

2018-19 Onwards (MR-18)	MALLA REDDY ENGINEERING COLLEGE (Autonomous)	B.Tech. I/II Semester		
Code: 80301	ENGINEERING GRAPHICS	L	T	P
Credits: 2	(Common for CE, EEE, ME, ECE, CSE, IT and Min.E)	1	-	2

Prerequisites: Nil

Course Objectives:

To develop in students, graphic skills for communication of concepts and ideas of engineering products.

**MODULE I: Introduction to Engineering Drawing, Curves and 10 Periods
Projection of Points**

Introduction to Engineering Drawing: Principles of Engineering Graphics and their significance. Lettering and dimensioning. Geometrical Constructions: Regular polygons only.

Curves: Conic Sections - eccentricity method. Cycloid and Involute.

Projection of Points: Principles of Orthographic Projections – Conventions – First and Third Angle projections. Projection of points including all four quadrants.

MODULE II: Projection of Lines & Planes 10 Periods

Projection of Lines: Projection of Lines - parallel, perpendicular, inclined to one reference plane and inclined to both reference planes. True length and true angle of a line.

Projection of Planes: Projection of Planes - Axis inclined to one reference plane.

MODULE III: Projection of Solids & Section of Solids 10 Periods

A. Projection of Solids: Projections of regular solids like cube, prism, pyramid, cylinder and cone by rotating object method. Axis inclined to one reference plane.

B. Section of Solids: Sectioning of single solid with the cutting plane inclined to one plane and perpendicular to the other - true shape of section.

MODULE IV: Development of Surfaces & Isometric Projections 9 Periods

Development of Surfaces: Development of lateral surfaces of simple Solids.

Isometric Projections: Principles of Isometric Projection – Isometric Views– Conventions – Plane Figures, Simple Solids.

MODULE V: Transformation of Projections

9 Periods

Transformation of Projections: Conversion of Isometric Views to Orthographic Views and vice versa– simple objects.

TEXT BOOKS

1. K.L.Narayana, S.Bheemanjaneyulu “**Engineering Drawing with Auto CAD-2016**” New Age International Publishers, 1st Edition, 2018.
2. N.D. Bhat, “**Engineering Drawing**”, Charotar Publishing House, 53rd Edition, 2014.

REFERENCES

1. K.L.Narayana, P. Kannaiah, “**Engineering Drawing**”, SciTech Publishers. 2nd Edition, 2017
2. K. Venugopal, “**Engineering Drawing**”, New Age International Publishers, 3rd Edition, 2014.
3. K. V. Natarajan, “**A text book of Engineering Graphics**”, Dhanalakshmi Publishers, Chennai, 2015.
4. M.S. Kumar, “**Engineering Graphics**”, D.D. Publications, 2011.
5. Trymbaka Murthy, “**Computer Aided Engineering Drawing**”, I.K. international Publishing House, 3rd Edition, 2011.

E - RESOURCES

1. <https://www.slideshare.net/search/slideshow?searchfrom=header&q=engineering+drawing>
2. <https://www.wiziq.com/tutorials/engineering-drawing>
3. <http://freevideolectures.com/Course/3420/Engineering-Drawing>
4. <http://www.worldcat.org/title/journal-of-engineering-graphics/oclc/1781711>
5. <http://road.issn.org/issn/2344-4681-journal-of-industrial-design-and-engineering-graphics>
6. <http://nptel.ac.in/courses/112103019/>

Course Outcomes

At the end of the course students will be able to

1. Understand the basics of drawings and importance of curves.
2. Draw the projection of lines and planes.
3. Draw the projection of solids and section of solids.
4. Produce development of surface and isometric projections.
5. Convert orthographic views to isometric views and vice-versa.

