



Techno College of Engineering Agartala

An Engineering College Approved by AICTE, MHRD, Govt. of India

Affiliated to Tripura University (A Central University),

Department of Civil Engineering



List of Laboratory Experiments

CAD in Civil Engineering							
Course Code	Hours / Week				Maximum Marks		
PC CE 607	L	T	P	C	CIA	SEE	Total
	0	0	2	1	40	60	100
Number of classes: 24 Hours			Prerequisites: Basic Computer Skills, Engineering Drawing.				
Branch: CE			Semester: VI				

Course overview:

This course provides the use of computer software to create, modify, analyze, and optimize engineering designs. In civil engineering, CAD helps professionals in planning, drafting, designing, and managing infrastructure projects with high precision and efficiency. Key Functions of CAD in Civil Engineering: Drafting, Design, Modeling, Analysis, Documentation, Visualization, Modification etc.

Course objectives:

- Understand CAD Fundamentals
- Develop Proficiency in CAD Software
- Interpret and Create Engineering Drawings
- Apply CAD in Civil Engineering Fields
- Introduce 3D Modeling Concepts
- Promote Design Accuracy and Efficiency
- Integrate CAD with Other Civil Engineering Tools
- 8. Encourage Professional Practices

Course outcomes:

CO Number	CO Description	K-level
CO-1	Develop graphical skills for communicating concepts, ideas and designs of engineering products graphically/visually as well as understand another person's designs.	K-3
CO-2	Create, analyse, Produce and interpret 2D & 3D drawings.	K-6
CO-3	Examine a design critically and also develop drawings for conventional structures using 2D and 3D Computer Aided Design and drafting softwares.	K-4
CO-4	Understand the need for software tools in analysis and design in Civil Engineering systems	K-4
Sl. No.	EXPERIMENT NAME	CO
1.	Introduction and getting started with computer aided drafting software.	CO-1



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2.	Practice exercises on CAD commands.	CO-2
3.	Page set up in a layout and Plotting in CAD.	CO-2
4.	Drawing of Plans of single storey/ multi-storeyed residential buildings using software.	CO-2
5	Developing sections and elevations for single storey/ multi-storeyed public buildings using software.	CO-3
6	Layout and section of water supply and drainage connections to a building.	CO-3
7	Symbols for electrical installations, water supply and sanitary fixtures.	CO-3
8	Perspective view of one and two storey buildings.	CO-3
9	Reinforcement drawings for typical slabs and beams, columns and spread footings.	CO-3
10	Introduction to 3D modelling using software.	CO-3
11	Developing a 3D modelling of a building.	CO-3
12	Design and analysis of RCC buildings using ETABS, SAP, STAAD Pro Softwares etc.	CO-4