

Subject Code: 01ME0104
Subject Name: Workshop
B.Tech. Sem-II
Type of course: Engineering Science

Prerequisite: Zeal to learn the subject

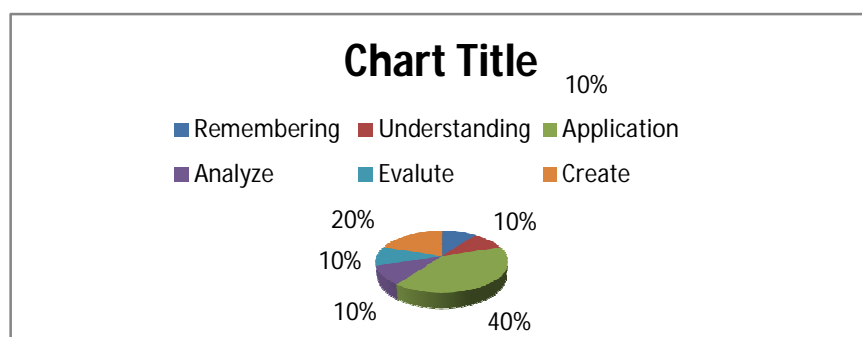
Rationale: Workshop practice is the backbone of the real industrial environment which helps to develop and enhance relevant technical hand skills required by the technician working in the various engineering industries and workshops. Irrespective of branch, the use of workshop practices in day to day industrial as well domestic life helps to dissolve the problems.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					Total Marks
L	T	P		Theory Marks			Tutorial/Practical		
			ESE	IA	CSE	Viva (V)	TW		
0	0	2	1	0	0	0	0	50	50

Content:

Sr. No.	Content	Total Hrs	% Weight age
1	<p>Introduction: Introduction to various shops / sections and workshop layouts. Safety norms to be followed in a workshop should be conveyed to students.</p> <p>Demonstration of hand tools, power tools, machine tools, basic measuring instruments, materials, Marking and measurement in Carpentry, Fitting, Smithy, Welding, Tin smithy, Plumbing and Machine shop.</p>	2	100%





Established Under Gujarat Private Universities Act No. 9 of 2016

Syllabus for Bachelor of Technology

Mechanical Engineering

Reference Books:

1. Mechanical Workshop Practice by K C John, PHI Learning
2. Workshop Technology Vol. 1 and 2 by Raghuvanshi B.S. Dhanpat Rai & Sons 1998
3. Workshop Technology by Chapman W.A. J and Arnold E. Viva low priced student edition, 1998
4. Workshop Practices, H S Bawa, Tata McGraw-Hill, 2009
5. Workshop Practices and Materials, B J Black, CRC Press.

Course Outcome:

After learning the course the students should be able to:

1. Understand applications of hand tools and power tools.
2. Understand the operations of machine tools.
3. Select the appropriate tools required for specific operation.
4. Comprehend the safety measures required to be taken while using the tools.

List of Experiments:

1. To understand and appreciate significance of mechanical engineering in different fields of engineering
2. To understand construction and working of different boiler mountings and accessories.
3. To determine brake thermal efficiency of an I. C. Engine.
4. To understand construction and working of different types of air compressors.
5. To demonstrate vapor compression refrigeration cycle of domestic refrigerator OR window air conditioner OR split air conditioner.

Design based Problems (DP)/Open Ended Problem:

1. Prepare a working model of a toy.
2. Prepare a game/puzzle games

List of Open Source Software/learning website:

1. <http://nptel.iitm.ac.in/courses.php>