

ANJUMAN COLLEGE OF ENGINEERING AND TECHNOLOGY,

SADAR, NAGPUR

DEPARTMENT OF MECHANICAL ENGINEERING

TECHNICAL TRAINING (2016-17)

AUTOCAD SYLLABUS

Module 1

Fundamentals of Engineering Drawings:

1. *Construction of plane and complex geometrical figures*
2. *Construction of Curves and Helix*
3. *Principles of Projections*
4. *Projections of Straight Lines and Solids*
5. *Section of Solids*
6. *Mechanical Parts Drawing*

Module 2

Fundamentals of Computers

1. *Introduction*
2. *Computer Hardware and Software Concepts*
3. *Introduction of Personal Computer and Operating Systems WINDOWS-XP, Windows-7, File Management*

Module 3

Drawing using AutoCAD

1. *Setting up a drawing starting from scratch*
2. *Setting up a drawing using a Wizard*
3. *Using and creating a template file*
4. *Opening an existing drawing*
5. *Screen layout*
6. *Pull-down menus*
7. *Screen icons*
8. *Command line*
9. *status bar*
10. *Dialogue boxes*
11. *Drawing Commands*
12. *Lines, Ray, Construction Line*
13. *Multiline and polylines*
14. *Rectangles*
15. *Arc, Circle and Ellipse*
16. *Polygon, Spline*



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17. Co-ordinate input methods (directive, absolute, relative and polar)
18. Starting a New Drawing/Opening an existing drawing
19. Drawing Commands
20. Hatching Command Text (multi-line & single line ) and Formatting Text Styles
21. View Commands & Drawing Settings and Aids
22. Modify Command – 1) Hatching 2) Text (multi-line & single line ) and Formatting Text Styles
23. Dimension Command Formatting Dimension Style and Multi-leader Style
24. Drawing Settings and Aids
25. Saving and Plotting

#### Module 4

##### Chapter 1.

Using rectangular 3D coordinates, the right-hand rule of drawing, displaying 3D views, 3D construction techniques, constructing wireframe objects, and constructing solid primitives. Commands: PLAN, UCS, 3DORBIT, HIDE, BOX, SPHERE, CYLINDER, CONE, WEDGE, and TORUS.

##### Chapter 2.

Spherical coordinates, cylindrical coordinates, 3D polylines, working with the UCS, constructing accurate intersections, and guidelines for working with 3D models. Commands: 3DPOLY and UCS.

##### Chapter 3.

Introduction to user coordinate systems, working with user coordinate systems, additional ways to change the UCS, managing user coordinate systems and displays, creating text with thickness, text and the UCS, and dimensioning in 3D. Commands and variables: UCS, UCSICON, DUCSP, UC, UCSMAN, UCSFOLLOW, and PROPERTIES. .

Chapter 4. Understanding viewports, creating viewports, drawing in multiple viewports, regenerating viewports, and creating a standard engineering layout.

Chapter 5. PLAN command options, dynamically changing a 3D view, and shading a 3D model. Commands and variables: PLAN, 3DORBIT, 3DDISTANCE, 3DSWIVEL, 3DCLIP, 3DCORBIT, SHADEMODE, and RENDER.

Chapter 6. Overview of solid modeling, constructing solid primitives, creating composite solids, and working with regions. Commands: BOX, SPHERE, CYLINDER, CONE, WEDGE,



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TORUS, SUBTRACT, UNION, INTERSECT, INTERFERE, REGION, BOUNDARY, and AREA.

Chapter 7. Creating solid model extrusions, creating solid model revolutions, and using the EXTRUDE and REVOLVE commands as construction tools. Commands: EXTRUDE and REVOLVE.

Chapter 8. Changing properties, aligning objects in 3D, 3D rotating, 3D mirroring, creating 3D arrays, filleting solid objects, chamfering solid objects, constructing details and features on solid models, and removing details and features. Commands: PROPERTIES, ALIGN, ROTATE3D, MIRROR3D, 3DARRAY, FILLET, and CHAMFER

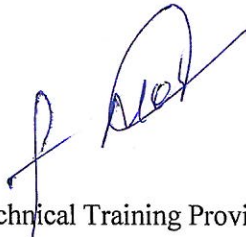
Chapter 9. Overview of solid model editing, face editing, edge editing, body editing, and using SOLIDEDIT as a construction tool. Commands: SOLIDEDIT

Chapter 10. Controlling solid model display, viewing the internal features of a solid model, creating and using multiview layouts, solid model analysis, and solid model file exchange. Commands and variables: ISOLINES, DISPSILH, FACETRES, SECTION, SLICE, SOLVIEW, SOLDRAW, AMECONVERT, SOLPROF, MASSPROP, ACISOUT, EXPORT, ACISIN, IMPORT, and STLOUT.



Technical Training In-charge

Prof. S. Mohiuddin



Technical Training Provider

Astral Infometics Pvt. Ltd.



H. O. D.

Prof. Dr. Akash Langde

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# Certificate



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Sheikh Mohtasim Abdulkhalil


OF V<sup>TH</sup> SEM OF ACET, NAGPUR


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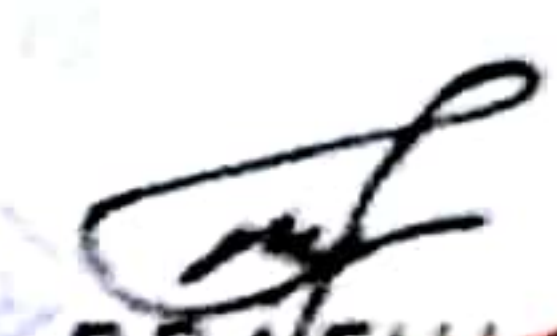
AUTOCAD-3D

  
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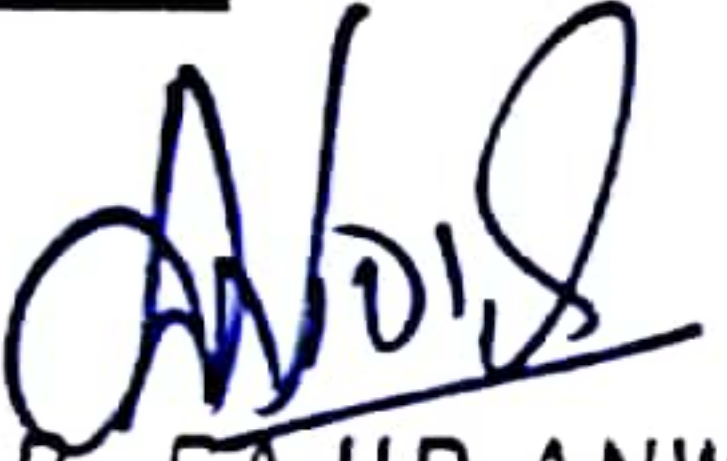
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**03<sup>RD</sup> JULY 2017 TO 23<sup>RD</sup> AUGUST 2017**




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