



RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL  
OUTCOME BASED CURRICULUM

**NAME OF THE PROGRAMME:** AUTOMOBILE, MECH, RAC, CHEMICAL, CEMENT, PRODUCTION, CIVIL, CTM, PRINTING and TEXTILE TECH

**Name of Scheme :** OCBC -2019

**COURSE TITLE :** WORKSHOP PRACTICE

SEMESTER-I

COURSE OUTCOMES		CL	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO 1	Discuss general safety rules used in different shops	U	3	3	2	3	3	3	3
CO 2	Demonstrate making , measuring , cutting, holding, striking and planning tools and equipments	U	3	3	2	3	2	2	2
CO 3	Explain operations used in fitting , carpentry, smithy, sheetmetal, welding and plumbing shops	U	3	3	2	3	2	2	2
CO 4	Prepare simple jobs in different shops	A	3	3	2	3	2	2	2

**COURSE CONTENTS**

UNIT	CONTENTS	
UNIT-1	CARPENTRY SHOP 1-Introduction 2-Variety types of woods. 3-Different types of tools, machines and accessories.	
UNIT-2	WELDING SHOP 1-Introduction 2-types of welding, ARC welding, Gas Welding, Gas Cutting. 3-welding of dissimilar materials, Selection of welding rod material Size of welding rod and work piece. 4-different types of flame. 5-Elementary Symbolic representation. 6-Safety precautions in welding safety equipments and its use in welding processes.	
UNIT-3	FITTING SHOP 1-Introduction 2-Variety marking, measuring, cutting, holding and striking tools. 3-Different fitting operation like chipping, filing, right angle, marking, drilling, tapping etc.	
UNIT-4	PLUMBING SHOP 1-Introduction. 2-various marking, measuring, cutting, holding and striking tools. 3-Different G.I. pipes, PVC pipes, flexible pipes used in practice. 4-G.I. pipes and PVC pipes fitting and accessories, adhesive solvents chemical action, piping layout.	
UNIT-5	SHEET METAL SHOP 1-Introduction.	



RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL  
OUTCOME BASED CURRICULUM

**NAME OF THE PROGRAMME:** AUTOMOBILE, MECH, RAC, CHEMICAL, CEMENT, PRODUCTION, CIVIL, CTM, PRINTING and TEXTILE TECH

**Name of Scheme :** OCBC -2019

**COURSE TITLE :** WORKSHOP PRACTICE

SEMESTER-I

	2-Various types of tools, equipments and accessories. 3-Different types of operations in sheet metal shop. 4-Soldering and riveting. 5-Safety precautions.	
--	---	--

### PRACTICALS

UNIT	PRACTICAL CONTENTS	
1	WOOD WORKING SHOP <ul style="list-style-type: none"><li>• Demonstration of different wood working tools/machines.</li><li>• Demonstration of different wood working processes, like planning, marking, chiseling, grooving, turning of wood etc.</li><li>• One job involving any one joint like mortise and tenon dovetail, bridle, half lap etc.</li></ul>	
2	WELDING SHOP <ul style="list-style-type: none"><li>• Demonstration of different welding tools/machines.</li><li>• Demonstration on ARC Welding, Gas welding, Gas Cutting and rebuilding of broken parts with welding.</li><li>• One job involving butt and lap joint.</li></ul>	
3	FITTING SHOP <ul style="list-style-type: none"><li>• Demonstration of different fitting tools and drilling machines and power tools.</li><li>• Demonstration of different operations like chipping, filing, drilling, tapping, cutting etc.</li><li>• One fitting job involving practice of chipping, filing, drilling, tapping, cutting etc.</li></ul>	
4	PLUMBING SHOP <ul style="list-style-type: none"><li>• Demonstration of different plumbing tools .</li><li>• Demonstration of different operations in plumbing, observing different pipe joint and pipe accessories. Different samples of PVC pipes and PVC pipe fittings.</li><li>• One job on pipe joint with nipple coupli9ng for standard pipe. Pipe threading using standard die sets.</li></ul>	
5	SHEET METAL SHOP <ul style="list-style-type: none"><li>• Demonstration of different sheet metal tools/machines.</li><li>• Demonstration of different sheet metal operations like sheet cutting, bending, edging, end curling,</li></ul>	



RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL  
OUTCOME BASED CURRICULUM

**NAME OF THE PROGRAMME:** AUTOMOBILE, MECH, RAC, CHEMICAL, CEMENT, PRODUCTION, CIVIL, CTM, PRINTING and TEXTILE TECH

**Name of Scheme :** OCBC -2019

**COURSE TITLE :** WORKSHOP PRACTICE

SEMESTER-I

	lancing, soldering and riveting. <ul style="list-style-type: none"><li>• One job involving sheet metal operations and soldering and riveting.</li></ul>	
6	<b>SMITHY SHOP</b> <ul style="list-style-type: none"><li>• Demonstration of different forging tools and Power Hammer.</li><li>• Demonstration of different forging processes, likes shaping, caulking, fullering, setting down operations etc.</li><li>• On e job like hook peg, flat chisel or any hardware item.</li></ul>	
7	<b>Demonstration of power tools and practice of utility items.</b> <ul style="list-style-type: none"><li>• Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories.</li><li>• Making of electrical switchboard with 2 sockets and piano buttons and with electrical wiring.</li><li>• Any other item as per the requirement of college/Deptt.</li></ul>	

**LIST OF BOOKS**

S.K. Hajara Chauadhary.	Workshop Technology	Media Promoters and publishers, New Delhi.
B.S. Raghuwanshi.	Workshop Technology	Dhanpat Rai and sons, New Delhi.
R.K. Jain.	Production Technology	Khanna Publishers, New Delhi.
H.S. Bawa.	Workshop Technology	Tata McGraw Hill Publishers, New Delhi.
Kent's	Mechanical Engineering Hand book	John Wiley and Sons, New York.