COURSE TITLE : COMPUTER AIDED DRAFTING LAB
COURSE CODE : 4017
COURSE CATEGORY : A
PERIODS/WEEK : 6
PERIODS/SEMESTER: 78
CREDITS : 3

TIME SCHEDULE

Module	Topics	Period
1	Preliminary settings of CAD work sheet	12
2	Developing detailed 2D drawing of buildings	24
3	Develop detailed 3D drawing of objects & buildings	21
4	Structural detailing of beams, lintel with sunshade, staircase, column with footing, slabs etc using CAD	21
TOTAL		**78**

COURSE OUTCOME

Sl.	Sub	Student will be able to
1	1	Do the preliminary settings of CAD work sheet
	2	Developing detailed 2D drawing
	3	Develop detailed 3D drawing
2	1	Structural detailing using CAD

SPECIFIC OUTCOME

Upon completion of the study, the student should be able to:

1.1.0 Understand the importance of CAD
1.1.1 List the advantages of CAD
1.1.2 Identify the operating tools in CAD

2.1.0 Working with CAD
2.1.1 Set up CAD work sheet
2.1.2 Draw simple shapes
2.1.3 Perform Editing, adding dimensions and text

3.1.0 Developing 2D drawings

3.1.1 Draw simple structures, single storied and double storied buildings with all details (Plan, section & Elevation) and familiarize the key board operations while drawing

3.1.2 Develop pictorial drawing of simple structures

4.1.0 Developing 3D drawings

4.1.1 Obtain the different views including perspective view of simple objects

4.1.2 Draw isometric view of simple buildings

4.1.3 Obtain the wire frame models

4.1.4 Create various surfaces

4.1.5 Create solid modeling

4.1.6 Perform the developments of 3D models of simple objects & buildings

4.1.7 Perform rendering of 3D model

4.1.8 Plot the drawing to a standard paper size with title block

CONTENT DETAILS

Introduction to Computer Aided Drafting: Drawing using CAD - Advantages of using CAD - Three dimensional geometry - Solid modeling - CAD system components - Computer hardware and software - CAD work station - Elements of Drawing window-Application of CAD - CAD an Overview: -Development of CAD – System requirements - Drawing by CAD - Programme operation - CAD basics - Start up dialogue box - Start from scratch-create new files, format setting - Use a template-open a drawing - Accessing commands-setting tool bars - Data entry

Working with CAD - Setting limits - Drawing lines - Using Grid and Snap - Saving work –DRAW Commands- Drawing simple shapes (Eg., Rectangle, Circle, Arc, etc) - Exit and quit commands – Editing- Adding dimensions and Text: - Editing drawings using various MODIFY commands - Add dimensions and texts on drawings

Developing simple buildings with CAD (Eg., Residential building, Library hall, Town hall, School building, etc.) - Developing detailed drawing - Pictorial drawing –

Develop 3D drawings and obtain different views including perspective view-. Develop an isometric drawing - wire frame modeling. - Plot the building drawings suitably brought onto a standard paper size with suitable title block using paper space and model space.

Note : Use of Free & Open Source Software to be promoted to the maximum extent.

REFERENCES

1. Dayanithi : AutoCAD ; NITTTR, Chennai.
2. NITTTR, Chennai : Computer Application Course material
3. George Omuru : Autocad 2010 ; BPB publications