

<b>Devi Ahilya University, Indore, India</b> <b>Institute of Engineering &amp; Technology</b>			<b>BE (Common to all branches/ Branch)</b> <b>Semester- A/B,B/A</b>				
<b>Subject Code &amp; Name</b>	<b>Instructions</b> <b>Hours per Week</b>			<b>Credits</b>			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>
<b>MER2C3:Engineering Drawing</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>5</b>
<b>Duration of Theory Paper:</b> <b>3 Hours</b>							

**Learning Objectives:**

- To understand the concepts of imagining, envisioning and visualizing the objects & machine parts and drawing them with the instruments & tools.
- To introduce the students to the “universal language of Engineers” for effective communication through drafting exercises of geometrical solids.

**Pre requisite(s): Nil**

**COURSE CONTENTS**

**Unit-I**

Introduction, need & Classification of Engineering Drawings, Drawing Instruments and their uses, Indian Standards for Drawing, Drawing Sheet Layout, Various conventions used in drawing, Technical Lettering, Dimensioning, Basic Geometrical Constructions. Engineering Scales & Engineering Curves

**Unit - II**

Orthographic Projections, Isometric Projections, Oblique Projections, Perspective Projections & Missing Views.

**Unit - III**

Projection of Points, Straight Lines and Plane Surfaces.

**Unit - IV**

Projection of Solids, Section of Solids & Development of Surfaces.

**Unit - V**

Interpenetration of Solids / Intersection of Surfaces, Introduction to Computer Aided Drawings, Drawing of Machine elements like Riveted Joints, Screw fasteners and Welded Joints.

**Learning Outcomes:**

- Upon Completing the Course, Student will able to:
- Understand the importance of BIS and ISO Standards in Engineering Drafting.
- Graphically construct and understand the importance of mathematical curves in engineering applications.
- Visualize geometrical solids in 3D space through exercises in Orthographic Projections.
- Interpret Orthographic, Isometric and Perspective views of objects.
- Develop the surfaces of geometrical solids.

**Text Books**

1.Bhatt N D, *Engineering Drawing*, Charoter Publishing House, Anand, Gujrat 2.Agrawal B, and Agrawal C M, *Engineering Drawing*, Tata McGraw-Hill Publishing Company Limited.

**References Books**

- 1.French T E, Vierck C J, Foster R J, *Engineering. Drawing and Graphic Technology* Mc Graw-Hill International, Singapore, Low Price Edition.
- 2.Luzadder W J, Duff J M, *Fundamentals of Engineering Drawing*, Prentice- Hall India, New Delhi.
- 3.Dhananjay A Jolhe, *Engineering drawing*, Tata McGraw Hill.
- 4.Shah M B and Rana B C , *Engineering Drawing*, Pearson Education, New Delhi.