Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty	: Mr. Abhishek Sharma	Subject Code: 4ME4-24
Subject	: Theory of Machine Lab	
Department	: Mechanical Engineering	Sem: IV

Total No. of Lectures Planned: 11

COURSE OUTCOMES:

At the end of this course students will be able to:

CO1: Get the practical knowledge about various mechanisms.
CO2: Learn about applications of various mechanisms.
CO3: Go through and observe the various experiments/working of different mechanism like cam-follower mechanism, four bar chain, steering mechanism etc.

Lecture No.	Practical No.	Topic
1	**1**	To study inversions of four bar chain and slider crank mechanism and their practical applications.
2	2	To study Steering Mechanisms: Davis and Ackerman
3	3	Study of quick return mechanism and its practical applications.
4	4	Study of inversion of Double slider chain: Oldham Coupling, Scotch Yoke and Elliptical Trammel.
5	5	Study of various cam-follower arrangements. To plot displacement v/s angle of rotation curve for various cams
6	6	To determine co-efficient of friction using two roller oscillating arrangement
7	7	Study of various types of dynamometers, Brakes and Clutches.
8	8	Study of differential gear box.
9	9	To verify the torque relation for gyroscope
10	10	To perform wheel balancing. To perform static and dynamic balancing on

		balancing set up.
11	11	Study of a lathe gear box, sliding mesh automobile gear box, planetary gear box.

TEXT/REFERENCE BOOKS

1. RATTAN, S.S., "THEORY OF MACHINES", 2ND ED., TATA MCGRAW HILL
2. UICKER, J.J., PENNOCLE, G.R, AND SHIGLEY, J.E, "THEORY OF MACHINES AND MECHANISMS", 3RD ED., OXFORD UNIVERSITY PRESS.