Syllabus for Diploma Engineering

Civil Engineering

Semester – II

Subject Name: Computer Aided Drafting

Subject Code: 09CI1104

Diploma Branches in which this subject is offered: Civil Engineering

Objective: Objectives of introducing this subject at second semester level in civil branches are:

- To understand the AutoCAD Software and its application in Planning for buildings.
- To study about different Software commands.
- To apply the learning into the different projects by following building bye laws and national building code for buildings

Credits Earned: 3 Credits

Course Outcomes:

After studying this subject students will be able to:

- Explain the use of Software application in Civil Engineering and its benefits.
- Prepare working drawings, foundation plans and other executable drawings with proper details for residential buildings, commercial and institutional buildings and will be clear with the basics of drafting.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term work	
0	0	6	3	00	30	20	25	25	100

Laboratory work content:

Sr. No.	Topic Name	Hours
1	**Introduction to AutoCAD**	**8**
	1.1 Basics of Drawing 1.2 Introduction to plan, elevation and section 1.3 Significance of scale in drawing 1.4 Basic Units in AutoCAD	

2	**Introduction to AutoCAD**	**6**
	2.1 Introduction to CAD 2.2 Different Versions of AutoCAD	
3	**Working with files**	**5**
	3.1 Startup dialog box, save drawings, open drawings 3.2 File Management	
4	**Displaying Objects**	**5**
	3.1 Zoom Command, Grid, Snap	
5	**Basic drawing and editing command**	**6**
	Drawing lines, Erasing objects, Drawing rectangles, Drawing 4.1 circles 4.2 Undoing and Redoing Actions	
6	**Using Polar tracking and polar snaps**	**6**
	5.1 Polar Tracking 5.2 Spline	
7	**Creating Object Pattern and Text:**	**8**
	6.1 Array Command 6.2 Single line Text 6.3 Multi line Text 6.4 Text Style	
8	**Trimming and Extending Objects:**	**4**
	7.1 Offset 7.2 Trim 7.3 Extend	
9	**Layer Tool Palette and Creating Section line:**	**10**
	8.1 Layer, Layer Tools 8.2 Layer State Manager, Export Import Layer 8.3 Hatch Pattern	
10	**Unit and Drawing Creation:**	**6**
	9.1 Drawing Units 9.2 Drawing Creation	

Suggested Theory distribution:

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyse	Evaluate	Create
5%	50%	40%	5%	0%	0%

List of Experiment & Projects

- Individually students have to maintain their folder.
- Students will save their work and submit all the files at the end of the semester.

Drawing Sheets (A1 Size)

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
- Labs will be conducted with the aid of multi-media projector, and Computers with the software installed.
- Attendance is compulsory in laboratory for regular evaluation.
- Students have to save their work regularly and submit it in soft copy at the end of semester.

Instructional Method and Pedagogy

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
- Lectures will be also conducted with the aid of multi-media projector, green board, drawing halls.
- Attendance is compulsory in lectures and laboratory which carries a 10% component of the overall evaluation.
- Minimum two internal exams will be conducted and average of two will be considered as a part of 10% overall evaluation.
- Assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval. It carries a weightage of 10%.
- The course includes a laboratory, where students have an opportunity to build an appreciation for the concepts being taught in lectures.
- Minimum 3 drawing exercises shall be there in the laboratory related to course contents.
- Minimum 3 assignment or tutorials which include solution of minimum 5 numerical based under each head.

Recommended Study Material

- Planning, designing building by Y. S. Sane, Allies Book Stall
- Building Drawing by M. G. Shah, C. M. Kale and S. Y. Patki, Tata Mc Graw Hill, New Delhi
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- Building Planning, Designing and scheduling by Gurucharan Singh, Standard Book House, New Delhi National Building Code-2005, New Delhi Ss
- National Building Code-2005, New Delhi
- GDCR: General Development control regulations published by RMC and RUDA.
- General Development Control Regulations published by AUDA and GICEA.