

University of Mumbai			
CLASS: F.E (All Branches of Engineering)		Semester - I	
SUBJECT: Workshop Practice I			
Periods per week (each of 60 min)	Lecture	--	
	Practical	04	
	Tutorial	-	
		Hours	Marks
Evaluation System	Theory Examination	--	--
	Practical and Oral Examination	--	--
	Oral Examination	--	--
		Term Work	50
		Total	50

University of Mumbai			
CLASS: F.E (All Branches of Engineering)		Semester - II	
SUBJECT: Workshop Practice II			
Periods per week (each of 60 min)	Lecture	--	
	Practical	04	
	Tutorial	-	
		Hours	Marks
Evaluation System	Theory Examination	-	--
	Practical and Oral Examination	--	--
	Oral Examination	--	--
		Term Work	50
		Total	50

Details of the Syllabus:-

Sr.No	Details Syllabus	Periods per weeks
Note :	The syllabus and the Term-work to be done during semester I & II are given together. Individual instructor for the course is to design the jobs for practice and demonstration and spread the work over entire two semesters. The objective is to impart training to help the students develop skill sets for creating entities from primitive engineering materials and establishing connections through wires	

	<p>and cables. This exercise also aims in inculcating respect for physical work and hard labor in addition to some amount of value addition by getting exposed to interdisciplinary engineering domains. The two compulsory trades (Sr.No. 1 and 2) shall be offered in separate semesters.</p> <p>Select any four grade topics (two per semester) out of the topic at Sr.No. 3 to 10. Demonstrations and hands on experience to be provided during the periods allotted for the same. Report on the demonstration including suitable sketches is also to be included in the term-work.</p>	
01	<p>Fitting (Compulsory)</p> <ul style="list-style-type: none"> • Use and setting of fitting tools for chipping, cutting, filing, marking, center punching, tapping drilling • Term work to include one job involving following operations: Filing to size one simple male-female joint, drilling and tapping. 	24
02	<p>Carpentry (Compulsory)</p> <ul style="list-style-type: none"> • Use and setting of hand tools like hacksaws, jack planes, chisels and gauges for construction of various joints, wood turning, and modern wood turning methods. • Term work to include one carpentry job involving a joint and a report on demonstration of a job involving wood turning. 	24
03	<p>Forging (Smithy)</p> <ul style="list-style-type: none"> • At least one workshop practice job (Lifting hook and handle) is to be demonstrated. 	12
04	<p>Welding</p> <ul style="list-style-type: none"> • Edge preparation for welding jobs. Arc welding for different job like Lap welding of two plates, butt welding of plates with simple cover, arc welding to join plates at right angles. 	12
05	<p>Machine Shop</p> <ul style="list-style-type: none"> • At least one turning job is to be demonstrated. 	12
06	<p>Electrical board wiring</p> <ul style="list-style-type: none"> • House wiring, staircase wiring for fluorescent tube light, go-down wiring and three phase wiring for electrical motors. 	12
07	<p>PCB Laboratory Exercise</p> <ul style="list-style-type: none"> • Layout drawing, positive and negative film making, PCB etching and drilling, Tinning and soldering techniques. 	12
08	<p>Sheet metal working and Brazing</p> <ul style="list-style-type: none"> • Use of sheet metal, working hand tools, cutting, bending, spot welding 	12

09	Plumbing <ul style="list-style-type: none"> • Use of plumbing tools, spanners, wrenches, threading dies, demonstration of preparation of a domestic plumbing line involving fixing of a water tap and using of coupling ,elbow, tee, and union etc. 	12
10	Masonry <ul style="list-style-type: none"> • Use of mason tools like trowels, hammers, spirit level, square, plumb, line and pins etc. Demonstration of mortar making, single and one and half brick masonry, English and Flemish bonds, block masonry ,pointing and plastering. 	12

Term Work

Term work shall consist of respective reports and jobs of the trades selected. The distribution of marks for term work shall be as follows, (per semester).

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| 1. Laboratory work (Job and Journal) | 40 Marks |
| 2. Attendance (Theory and Practical) | 10 Marks |

The final certification and acceptance of Term Work ensures the satisfactory performance of laboratory work and minimum passing in the Term- Work.