

GOVT.POLYTECHNIC NAYAGARH

DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

SUBJECT: MANUFACTURING ENGINEERING LAB-I (PR-I)

PERIODS: 4P/WEEK

SEMESTER: 3rd

NAME OF FACULTY: ABINAS NAYAK, (Gr. A)

MONALISA SAHOO, (Gr. B)

SEMESTER FROM : 14/07/2024 to 15/11/2025

NO. OF WEEKS: 15

Week	Class Day	Theory / Practical Topics
1st	1st Period	Moulding & casting of (i) Connecting rod (ii) Solid bearing (iii) V-Pulley/Gear Pulley
	2nd Period	Moulding & casting of (i) Connecting rod (ii) Solid bearing (iii) V-Pulley/Gear Pulley
2nd	1st Period	Arc welding (i) Lap Joint (ii) Butt Joint (iii) T- Joint
	2nd Period	Arc welding (i) Lap Joint (ii) Butt Joint (iii) T- Joint
3rd	1st Period	Gas welding (i) Lap Joint (ii) Butt Joint
	2nd Period	Gas welding (i) Lap Joint (ii) Butt Joint
4th	1st Period	Spot welding (i) Lap Joint
	2nd Period	Spot welding (i) Lap Joint
5th	1st Period	Turning Exercise (i) Facing, Step Turning & Chamfering (ii) Step Turning & Taper Turning
	2nd Period	Turning Exercise (i) Facing, Step Turning & Chamfering (ii) Step Turning & Taper Turning
6th	1st Period	Turning Exercise (iii) Step Turning & Groove Cutting (iv) Step Turning & Knurling
	2nd Period	Turning Exercise (iii) Step Turning & Groove Cutting (iv) Step Turning & Knurling
7th	1st Period	Turning Exercise (v) Step Turning & Thread Cutting (vi) Turning and Drilling
	2nd Period	Turning Exercise (v) Step Turning & Thread Cutting (vi) Turning and Drilling
8th	1st Period	Grinding the Lathe Cutting tools to the required angles
	2nd Period	Grinding the Lathe Cutting tools to the required angles
9th	1st Period	Study of Lathe, Drilling machine, shaping machine and slotting machine
	2nd Period	Study of Lathe, Drilling machine, shaping machine and slotting machine
10th	1st Period	Dismantling some of the components of lathe and then assemble the same
	2nd Period	Dismantling some of the components of lathe and then assemble the same

11th	1st Period	List the faults associated with lathe and its remedies
	2nd Period	List the faults associated with lathe and its remedies
12th	1st Period	Routine and preventive maintenance procedure for lathe
	2nd Period	Routine and preventive maintenance procedure for lathe
13th	1st Period	Practice session on welding joints and lathe operations
	2nd Period	Practice session on welding joints and lathe operations
14th	1st Period	Lab record checking and viva voce
	2nd Period	Lab record checking and viva voce
15th	1st Period	Final revision and submission
	2nd Period	Final revision and submission

REFERENCES:

1. Elements of Workshop Technology (Volume I & II) - Hajra Chowdry & Bhattacharaya, MediaPromoters, 11th Edition, 2007
2. Introduction of Basic Manufacturing Processes and Workshop Technology - Rajendersingh, New age international (P) Ltd, New Delhi, 2006
3. Workshop Technology - Raghuvanshi, Khanna Publishers. Jain & Gupta, New Delhi, 2002
4. Production Technology - Jain & Gupta, Khanna Publishers, New Delhi, 2006.
5. Production Technology - HMT, 18th edition, Tata McGraw Hill, New Delhi
6. Manufacturing process - Myro N Begman, 5th edition, Tata McGraw Hill, New Delhi

Abin 14/08/25

Abinas Nayak

Lecturer Stage I

Monalisa 11/08/25

Monalisa Sahoo

Sr. Lecturer