechanism
6. Quick return mechanism
7. CAM follower mechanism

WEB REFERENCE: <http://vlabs.iitkgp.ernet.in/mr/>