

Regulation GRBT-20	Godavari Institute of Engineering & Technology (Autonomous)	I B.Tech. I Sem (1 st Semester)			
Course Code	Engineering Graphics (Common to CE, ME, CSE(AI&ML), CSE(Cyber Security), Automobile, Mining and Petroleum Engineering)				
Teaching	Total contact hours- 60	L	T	P	C
Prerequisite(s): Aptitude to Learn and Basic Geometry		1	0	0	2.5

Course Objectives:

- To highlight the significance of universal language of engineers.
- To impart basic knowledge and skills required to prepare engineering drawings.
- To impart knowledge and skills required to draw projections of solids in different contexts.
- To visualize and represent the pictorial views with proper dimensioning and scaling. Course

Course Outcomes:

On Completion of the course, the students will be able to-	
CO1:	Apply principles of drawing to represent dimensions of an object.
CO2:	Outline the polygons and engineering curves.
CO3:	Illustrate projections of points, lines, planes and solids.
CO4:	Illustrate the 3D views through isometric views.
CO5:	Create the isometric views and orthographic views

Syllabus:

UNIT-I

POLYGONS: Constructing regular polygons by general methods, inscribing and describing polygons on circles.

CURVES: Parabola, Ellipse and Hyperbola by general methods, cycloids, involutes.

UNIT-II

ORTHOGRAPHIC PROJECTIONS: Horizontal plane, vertical plane, profile plane, importance of reference lines, projections of points in various quadrants, projections of lines, lines parallel either to one of the reference planes (HP, VP or PP)

PROJECTIONS OF STRAIGHT LINES: Inclined to both the planes, determination of true lengths, angle of inclination and traces- HT, VT.

UNIT-III

PROJECTIONS OF PLANES: Regular planes perpendicular/parallel to one plane and inclined to the other reference plane; inclined to both the reference planes.

UNIT-IV

PROJECTIONS OF SOLIDS: Prisms, Pyramids, Cones and Cylinders with the axis inclined to one of the planes.

UNIT-V

ISOMETRIC VIEWS: Conversion of isometric views to orthographic views; Conversion of orthographic views to isometric views.

COMPUTER AIDED DESIGN: Drawing practice using Auto CAD, Creating 2D&3D drawings of objects using Auto CAD

Note: In the End Examination there will be no question from CAD.

Text Books:

1. Engineering Drawing by N.D. Butt, Chariot Publications.
2. Engineering Drawing by Agarwal&Agarwal, Tata McGraw Hill Publishers.

Reference Books:

1. Engineering Drawing by K.L.Narayana& P. Kannaiah, Scitech Publishers.
2. Engineering Graphics for Degree by K.C. John, PHI Publishers.
3. Engineering Graphics by PI Varghese, McGrawHill Publishers.
4. Engineering Drawing + AutoCad – K.Venugopal, V. Prabhu Raja, New Age

University Nominee (Dr. B. Balakrishna)	Subject Expert (Dr. D. Ravi Kumar)	Industrial Expert (Mr. Rajiv Aramadaka)	Special Invitee Member (Dr. M.V.Sekhar.Babu)	
Internal Member (Dr. T. Jayananda Kumar)	Internal Member (Dr. D. Santha Rao)	Internal Member (Mr. Kedaranath M)	Internal Member (Mr. B.Joga Rao)	Internal Member (Mrs.E. Nirmala Devi)
Internal Member (Mr.M. Balakrishna)	Internal Member (Mr. P.Veera Raju)	Internal Member (Mr. G Ramakrishna)	Chairman, BoS (Dr. M. Sreenivasa Rao)	