

ME 605 : Dynamics of Machines

Contacts : 3L

Credits : 3

Static and dynamic force analysis; Flywheel; Inertia forces and their balancing for rotating and reciprocating machines; Gyroscope and gyroscopic effects; Governors: types and applications; Cam dynamics: analysis of cam and follower, jump phenomenon; Hydrodynamic and boundary lubrication and analysis of journal and thrust bearings; Vibration of one degree of freedom systems; Free and forced vibrations; Transverse and torsional vibrations of two and three rotor systems; Critical speeds; Vibration isolation and measurements; Two degree of freedom systems; Vibration absorber; Geared system; Multi degree of freedom system.