



Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty	: Mr. Abhiahek Sharma	Subject Code: 4ME4-23
Subject	: Production Practice-I	
Department	: Mechanical Engineering	Sem: IV
Total No. of Lectures Planned: 12		

COURSE OUTCOMES:

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

- CO1: Learn about material removal in various modern manufacturing processes.
- CO2: Gaining knowledge of Foundry and Welding, etc.
- CO3: Analyze the processes and evaluate the role of each process parameter during machining of various advanced materials.
- CO4: Solve the various problems for the given profiles to be imparted on the work specimens.

LAB No.	Agenda	Exposure
1	Turning Shop	To study lathe machine construction and various parts including attachments, lathe tools cutting speed, feed and depth of cut. To perform step turning, knurling and chamfering on lathe machine as per drawing.
2		To cut multi-start Square/Metric threads on lathe machine. Boring using a boring bar in a centre lathe and cut BSW/Metric internal threads on lathe machine
3		To perform taper turning using compound rest.
4	Machine shop	To study the milling machine, milling cutters, indexing heads and indexing methods and to prepare a gear on milling machine. To machine a hexagonal /octagonal nut using indexing head on milling machine.
5		To study of single point cutting tool geometry and to grind the

		tool as per given tool geometry. Cylindrical grinding using grinding attachment in a centre lathe
6		To study shaper machine, its mechanism and calculate quick return ratio. To prepare a job on shaper from given mild steel rod.
7	Demonstration and study	Demonstration for job by eccentric turning on lathe machine. Study of capstan lathe and its tooling and prepare a tool layout & job as per given drawing
8		Demonstration on milling machine for generation of plane surfaces and use of end milling cutters. Grinding of milling cutters and drills.
9	Foundry Shop	To prepare mould of a given pattern requiring core and to cast it in aluminium.
10		To perform moisture test and clay content test and permeability test
11		A.F.S. Sieve analysis test. Strength Test (compressive, Tensile, Shear Transverse etc. in green and dry conditions) and Hardness Test (Mould and Core).
12	Welding Shop	Hands-on practice on spot welding.

TEXT/REFERENCE BOOKS

1. RAGHUVANSI B. S., WORKSHOP TECHNOLOGY I & II
2. HAJRA S. K. AND CHAUDHARY, WORKSHOP TECHNOLOGY I & II, KHANNA PUBLISHER
3. CHAPMAN W. A. J., WORKSHOP TECHNOLOGY VOL. 1, 2, 3 & 4, BUTTERWORTH-HEINEMANN