

**CC153: WORKSHOP**  
**CREDITS = 4 (L=0, T=0, P=4)**

**Course Objective:**

Introduce the concepts of manufacturing processes and demonstrate the conversion of raw material into a finished product.

**Teaching and Assessment Scheme:**

Teaching Scheme			Credits	Assessment Scheme				
L	T	P		Theory		Practical		Total Marks
			ESE	CE	ESE	CE		
0	0	4	4	0	0	60	40	100

**Course Contents:**

Unit No.	Topics	Teaching Hours
1	<b><u>Introduction to workshop and safety aspect:</u></b>  Orientation of the workshop, Introduction to safety aspects to be observed in workshop or industries.	02
2	<b><u>Measuring and Gauging:</u></b>  Introduction to various measuring instruments and gauges.	04
3	<b><u>Machine Shop:</u></b>  Introduction and demonstration of various machine tools such as Lathe, Drilling, Shaping, Slotting, Planning, Milling, Grinding.	22
4	<b><u>Manufacturing Shops:</u></b>  Foundry, Carpentry, Fitting, Smithy & Tin Smithy, Welding, Plumbing.	22
<b>TOTAL</b>		<b>50</b>

**List of References:**

1. Hajra Choudhury S.K., Bose H.K., and Hajra Choudhury A. K., “*Elements of Workshop Technology*” (Vol. I, II, 12th Edition), Media promoters and Publishers Pvt. Ltd.
2. Raghuvanshi B.S., “*Workshop Technology Vol. 1 and 2*”, Dhanpat Rai & Sons 1998.
3. Chapman W.A. J and Arnold E, “*Workshop Technology*”, Vol. 2, Viva low priced student edition, 1998.
4. H S Bawa, “*Workshop Practices*”, Tata McGraw-Hill, 2009.
5. K C John, “*Mechanical Workshop Practice*”, PHI Learning.

**Course Outcomes (COs):**

At the end of this course students will be able to ...

1. Practice safety aspects required in the workshop.
2. Use the principle & application of measuring & gauging instruments.
3. Analyze the structure, basic elements and working of general purpose machine tools.
4. Identify appropriate manufacturing process like foundry, carpentry, fitting, tin smithy, smithy, welding & plumbing for preparation of the given job.