

COURSE TITLE : C A D LAB - I
COURSE CODE : 406
COURSE CATEGORY : A
PERIODS/WEEK : 4
PERIODS/SEMESTER : 72
CREDITS : 2

TIME SCHEDULE

MODULE	TOPIC	PERIODS
I	Introduction to computer aided drafting CAD – An overview	18
II	CAD – basics	18
III	Working with CAD Software	18
IV	Developing 2D drawing	18
	TOTAL	72

COURSE CONTENT

UNIT – I: Introduction to computer aided drafting

- 1.1 Drawing using CAD – advantages of using CAD
- 1.2. Three Dimensional geometry
- 1.3. Solid modeling
- 1.4. CAD system components
 - Computer hardware and software
 - Function of a computer
 - CAD work station
 - Elements of drawing window
 - Application of CAD
- 1.5. CAD Software– an over view
- 1.6. Development of CAD
- 1.7. System requirements
- 1.8. Drawing by CAD Software – Drawing units zooming and panning – Drawing limits and extents
- 1.9. Program operation – drawing editor point and command entry, plotting

UNIT – II: CAD Basics

- 2.1. Start up dialogue box – options
- 2.2. CAD Software initial screen, menu bar, tool bars, graphic window, command line, status bar
- 2.3. Pointing devices like mouse
- 2.4. Accessing commands – command line pull down menu – using commands transparently, getting help from CAD Software
- 2.5. Use a template-open a drawing
- 2.6. Data entry, entity selection, correcting mistakes
- 2.7. Setting limits
- 2.8. Drawing lines, circles, Arcs etc. Simple exercises

UNIT – III: Working with CAD Software

- 3.3 Editing commands like erase, copy, trim, extend, fillet etc
- 3.4 Adding dimensions and text

3.5 Drawing simple geometrical figures with CAD Software

UNIT – IV: Developing 2D drawing

- 4.1 More draw commands like point, trace, sketch, solid, hatch, polyline etc
- 4.2 Object snap settings
- 4.3 More edit commands like chamfer, break, stretch, scale, array etc
- 4.4 Layer manipulation
- 4.5 Making and inserting blocks
- 4.6 Retrieving the drawing as hard copy & soft copy
- 4.7 Wire frame modeling and hide command
- 4.8 Drawing layouts and plotting
- 4.9 Drawing detailed plan of small buildings

REFERENCE BOOKS

1. AutoCAD - Dayanithi
2. AutoCAD with Application - Sham Tickoo