

<b>Course code: Course Title</b>	<b>Course Structure</b>			<b>Pre-Requisite</b>
	<b>L</b>	<b>T</b>	<b>P</b>	
<b>ME103: Workshop Practice</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>NIL</b>

**Course Objective:** The objective of the course is to familiarize the students with manufacturing shops like Carpentry, Foundry, Welding, Machining, Fitting and Smithy.

<b>S. No</b>	<b>Course Outcomes (CO)</b>
<b>CO1</b>	Describe the fundamentals of workshop practices.
<b>CO2</b>	Choose appropriate manufacturing processes/tools/techniques for various jobs.
<b>CO3</b>	Practice various tools and machinery to make different jobs in various shops of the workshop.
<b>CO4</b>	Demonstrate various techniques to study about various hazards in workshop and standard safety procedures.
<b>CO5</b>	Experiment workshop practices in fabrication and integration of various components for research/ project/ professional work.

<b>S. No</b>	<b>Contents</b>
<b>UNIT 1</b>	Carpentry: Study of Different Carpentry Tools and Pattern Making of a given job (pulley/screw jack body).
<b>UNIT 2</b>	Foundry: Study of Different Foundry Tools and Furnaces Making a green sand mould of a given pattern (pulley/screw jack body) and its casting.
<b>UNIT 3</b>	Welding: Arc welding of butt joint, T-joint and lap joint Study of other welding/ joining Techniques.

<b>UNIT 4</b>	Machining: Study of lathe, milling, drilling machine, shaper, planer and grinding machine. Demonstration of a job on lathe.
<b>UNIT 5</b>	Fitting: Study of various fitting hand tools, marking and measuring devices Preparation of a given job (box / funnel).
<b>UNIT 6</b>	Smithy: Study of different forming tools and power press Preparation of a given job (bolt / chisel).

## REFERENCES

S.No.	Name of Books/Authors/Publishers	Year of Publication / Reprint
1	Manufacturing Processes for Engineering Materials, 6e; Serope Kalpakjian, Steven R. Schmid, Pearson Education.	2018
2	Basic Mechanical Engineering; P. Kumar, Pearson Education, 1/e.	2018
3	Elements Of Workshop Technology Vol-1; S. K. H. Choudhary, A. K. H. Choudhary, N. Roy, Media Promoters.	2008
4	Workshop Technology; W. Chapman, Routledge.	1972
5	Production Engineering, R. K. Jain, Khanna Publishers.	1976