

ENGINEERING WORKSHOP AND MANUFACTURING PRACTICES

I Semester								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
A5ME03	ESC	L	T	P	C	CIE	SEE	Total
		1	-	3	2.5	30	70	100
<b style="color: blue;">COURSE OBJECTIVES: Student will be able to: <ol style="list-style-type: none"> 1. Get the hands on experience on various trades. 2. Perform various machining operations. 3. Capable to make useful products using one or more operations. 4. Learn various manufacturing processes. 								
LIST OF EXPERIMENTS								
WEEKS	BASIC TRADES			BASIC MANUFACTURING				
	Fitting			Machine Shop				
Week 1	Filing Four Sides of Work piece			Facing & Step Turning on Lathe				
Week 2	L Fit			Milling and Drilling				
	Carpentry			Black Smithy				
Week 3	Half Lap Joint			Convert round rod to S-hook				
Week 4	Dove Tail Joint			Convert round rod to Chisel				
	Tin Smithy			Casting				
Week 5	Tin Smithy- Prepare a Rectangular Tray			Preparation of Mould Cavity for Multi Piece Pattern				
Week 6	Prepare A Square Tin			Casting of Simple pattern				
	Electrical			Welding Shop				
Week 7	House Wiring Parallel and Series Connection			Lap/Butt joint Using Arc Welding				
Week 8	House Wiring Two Way Switch			Lap/Butt joint Using Gas Welding				
	Electronics			Plastic Moulding				
Week 9	Soldering Parallel Connection			Injection moulding of Simple Components				
Week 10	Soldering Series Connection							
Week 11	Making useful product using 3 or more			Making useful product using 3 or more				

	operations.	operations.
Note: Total 16 experiments are to be conducted.		
TEXT BOOKS:		
<ol style="list-style-type: none"> 1. Workshop Manual by P. Kannaiah and K. L. Narayana. 2. Rao P.N., "Manufacturing Technology", Tata McGraw Hill House, Vol. I and Vol. II. 		
REFERENCE BOOKS:		
<ol style="list-style-type: none"> 1. HajraChoudhury S.K., HajraChoudhury A.K. and Nirjhar Roy S.K., "Elements of Workshop Technology", Media promoters and publishers private limited, Mumbai, Vol. I 2008 and Vol. II 2010. 2. Kalpakjian S. and Steven S. Schmid, "Manufacturing Engineering and Technology", Pearson Education India Edition, 4thedition,2002. 		
COURSE OUTCOMES:		
Student will be able to:		
<ol style="list-style-type: none"> 1. Fabricate components with their own hands 2. Get practical knowledge of the dimensional accuracies and tolerances possible with different manufacturing processes 3. Assemble different components 4. Produce small devices of their interest 		