



Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty	: Mrs. Nisha Patel	Subject Code: 8ME4-21
Subject	: Industrial Engineering Lab	
Department	: Mechanical Engineering	Sem: VIII
Total No. of Lectures Planned: 15		Max. Marks: 50(IA: 30, ETE: 20)

COURSE OUTCOMES:

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

- CO1: Apply industrial engineering concept in industrial environment.
- CO2: Understand different concepts regarding Organization and Productivity in industries.
- CO3: Manage and implement different concepts involved in work and method study and understanding of work contents in different situations.
- CO4: Undertake small case study based project works regarding work measurement and time study.

Lecture No.	Exp. No.	Topic
1	1	Determination of time standard for a given job using stopwatch time-study.
2	2	Preparation of flow process chart, operation process chart and man-machine charts for an existing setup and development of an improved process.
3	3	Study of existing layout of a workstation with respect to controls and displays
4	3	Suggesting improved design from ergonomic viewpoint.
5	4	To perform ABC analysis for the given set of inventory data.
6	5	To develop Bill of Materials/Product structure tree and calculate planned order release (POR) using MRP format

7	6	To solve the operations research problems on Linear programming /Transportation /Assignment etc. using OR software's like TORA/LINGO/LINDO/SAS/EXCEL SOLVER etc
8	7	Simulation of inventory system/Queuing system/production system using Monte-Carlo method.
9	7	Simulation of inventory system/Queuing system/production system using Monte-Carlo method.
10	8	To perform case study on sales forecasting.
11	9	To perform case study on project management using PERT/CPM.
12	9	To perform case study on project management using PERT/CPM.
13	10	To perform a case study on plant location and layout planning.
14	10	To perform a case study on plant location and layout planning.
15	11	To perform a case study on capacity planning.

TEXT/REFERENCE BOOKS

1. MOTION AND TIME STUDY AND MEASUREMENT OF WORK, RALPH, M BARNES , JOHN WILEY AND SONS.
2. INTRODUCTION TO WORK STUDY, GEORGE KANAWATY, ILO.
3. PRASAD, L.M., PRINCIPLES AND PRACTICE OF MANAGEMENT, SULTAN CHAND & SONS.