



Department of Mechatronics Engineering

Course Name: Machine Design

Class: TE Mechatronics Engineering

Course Code: 317541 (2019 Course)

Course Objectives:

1. Understand the various design considerations, design procedure and select materials for a specific application
2. Calculate the stresses in machine components due to various types of loads and failure
3. Analyze machine components subjected to variable loading for finite and infinite life
4. Design various machine components such as shafts, couplings, keys, screws, joints, springs

Course Outcomes:

On completion of the course, learner will be able to

CO1.Design and analyze the cotter and knuckle Joints, levers and components subjected to eccentric loading.

CO2.Design shafts, keys and couplings under static loading conditions.

CO3. Analyze different stresses in power screws and apply its knowledge to design screw jack.

CO4.Evaluate dimensions of machine components under fluctuate loading conditions.

CO5.Understand different welded and threaded joints structure and apply its knowledge to analyze its strength.

CO6.Apply the design and development procedure for different types of springs.