

Course Name: Civil Engineering Group

Course Code: CE/CS/CR/CV

Semester : Fourth

Subject Title : Computer Aided Drawing

Subject Code:

Teaching And Examination Scheme:

Teaching Scheme			Examination Scheme						
TH	TU	PR	Paper Hrs	TH	TEST	PR	OR	TW	TOTAL
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Rationale:

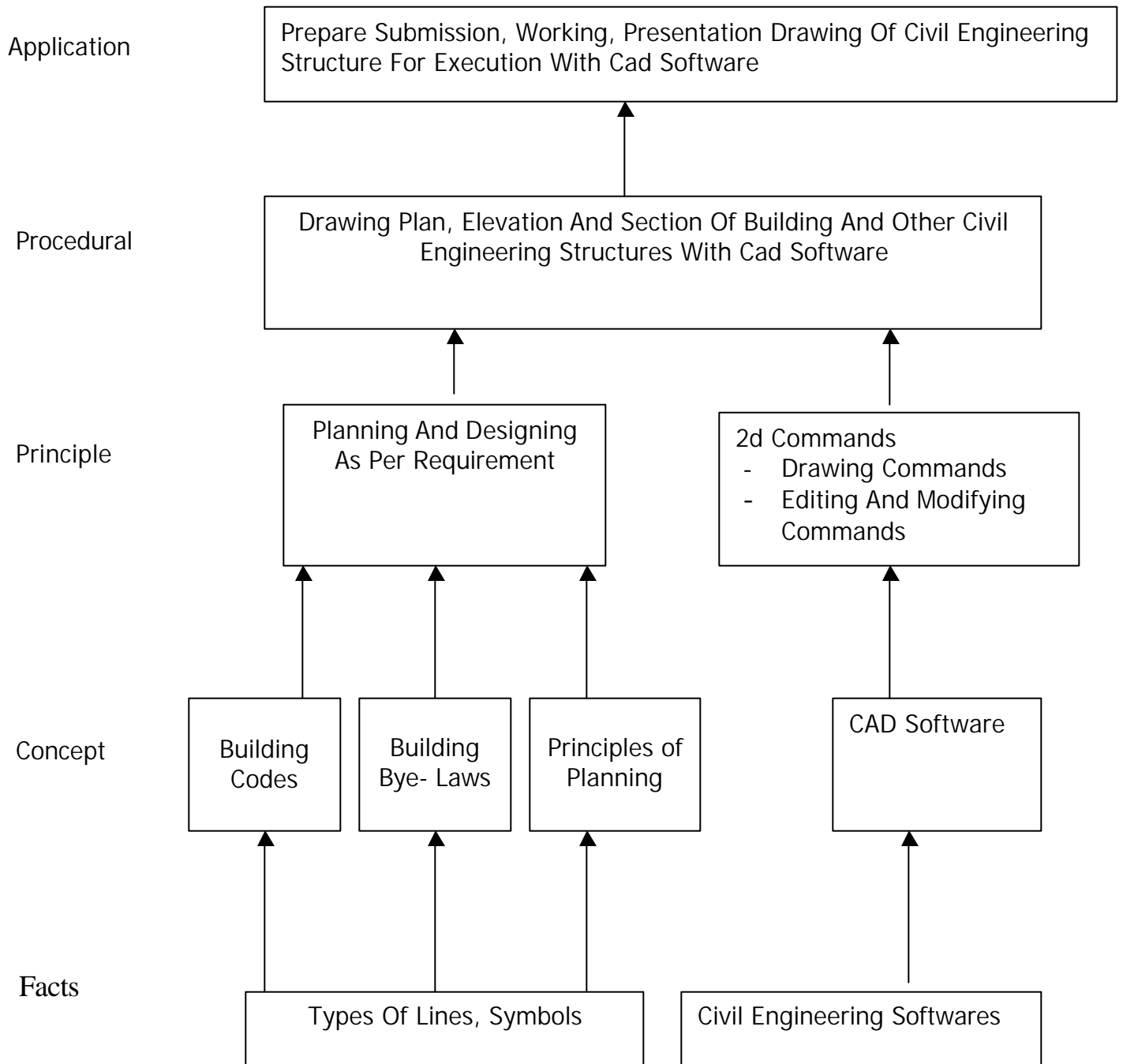
It is the age of computer. Architect / Engineers prepares most accurate and descent presentation of plans to satisfy the clients. Use of computer software such as AutoCAD, Felix Cad, Auto Civil enables Civil Engineers to prepare quality drawings in shortest possible time. This helps in reduction in the laborious, tedious work of draftsmanship. Working drawings are also prepared with the help of computer. In view of this computer aided drawing has been included in the present curriculum.

Objectives:

Students will be able to:

- 1) Use different CAD commands for drawing.
- 2) Prepare line plans with CAD software.
- 3) Prepare submission drawing/working drawing for the buildings with CAD software.
- 4) Prepare drawings of civil engineering structures.

Learning STRUCTURE:



Contents:

Topic	Contents
1.0	CAD Software Meaning, various CAD software available in the market (AutoCAD, Felix Cad, Auto Civil, 3D Max ; etc.) Starting up of CAD, CAD Window, Tool bar, Drop down menu, Command window, Saving the drawing. Introduction of Graphic screen.
2.0	CAD Commands WCS icon, UCS icon, co-ordinates, drawing limits, grid, snap, ortho features. Drawing commands, line, circle, polyline, multiline, ellipse, polygon etc. Editing commands – Copy, move, offset, fillet, chamfer, trim, lengthen, mirror, rotate, array etc. Working with hatches, fills, dimensioning, text etc.
3.0	Submission / Working Drawing Generation of line plan, Detailed Plan, elevation, section, site plan, Area statement Generation of 3D view and print commands Introduction to Auto Civil , 3D Max.

Note: Above theoretical aspects should be covered in the practical periods.

Practical:

A) Building Drawing:

Following exercises shall be completed with CAD software and Print of all the drawings should be prepared on A3 / A4 size paper

- 1) Preparation of line plan of a residential building.
- 2) Preparation of line plan of a Public building.
- 3) Preparation of detailed plan of a small residential building .
- 4) Preparation of submission drawing of residential building – showing Plan, Elevation, Section, Schedule of openings, Site Plan and Area Statement

B) Civil Engineering Drawing.

Preparation of Drawings with CAD software for the following exercises (Any THREE) and Print of all the drawings should be prepared on A3 /A4 size paper.

- 1) Plan, Cross Section and Longitudinal section of a Culvert (Pipe culvert/Box Culvert).
- 2) Section of an Earthen Dam.
- 3) Plan and Section of K. T. Weir.
- 4) Cross Section of Retaining wall.
- 5) Bonds in brickwork – Plan and Elevation for English bond and Flemish bond for one brick thick wall.
- 6) Cross Section of ESR.
- 7) Cross Section of Clarri-flocculator.

Learning Resources:

Books :

Sr. No.	Title	Author	Publisher
1	Reference Manual of AutoCAD	AutoDesk	
2	Reference Manual of Felix cad	Felix CAD	
3	Reference Manual of Intel CAD		
4	Reference Manual of Auto Civil		
5.	Reference Manual of 3D-Max		