



Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty	: Mrs. Nisha Patel	Subject Code: 5ME4-24
Subject	: Machine Design Practice-I	Sem : V
Department	: Mechanical Engineering	
Total No. of Hours Planned:	14	Max. Marks: 50(IA: 30, ETE: 20)

COURSE OUTCOMES:

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

- CO1: Understand the problem and draw the design specifications.
- CO2: Solve problems related to fits and tolerances.
- CO3: Understand component behavior subjected to loads and identify the failure criteria.
- CO4: Design beams, cotters and knuckle etc.

SN	Agenda	Exposure
1	BIS Nomenclature	Classification of Engineering Materials and their properties. Selection of materials from properties
2		Designation of Engineering Materials and IS coding system of various materials.
3	Fits & Tolerances	Classification of fits, Hole & Shaft Basis System
4		Numerical Problems based on fits & tolerances
5	Numerical Problems based on	Design of Cotter joint
6		Design of Knuckle Joint
7		Design of Shafts (Solid & Hollow)
8		Design of keyed Joints
9		Design of Screw Fastening
10		Design of members in bending: Levers
11		Design of members in bending: Springs
12		Design for stiffness of beam: Using Deflection beam method
13		Combined stresses: Shafts
14		Combined stresses: brackets, eccentric loading

TEXT/REFERENCE BOOKS

1. BHANDARI, V. B., INTRODUCTION TO MACHINE DESIGN, MCGRAW HILL EDUCATION (INDIA)
2. SHIGLEY, JOSEPH E., MECHANICAL ENGINEERING DESIGN, MCGRAW HILL EDUCATION (INDIA)
3. DESIGN DATA BOOK, PSG COLLEGE OF TECHNOLOGY