

Lesson Plan for ENGINEERING WORKSHOP PRACTICE (PR-5) , 1st year, Common to all branches. (WINTER-2026)

Discipline: Civil, Electrical and Mechanical

Year-
1st year

Name of the Teaching Faculty:
Sri Pitabas Tripathy, Guest Faculty ,Mechanical

SUBJECT:
ENGINEERING
WORKSHOP
PRACTICE
(PR-5)

No. of Days/
week class
allotted=2

Semester Starts from 17.08.2026

WEEK	PERIOD	TOPICS TO BE COVERED
01	02	Introduction to Workshop Safety, General Rules, and Fitting Shop Overview
02	02	Identification and Selection of Measuring and Marking Tools
03	02	Identification and Selection of Hand Cutting and Striking Tools
04	02	Demonstration and Practice of Chipping Operations on Flat Metal Surfaces
05	02	Demonstration and Practice of Filing Operations (Flat, Square, Round)
06	02	Drilling Machines, Power Tools, and Drill Bit Nomenclature
07	02	Thread Cutting Operations: Tapping and Dieing
08	02	Sawing and Metal Cutting Operations using Hand and Power Hacksaws
09	02	Planning and Laying out a Simple Fitting Job
10	02	Execution and Finishing of Complete Simple Fitting Job
11	02	Introduction to Welding Shop, Safety Practices, and Protective Equipment
12	02	Identification and Classification of Welding Tools, Equipment, and Consumables
13	02	Principles and Setup of Arc Welding (MMAW) Equipment
14	02	Gas Welding Fundamentals, Oxy-Acetylene Equipment, and Flames
15	02	Advanced Welding Processes: MIG (GMAW) and MAG Welding Principles
16	02	Thermal Cutting Operations: Gas Cutting and Edge Preparation

17	02	Rebuilding and Repair of Broken Metallic Parts using Welding
18	02	Execution of Simple Butt Joint and Lap Joint using Welding
19	02	Introduction to Sheet Metal Working and Common Sheet Metals
20	02	Sheet Metal Hand Tools and Measuring Instruments
21	02	Sheet Metal Cutting Operations (Straight, Curved, Notching)
22	02	Bending and Edging Operations (Hemming and Flanging)
23	02	End Curling and Lancing Operations in Sheet Metal Fabrication
24	02	Soldering and Brazing Techniques for Sheet Metal Joints
25	02	Riveting Principles, Types of Rivets, and Joint Assembly
26	02	Execution of Complete Simple Sheet Metal Job (Tray/Funnel)
27	02	Introduction to Carpentry Shop, Wood Classifications, and Timber Properties
28	02	Identification and Usage of Woodworking Hand Tools
29	02	Woodworking Machines (Wood Lathe, Circular Saw, Planer)
30	02	Wood Working Operations: Planning, Marking, and Square Truing
31	02	Chiselling, Grooving, and Wood Turning Operations
32	02	Execution of Wood Joints (Mortise and Tennon / Dovetail / Half Lap)

Pitambar Tripathy
01/08/21

Concerned faculty

H. K. S. / 30/7/2026
HOD

Math and Science Department