**Learning Objectives:**

* State the concepts of dynamic analysis of four bar mechanisms
* Understand the significance of parameter and select the variable accordingly.
* Calculate the velocity, acceleration and force acting on each link.
* Examine the calculated values with the simulation results
* Evaluate how change in length, angle and driving force results in change of acceleration, velocity and work done by the mechanism

**Theory:**

A four bar link mechanism or linkage is the most fundamental of the plane kinematics linkages. It is a much-preferred mechanical device for the mechanization and control of motion due to its simplicity and versatility. Basically, it consists of four rigid links which are connected in the form of quadrilateral by four pin joints. If a link completes its full rotation then it’s a crank motion and if it oscillates then rocker motion, the link opposite to the fixed link is the coupler and adjacent to fixed link are input and output link.

The dynamic analysis of the four bar mechanism is covered after understanding the kinematic analysis since the acceleration of the links are required to calculate the forces on the link. The analysis involves the offset analysis, acceleration of CG, forces on each link of four bar mechanism, with the help of position diagram, velocity and acceleration diagram.