Certificate Course in AutoCAD

Preamble:

Computer Aided Design (CAD) is the most powerful tool in design and manufacturing industries with its reliability, flexibility, efficient and cost effectiveness. With the CAD one can easily visualize and see the final product at the design stage itself with the aid of computer. The final product can be modified easily according to the need of application. **AutoCAD** is one of the most popular and powerful CAD packages available on PC platforms and also a general purpose CAD program for Part and Assembly Models. One can customize the powerful drawing tool to suit their specific application. This makes it essential for engineers to get an exposure to **AutoCAD** package.

Objective:

The course is aimed at giving exposure to and enhancing the knowledge and skills of engineers involved in CAD packages and for those who want to provide training to others in this area. It gives exposure and on hand experience in the field of CAD, Part modeling, Assembly Modeling and Detailing.

Expected Job Roles

The participants will be able to:

- Understand the concepts of CAD and CAD tools
- Design and create Part Models and Assembly Models
- Understand concepts 3D Modeling: Concepts, Wireframe, Surface, and Solid Modeling
- Create Engineering Drawings by using Part and Assembly models
- Share the data with other CAD Packages

Duration:

- 90 hrs. /6 Weeks
- 3hrs. Daily

Course Outline:

Sl. No	Module Title	Duration (Hours)		
		Theory	Lab	Total
1	**Introduction of AutoCAD, AutoCAD versions Interface, Control the Drawing, Function keys AutoCAD basics, Cartesian coordinate system, Absolute Coordinate System, Relative Coordinate System**	6	9	15

2	**Draw commands, Line command, Poly line command, Rectangle command, Modify commands Move ,Rotate, Scale, copy, Mirror, erase, trim, extend, Annotate Dimension Style Manager Linear, Aligned, Radius Angular, Arc length**	6	9	15
3	**Text command, Layers, blocks, Single line text, Multiline text, Layer properties, Insert blocks, Parametric Geometric, Dimensional Manage**	7	8	15
4	**Isometric views Isometric top, left, right Isometric diagrams, Isometric drawings, Isometric diagrams exercise, 2D Fundamentals, Drawing units, Sheet settings, Mechanical diagrams**	7	8	15
5	**Introduction to 3D Interface, AutoCAD workspaces, Mechanical 3D Modeling**	7	8	15
6	**AutoCAD Project**	7	8	15
	Total Duration	**40**	**50**	**90**

Prerequisites:

-Basic Knowledge of Computers

Eligibility:

12th pass with basic knowledge of Computers / ITI /Diploma/BE / B.Tech. pursuing or equivalent of any of these.

Online Theory / Practical Class Delivery Mode:

(Using any one of the following tools)

- NIELIT Web Conferencing tool using Jitsi.
- Cisco WebEx.
- Microsoft Team.
- Google Meet

E-contents, Presentations, Assignments, programs etc can be shared using E-mail/whatsApp/Google classroom

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Training Fees:

Rs. 1000/-

Payment towards Course fee paid through Online:

Name : NIELIT Lucknow
Bank name : Punjab National bank
Account Number : 3926002105001894
IFSC Code : PUNB0392600

***Once Fees paid will not be refunded in any case**

Registration Process:

After fee payment a link of registration form will be provided to the students for Online Registration.

Examination:

1. The Student shall be completing the per day module after having self-assessment through daily quiz (05 MCQ), which shall be in line with the content covered per day.
2. There shall be an online test for assessment at the end of the course

Certificate:
NIELIT Lucknow will provide training certificate to all the participants after successfully completion of training program.

Detailed Syllabus and Learning Outcome:

S. No	Chapter Name	Course Outline	Duration (Hours)		Learning Outcome
			Theory	Lab	
1	**Module1 - Introduction To AutoCAD**	1.1 Introduction of AutoCAD, 1.2 AutoCAD versions Interface, 1.3 Control the Drawing, 1.4 Function keys AutoCAD basics, 1.5 Cartesian coordinate system, Absolute Coordinate System,	6	9	After completion of this module, the candidate will be able to : • Understand about AutoCAD Versions • Understand about the working of different Function Keys. • Understand about the different types of Coordinate system

		Relative Coordinate System			
2	**Module 2 - Draw and Modify commands**	2.1 Draw Commands- Line command, Poly line command, Rectangle command, 2.2 Modify commands- Move ,Rotate, Scale, copy, Mirror, erase, trim, extend, 2.3 Annotate Dimension Style Manager Linear, Aligned, Radius Angular, Arc length	6	9	After learning this module the participant will be able to • Understand about Draw Commands, Modify Commands • Learn about how to change Dimension Style
3.	**Module3 - Text command, Layers, blocks**	3.1 Text command- Single line text, Multiline text 3.2 Layers, Layer properties, 3.3 Blocks, Insert blocks, Parametric Geometric, Dimensional Manage	7	8	After completion of this module the participants will be able to • Write Text Messages • Understand about Layers and Blocks
4.	**Module4 - Isometric views**	4.1 Isometric views- Isometric top, left, right 4.2 Isometric diagrams, Isometric drawings, Isometric diagrams exercise,	7	8	After attending this module the participants will be able to • Learn about the basics of 2D Fundamentals • Isometric Views and Diagrams • Mechanical Drawing

		4.3 2D Fundamentals, Drawing units, Sheet settings 4.4 Mechanical diagrams			
5	**Module5 - Introduction to 3D Interface**	5.1 Introduction to 3D Interface 5.2 AutoCAD workspaces 5.3 Mechanical 3D Modeling	7	8	After attending this module the participants will be able to • Learn about the basics of 3D Interface • 3D Modeling
6.	**Module-6 Project**	6.1 Project based on following Areas: • Mechanical • Civil	7	8	After completion of the project students will • Able to create a design which will help to solve any real life design problem in Civil and Mechanical Areas.
Total Hours = 90			**40**	**50**	

Recommended hardware/software tools:

PC with capable of latest AutoCAD software.

Course Name	Certificate Course in AutoCAD	**Vertical**	Computer Aided Design & Drafting
Course Co-ordinator	Vijai Shankar Jaiswal	**NIELIT Centre**	Gorakhpur Extension Centre Lucknow
Email of the contact person	vsjaiswal@nielit.gov.in	**Phone / Mobile no of the Contact person**	7706009304