

Lesson Plan

Name of the Subject : Computer Aided Engineering Drawing -14BT1ES03

Class & Semester : I B.Tech (Common to all branches)

| S. No. | Topic | No. of periods | Book(s) followed | Topics for self-study |
|---|---|----------------|------------------|---|
| UNIT – I: INTRODUCTION TO COMPUTER AIDED SKETCHING | | | | |
| 1. | Introduction, Drawing Instruments and their uses, BIS conventions, Lettering, Dimensioning and free hand practicing. Computer screen, layout of the software, standard tool bar/menus | 4 | T1 & T2 | 1. Geometrical Constructions- Line, Circle, Polygon, Division of line |
| 2. | Coordinate system and reference planes. Definitions of HP, VP, RPP & LPP. Creation of 2D/3D environment. Selection of drawing size and scale. Commands and creation of Lines, | 4 | T1 & T2 | |
| 3. | Co-ordinate points, axes, poly-lines, square, rectangle, polygons, splines, circles, ellipse, text, move, copy, off-set, mirror, rotate, trim, extend, break, chamfer, fillet, | 8 | T2 | |
| 4. | Dimensioning, line convention, material conventions and lettering. | 4 | T2 | |
| Total periods required: | | 20 | | |
| UNIT – II: ORTHOGRAPHIC PROJECTIONS | | | | |
| 5 | Introduction, Definitions- Planes of projection | 4 | T1 | |
| 6 | reference line and conventions employed, Projections of points in all the four quadrants, | 4 | T1 | |
| 7 | Projections of straight lines | 4 | T1 | |
| 8 | Projection of lines inclined to one plane | 4 | T1 | |
| 9 | Projection of lines inclined to both the planes | 4 | T1 | |
| Total periods required: | | 20 | | |

| UNIT-III: ORTHOGRAPHIC PROJECTIONS OF PLANE SURFACES | | | | |
|---|---|------------|-----------|--|
| 10 | Introduction, Definitions-projections of plane surfaces | 4 | T1 | 1. Geometrical construction of simple planes |
| 11 | -projections of plane surfaces-triangle, square | 4 | T1 | |
| 12 | projections of plane surfaces- rectangle, rhombus | 4 | T1 | |
| 13 | projections of plane surfaces- pentagon, hexagon and circle, | 4 | T1 | |
| 14 | planes in different positions by change of position method | 4 | T1 | |
| Total periods required: | | 20 | | |
| UNIT – IV: PROJECTIONS OF SOLIDS | | | | |
| 15 | Introduction to projection of solids | 4 | T1 | 1. Geometrical construction of simple solids |
| 16 | Projections of right regular prisms, pyramids | 6 | T1 | |
| 17 | Projections of pyramids, cylinders and cones | 6 | T1 | |
| 18 | Isometric Projections and Isometric Views | 4 | T1 | |
| Total periods required: | | 20 | | |
| UNIT – V: SECTIONS AND DEVELOPMENT OF LATERAL SURFACES OF SOLIDS | | | | |
| 19 | Introduction to section of solids | 4 | T1 | 1. Geometrical construction of simple solids |
| 20 | Section planes and sectional views of right regular solids | 4 | T1 | |
| 21 | Section planes and sectional views of prisms, cylinder, pyramids and cone resting with base on HP | 8 | T1 | |
| 22 | Development of Surfaces: Right regular solids – prisms, cylinder, pyramids, cone and their sectional parts. | 8 | T1 | |
| Total periods required: | | 20 | | |
| Grand total periods required: | | 100 | | |

TEXT BOOKS:

T1.N D Bhat & V M Panchal, *Engineering Drawing*, Charotar Publishing House, Gujarat, 51st edition, 2013.

T2.Sham Tickoo, *AutoCAD 2013 For Engineers And Designers*, Dreamtech Press, 2013

REFERENCE BOOKS:

R1. M H Annaiah & Rajashekar Patil, *Computer Aided Engineering Drawing*, New Age International Publishers, 4th Edition, 2012.

R2.T Jeyapooan, *Engineering Drawing and Graphics Using Autocad*, Vikas Publishing House, 3rd Edition, 2010.

R3.Jolhe, *Engineering Drawing*, Tata McGraw Hill Education Private Limited, 1st Edition, 2007.

R4.Basant Aggarwal, *Engineering Drawing*, Tata McGraw Hill Education Private Limited, 1st Edition, 2008.

Signature of the faculty Member

Signature of the Chairman

(BOS)