

Subject Code	Subject Name	Period per Week		Credit
26521	WOOD WORKSHOP PRACTICE	T	P	C
		1	3	2

Rationale	Wood Workshop practice is the backbone of the real Wood industrial environment. This subject will help to develop and enhance relevant technical hand skills required by the technician working in the various engineering industries and wood workshops. This course intends to impart basic know-how of various hand & power tools and their use in different sections of furniture manufacturing. Irrespective of branch, the use of workshop practices in day to day industrials well domestic life helps to dissolve the problems. The workshop experiences would help to build the understanding of the complexity of the industrial job, along with time and skills requirements of the job. Workshop curricula build the hands on experiences which would help to learn manufacturing processes and production technology courses in successive semesters. Workshop practice is also important since only practice can make the man perfect. The subject covers only such topics which will enable the diploma engineers to identify and classify the different types of wooden joints, OSH & Safety, Hand & Power tools. The emphasis will be more on teaching practical aspect rather than theory.
Learning Outcome (Theoretical)	After undergoing the subject, students will be able to: OSH practice, Different types hand and power tools, Wooden joint and their uses. ☐ Describe OSH and Safety. ☐ Explain the measuring and marking tools. ☐ Mention different types of hand tools. ☐ Describe the different types of power tools. ☐ State procedure the different types of wooden joint.
Learning Outcome (Practical)	After undergoing the subject, students will be able to: ☐ Apply OSH and safety. ☐ Uses of measuring, marking hand & power tools. ☐ Show skill in sawing, planning and cutting of wood piece. ☐ Show skill in making different types of wood joint. ☐ Apply polish to wooden works. ☐ Prepare one complete job as project work.

Detailed Syllabus (Theory)

Unit	Topics with Contents	Class (1 Period)	Final Marks
1.	OSH PRACTICES AND SAFETY IN THE WORKPLACE. 1.1 Define OSH Practices. 1.2 Mention Safety Signs and symbols. 1.3 Mention personal protective equipment (PPE). 1.4 Describe the improving OSH performance are identified and raised with relevant personnel. 1.5 State the safety records according to workshop policies. 1.6 State the Importance of wood workshop OSH and safety. 1.7 Mention the wood workshop safety rules. 1.8 Describe the safety procedures when using wood working machines and tools.	3	6
2	MEASURING AND MARKING INSTRUMENTS FOR WOOD WORKS. 2.1 Define measuring and marking tools. 2.2 Mention the measuring and marking tools. 2.3 State folding rule, steel rule and steel tape. 2.4 State the marking Gauge, Mortise Gauge, Compass, Divider, Scriber or marking knife and Carpenter's vice. 2.5 State the measure and marking procedure of wood works. 2.6 State the Importance of the measurement and marking of wood works. 2.7 Describe the marking out tools in wood work. 2.8 Classify measuring and marking out tools. 2.9 Mention the uses of measuring & marking tools.	3	6
3	WOOD WORKING HAND TOOLS. 3.1 Mention common and basic hand tools required in carpentry works. 3.2 Classify the wood workshop hand tools. 3.3 State the basic hand tools required to undertake a simple carpentry works. 3.4 Describe the minor maintenance and sharpening of tools used for wood works. 3.5 Explain the safety procedure during working in the wood shop. 3.6 Describe the Clean work place and store tools and equipment. 3.7 Define the traditional wood working hand tools. 3.8 Explain the Dust collection and workshop vacuums.	3	6
4	WOOD WORKING PORTABLE MACHINE. 4.1 Mention wood working portable power tools. 4.2 List down the Essential power tools 4.3 Mention the uses of power tools. 4.3 Describe the different types of portable saw and planner machine. 4.4 Describe the different types of drill and sanding machine.	3	6

	4.5 Explain the procedure of nail gun, air gun, air-compressor, screw gun, lacquers spray gun. 4.6 Mention the Maintenance procedure of power tools machine. 4.7 Mention the sharpen procedure of power tools. 4.8 List down the different types of portable machine blade, saw and bits.		
5	WOOD JOINT. 5.1 Define wood working joint. 5.2 Mention the wood joints. 5.3 Mention the unique purposes of wood joints. 5.4 Introduction to various types of wooden joints, their relative advantages and uses. 5.5 Importance of wooden joint. 5.6 Mention the different strongest wood joint. 5.7 Methods of joining wood. 5.8 Explain the different Materials used for wood joint. 5.9 Describe the Polishing method for wooden work.	4	6
	Total	16	30

Detailed Syllabus (Practical)

