

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING AND TECHNOLOGY (DIPLOMA PROGRAMMES)									
Programme		DIPLOMA				Branch/Spec.		Mechanical Engineering.	
Semester		I				Version		1.0.0.0	
Effective from Academic Year			2018-19			Effective for the batch Admitted in			June 2018
Subject code		1ES115		Subject Name		Mechanical Workshop			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	0	0	2	0	2	Theory	0	0	0
Hours	0	0	4	0	4	Practical	40	60	100
Pre-requisites:									
Learning Outcome:									
Practical should be carried out in such a manner that students are able to									
<ol style="list-style-type: none"> 1. Acquire skills in basic engineering practice 2. Identify the hand tools and instruments 3. Gain measuring and fitting and carpentry skills 4. Acquire skills in welding and soldering 									
Practical content									
Unit	Content								Hrs
1.	Prepare carpentry and fitting shop layout.								2
2.	Demonstrate use of different fitting tools –like work holding, marking, measuring, cutting, finishing and miscellaneous. Student will also prepare the report with sketch, specifications and applications of fitting tools demonstrated.								4
3.	Prepare one simple and another male-female type fitting jobs as per given drawings- 2 jobs.								10
4.	Demonstrate use of different tin smithy tools. Student will also prepare the report with sketch, specifications and applications of tin smithy tools demonstrated.								2
5.	Prepare one tin smithy job as per drawing having shearing, bending, joining and riveting.								4
6.	Demonstrate use of different carpentry tools. Student will also prepare the report with sketch, specifications and applications of carpentry tools demonstrated.								4
7.	Prepare two wooden joints as per given drawings								10
8.	Demonstrate use of different pipe fitting tools. Student will also prepare the report with sketch, specifications and applications of pipe fitting tools demonstrated.								2
9.	Prepare pipe fitting jobs as per drawings-two jobs								4
10.	Demonstrate use of different welding transformers and consumables. Also demonstrate arc welding, gas cutting, soldering and brazing operations. Student will also prepare the report with sketch, specifications and applications of fitting tools demonstrated.								4
11.	Prepare jobs using arc welding, gas cutting, spot welding, brazing and soldering process- three jobs.								8
12.	PROBLEM BASED LEARNING: (Assignment) Group of 6 students will take rejected work pieces in workshop practice (at least two in each fitting, carpentry, tin smithy, pipe fitting and welding). Group will draw the work pieces, will identify type of defects and will discuss the reasons of such defects. Outcome of discussion has to be written in logbook and report.								2
13.	SCHOOL WITHIN SCHOOL: (Assignment) i: Each student will demonstrate and explain at least one tool (to be assigned by teacher) to all batch colleagues. ii: Each student will share his/her student activities outcome. He/she will also share the experience for the student activities he/she has carried out.								4
Text Books									
1.	Workshop Technology-I. By Hazra and Chaudhary.								

2	Workshop Technology-I. By W.A. J. Chapman Taylor & Francis.
Reference Books	
1.	1 Mechanical workshop practice. K.C. John.
2.	2 Workshop familiarization. E.Wilkinson.
3.	Comprehensive Workshop Technology (Manufacturing Processes).
4.	I.T.B. Handbooks. – by Engineering industry Training Board.
5.	Workshop practice manual. By K.Venkata Reddy B.S.Publications.