Marwadi University

Bachelor of Technology

Civil Engineering

Computer Application in Civil Engineering - I

01CI1305

Objective of the Course:

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

Credit Earned: 01

Students learning outcomes:

After successful completion of the course, it is expected that student will be able to,

1. Demonstrate the use of various tools for drafting purpose.
2. Draw the Building Shapes and units using various commands.
3. Examine the role of different parameters used in Software and its benefits.
4. Prepare working drawings, foundation plans and other executable drawings with proper details for residential buildings, commercial and institutional buildings.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	IA (M)	CSE (I)	Viva (V)	Term Work (TW)	
00	00	02	01	-	-	-	25	25	50

Detailed Syllabus

Sr No.	Title of the unit	Number of hours
1	**Introduction to Engineering Drawings and AutoCAD**	**02**
	Introduction to Engineering Drawings, AutoCAD, Different Versions of AutoCAD Workspace, Coordinate System, File management.	
2	**Basic Drafting Command**	**04**
	Basic Geometry Shapes, Standards, Units, Limits, Snap, Drafting Setting,	
3	**Modified Command**	**04**

	Move, Rotate, Scale, Copy, Mirror, Erase, Trim, Extend, Undo, Explode, Break, Stretch, Join, Fillet, Chamfer, and Object Properties.	
4	**Advanced Drafting Commands**	**06**
	Array, Single line and multi-line text, Special Lines, Projection and Views, Hatching, Annotation, Dimension Style manager	
5	**Layer Management**	**04**
	Layer, Layer Tools, Layer State Manager, Export-Import Layer, Hatch Pattern, Blocks, External References, Layout, Plot and Publish.	
6	**Civil Engineering Building planning and drawing**	**08**
	Introduction to Building drawings, principles of planning, Plan, Elevation, Door and Windows, Partitions, Foundation, Title Block, Dimensions,	
	Total	**28**

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 an effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
15%	20%	50%	15%	00%	00%

Instructional Method and Pedagogy:

1. At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
2. Sessions will be taken in Computer Laboratory with the use of individual computer per student.
3. Attendance is compulsory in the laboratory which carries a 5% component of the overall evaluation.
4. Final practical exam will be conducted which contains 50% overall evaluation
5. Assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular intervals. It carries a weightage of 25%.

Recommended Study Material

1. AutoCAD 2011 for Engineers and Design; Sham Tickoo, Dream Tech Press.
2. Engineering Drawing and Graphics AutoCAD; T. Jayapoovan, Vikas Publication
3. AutoCAD 2017 Instructor by James A. Leach, SBC Publications