

Industrial Robotics (R15/R17/R19)	
CO#	# Student will be able to
CO 1	Analyze the manipulator design including actuator, drives and sensor Issues
CO 2	Calculate the forward kinematics, inverse kinematics and Jacobian for serial and parallel robots
CO 3	Identify different types of end effectors and sensors required for specific applications
CO 4	Develop programming principles and languages for a robot control system
CO 5	Discuss various applications of industrial robot systems
CO 6	Develop relationship between mechanical structures of industrial robots and their operational workspace characteristics.