Sl.	Experiment name with procedure	Class (3 Period)	Continuou s Marks
1	APPLY OSH PRACTICES & SAFETY IN THE WORKPLACE. 1.1 Check the OSH hazards and Safety in workplace. 1.2 Identify and corrective action for Hazards. 1.3 Make OSH hazards and incidents report in workplace. 1.4 Apply OSH practices in the workplace. 1.5 Select and worn personal protective equipment (PPE). 1.6 Identify Risks measure in the work area. 1.7 Show emergency response procedures in the workplace. 1.8 Maintain and improve health and safety in the workplace. 1.9 Maintain the record of performed job.	1	2
2	PREPARE WOOD FOR WORK 2.1 Select Wood and wood substitutes for performed job. 2.2 Check the quality of wood for as per work. 2.3 Take Dimension of wood work piece. 2.4 Use preservatives of wood. 2.5 Maintain the record of performed job.	1	3
3	USE MEASURING TOOLS & EQUIPMENT 3.1 Select the Measuring tools and equipment. 3.2 Tolerance and clearance limit for performed job. 3.3 Taken Measurement according to drawing or specification. 3.4 Check Measurement against job requirement. 3.5 Clean & Store measuring instruments. 3.6 Dispose the Waste materials form the workplace. 3.7 Maintain the record of performed job.	1	2

34	USE HAND TOOLS FOR WOOD WORKSHOP. 4.1 Select the hand tools as per task. 4.2 Prepare Hand tools for work. 4.3 Check Hand tools 4.4 Repair unsafe or faulty tools. 4.5 Operate the Hand tools. 4.6 Clean and store Hand tools. 4.7 Maintain the record of performed job.	1	2
5	USE POWER TOOLS FOR WOOD WORKSHOP. 5.1 Select Power tools as per task. 5.2 Collect Power tools for work. 5.3 Check Power tools. 5.4 Identify unsafe or faulty tools. 5.5 Check the holding and clamping devices. 5.6 Operate the Power tools. 5.7 Clean and store Power tools. 5.8 Maintain the record of performed job.	2	3
6	SAWING, PLANNING AND CUTTING OF WOOD PIECE. 6.1 Select Sawing, Planning and Cutting machine according to job requirements. 6.2 Perform different types of sawing on different parts. 6.3 Follow safety procedures during sawing. 6.4 Identify the planning tools for required job. 6.5 Follow the procedure of planning. 6.6 Select the right size and types of cutting tools. 6.7 Observe the safe procedure for cutting. 6.8 Clean work place and equipments. 6.9 Maintain the record of performed job.	2	3
7	MAKE DIFFERENT TYPES OF WOOD JOINT. 7.1 Select appropriate size of wood used in the job. 7.2 Select tools and equipment for the specific job. 7.3 Put marking the wood for jobs.(As per Drawing). 7.4 Make Cross lap joint, Rabbet joint, Butt joint, Tongue and Groove joint, T-halving joint, Tenon & Mortise joint, Half lap dovetail joint, Corner dove tail joint. 7.5 Make hole in wood, counter shank and wood joint with screw and nailing. 7.6 Clean work place and equipments. 7.7 Maintain the record of performed job.	2	3
8	APPLY POLISH TO WOODEN WORKS. 8.1 Select common materials use in polish on wooden surface. 8.2 Select sand paper of different grads. 8.3 Perform sand papering on wooden surface. 8.4 Apply putty on wooden surface. 8.5 Show the procedure of polish. 8.6 Apply polish along the grain of wood. 8.7 Clean work place and equipments. 8.8 Maintain the record of performed job.	2	2
9	APPLY THE BASIC RULES OF FREE HAND SKETCHING OF FURNITURE. 9.1 Identify the required materials for free hand sketching	2	2

	9.2 Draw working drawing of the following furniture. A. Book self B. Armless chair C. Reading table D. Wooden Stool 9.3 Maintain the record of performed job.		
10	PREPARE A COMPLETE JOB AS PROJECT WORK (SIMPLE WOODEN FURNITURE) 10.1 Perform one of the following furniture with costing/ including finishing work (varnishing / Lacquer). A. Book self B. Armless chair C. Reading table D. Wooden Stool 10.2 Clean work place equipments. 10.3 Maintain the record of performed job.	2	3
	Total	16	25

Necessary Resources (Tools, equipment's and Machinery):

SI	Item Name	Quantity
01	Wood Working Hand tools	--
02	Wood Working Power tools	--
03	Wooden Finishing materials	--

Recommended Books:

SI	Book Name	Writer Name	Publisher Name & Edition
01	Principles of wood working	Herman Hjorth	--
02	Wood working hand tools	Mohammad Abdul Matin Howladar	BTEB
03	Wood working Drawing-I,II	Mohammad Abdul Matin Howladar	BTEB
04	Raw & Finishing materials	Mohammad Abdul Matin Howladar	BTEB
05	National certificate in furniture sector (Carpenter)	--	BTEB