

		L	T	P	C
15ME105L	ENGINEERING GRAPHICS	1	0	4	3
	Total contact hours - 75				
	Prerequisite				
	Nil				

First Angle Projection is to be followed - Practice with Computer Aided Drafting tools

PURPOSE

1. To draw and interpret various projections of 1D, 2D and 3D objects.
2. To prepare and interpret the drawings of buildings.

INSTRUCTIONAL OBJECTIVES

1. To familiarize with the construction of geometrical figures
2. To familiarize with the projection of 1D, 2D and 3D elements
3. To familiarize with the sectioning of solids and development of surfaces
4. To familiarize with the Preparation and interpretation of building drawing

UNIT I FUNDAMENTALS OF ENGINEERING GRAPHICS 2

Lettering – Two dimensional geometrical constructions – Conics – Representation of three-dimensional objects – Principles of projections – Standard codes – Projection of points.

UNIT II PROJECTION OF LINES AND SOLIDS 4

Projection of straight lines – Projection of planes - Projection of solids – Auxiliary projections.

UNIT III SECTIONS AND DEVELOPMENTS 3

Sections of solids and development of surfaces.

UNIT IV PICTORIAL PROJECTIONS 4

Conversion of Projections: Orthographic projection – Isometric projection of regular solids and combination of solids.

UNIT V BUILDING DRAWING 2

Plan, Elevation and section of single storied residential (or) office building with flat RCC roof and brick masonry walls having not more than 3 rooms (planning / designing is not expected in this course) with electrical wiring diagram.

PRACTICAL 60
TOTAL 75

REFERENCES

1. Venugopal, K. and Prabhu Raja, V., *Engineering Graphics*, Eighth Edition (Revised), New Age International Publishers, Chennai, 2007.
2. Natarajan, K.V., *A Text Book of Engineering Graphics*, 21st Edition, Dhanalakshmi Publishers, Chennai, 2012.
3. Jeyapooan, T., *Engineering Drawing and Graphics using AutoCAD*, Vikas Publishing House Pvt. Ltd., New Delhi, 2010.
4. Bethune, J.D., *Engineering Graphics with AutoCAD 2013*, PHI Learning Private Limited, Delhi, 2013.
5. Bhatt, N.D., *Elementary Engineering Drawing (First Angle Projection)*, Charotar Publishing Co., Anand, 1999.
6. Narayanan, K. L. and Kannaiah, P., *Engineering Graphics*, Scitech Publications, Chennai, 1999.
7. Shah, M. B. and Rana, B. C., *Engineering Drawing*, Pearson Education (Singapore) Pvt. Ltd., New Delhi, 2005.

15ME105L ENGINEERING GRAPHICS												
Course designed by		Department of Mechanical Engineering										
1	Student Outcome	a	b	c	d	e	f	g	h	i	j	k
			×	×				×				
2	Mapping of instructional objectives with student outcome		1, 2, 3, 4	1, 2, 3, 4				1, 2, 3, 4				
3	Category	GENERAL (G)		BASIC SCIENCES (B)		ENGINEERING SCIENCES AND TECHNICAL ART (E)			PROFESSIONAL SUBJECTS (P)			
						X						
4	Approval	23 rd meeting of the Academic Council , May 2013										