

**ES112: BASICS OF MANUFACTURING PRACTICES
CREDITS - 1 (LTP:0,0,1)**

Course Objectives:

To introduce the concepts of basic manufacturing processes and demonstrate the conversion of raw material into a finished product.

Teaching and Assessment Scheme:

Teaching Scheme (Hours per week)			Credits	Assessment Scheme				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE	CE	ESE	CE	100	
0	0	2	1	0	0	40		60

Course Contents:

Unit No.	Topics	Teaching Hours
1	Introduction to workshop and safety aspect: Orientation of the workshop, Introduction to safety aspects to be observed in workshop or industries.	2
2	Machine Shop: Introduction and demonstration of various machine tools such as Lathe, Drilling, Shaping, Slotting, Planning, Milling, Grinding.	8
3	Manufacturing Shops: Introduction and demonstration to Carpentry, Fitting, Welding, Brazing Soldering ,Casting, Plastic moulding & Glass cutting.	18
Total		28

List of References:

- Hajra Choudhury S.K., Hajra Choudhury A.K. and Nirjhar Roy S.K., “*Elements of Workshop Technology*”, Vol. I 2008 and Vol. II 2010, Media promoters and publishers private limited, Mumbai.
- Kalpakjian S. And Steven S. Schmid, “*Manufacturing Engineering and Technology*”, 4th edition, Pearson Education India Edition, 2002.
- Gowri P. Hariharan and A. Suresh Babu,”*Manufacturing Technology – I*” Pearson Education, 2008.
- Roy A. Lindberg, “*Processes and Materials of Manufacture*”, 4th edition, Prentice Hall India, 1998.
- Rao P.N., “*Manufacturing Technology*”, Vol. I and Vol. II, Tata McGrawHill House, 2017.

Course Outcomes (COs):

- Understand the safety precautions in workshop in various hand/ power/ machine tools and processes.
- Understand the appropriate machine tools in manufacturing and their operations.
- Understand basic manufacturing workshop practices in various fields and applications of those.