



An ISO 9001 - 2008  
Organization



**TWG GROUP**

THE WORD OF GOD

**INTERNATIONAL STANDARD**

**ISO/IEC-17025:2005 NABL ACCREDITED FOR NDT**

(Dept. of Science and Technology, Government of India)



Accreditation Certificate No: T - 2387  
**Metal Lab**



सत्यमेव जयते  
Government of India

## AUTOCADD

### DAY 1

1. Need for Designing
2. Introduction to CAD/CAM/CAE
3. Concept of Designing and Drafting
4. Angle of Projection
  - 4.1 First angle projection
  - 4.2 Third angle projection
5. Orthographic and Isometric View
6. Quadrants
7. Introduction to AutoCAD
8. Introduction to Autodesk
9. Product design life cycle

### DAY 2

1. Function keys
- 2 Units
3. Limits
4. Line
  - 4.1 Close
  - 4.2 Undo
5. Selection
  - 5.1 Cross selection
  - 5.2 Window selection
6. Ray-line
7. Xline
  - 7.1 Horizontal
  - 7.2 Vertical
  - 7.3 Angle
  - 7.4 Bisect
  - 7.5 Offset
8. Polyline
  - 8.1 Arc
  - 8.2 Halfwidth
  - 8.3 Length
  - 8.4 Undo
  - 8.5 Width

### DAY 3

1. Polygon
  - 1.1Inscribed
  - 1.2 Circumscribed
  - 1.3 Edge
2. Properties
3. Match properties
  - 3.1 Object
  - 3.2 Settings
4. Erase
5. Copy
  - 5.1 Displacement
  - 5.2 Mode

### DAY 4

1. Rectangle
  - 1.1 Chamfer
  - 1.2 Fillet
  - 1.3 Elevation
  - 1.4 Thickness
  - 1.5 Width
2. Move
  - 2.1 Base point
  - 2.2 Displacement
3. Chamfer
  - 3.1 Undo
  - 3.2 Polyline
  - 3.3 Distance

- 3.4 Angle
- 3.5 Trim
- 3.6 Method
- 3.7 Multiple
4. Fillet
- 4.1 Undo
- 4.2 Polyline
- 4.3 Radius
- 4.4 Trim
- 4.5 Multiple
5. Offset
- 5.1 Through
- 5.2 Erase

### DAY 5

1. Arc
  - 1.1 points
  - 1.2 Start,center,End
  - 1.3 Start,center,angle
  - 1.4 Start,centre,length
  - 1.5 Start,end,angle
  - 1.6 Start,end,direction
  - 1.7 Start,end,radius
  - 1.8 Centre,start,end
  - 1.9 Center,start,angle
  - 1.10 Center, start, length
  - 1.11 Continue
2. Circle
  - 2.1 Center,radius
  - 2.2 Center, diameter
  - 2.3 2 point
  - 2.4 3 points
  - 2.5 Tangent, tangent, radius
  - 2.6 Tangent,tangent,tangen
3. Array

### 3.1 Rectangular Array

- 3.1.1Associative
- 3.1.2 Base point
- 3.1.3 Count
- 3.1.4 Spacing
- 3.1.5 Columns
- 3.1.6 Rows
- 3.1.7 Levels
- 3.1.8 Exit

### 3.2 Polar array

- 3.2.1 Associative
- 3.2.2 Base point
- 3.2.3 Items
- 3.2.4 Angle between
- 3.2.5 Fill
- 3.2.6 Rows
- 3.2.7 Levels
- 3.2.8 Rotate
- 3.2.9Exit

### 3.3 Path array

- 3.3.1 Associative
- 3.3.2 Base point
- 3.3.3 Items
- 3.3.4 Levels
- 3.3.5 Method
- 3.3.6 tangent direction
- 3.3.7 rows
- 3.3.8 align items
- 3.3.9 exit

### 3.4 Array edit

- 3.4.1 source
- 3.4.2 replace
- 3.4.3 method
- 3.4.4 base point
- 3.4.5 items
- 3.4.6 rows
- 3.4.7 Levels
- 3.4.8 z-direction
- 3.4.9 reset
- 3.4.10 exit

### DAY 6

1. Mirror
2. Rotate
  - 2.1 Copy
  - 2.2 Reference
3. Scale
  - 3.1 Copy
  - 3.2 Reference
4. Donut
5. Fill
- 6.Multiline
  - 6.1Justification
  - 6.2 Scale
  - 6.3 Style
  - 6.4 Top
  - 6.5 Zero
  - 6.6 Bottom
7. Multiline style
8. Multiline edit

- 8.1 Cross intersection
- 8.2 Closed cross
- 8.3 Open cross
- 8.4 Merged cross
- 8.5 Tee intersection
- 8.6 Closed tee
- 8.7 Open tee
- 8.8 Merged tee
- 8.9 Corner joint
- 8.9 Adding vertices and deleting vertices
- 8.10 Cutting and welding multiple
- 8.11 Cut single
- 8.12 Cut all
- 8.13 Weld all

### DAY 7

1. Spline
  - 1.1 Methods
  - 1.2 Knots
  - 1.3 Object
2. Ellipse
  - 2.1 Axis end point
  - 2.2 Center point
  - 2.3 Rotation angle
3. Arc
  - 3.1 Start and end angles of the arc
  - 3.2 Start and include angles of the arc
  - 3.3 Start and end parameters
5. Linear dimension
  - 5.1 MText
  - 5.2 Text
  - 5.3 Angle
  - 5.4 Horizontal
  - 5.5 Vertical
  - 5.6 Rotated
6. Aligned dimension
  - 6.1 MText
  - 6.2 Text
  - 6.3 Angle

### DAY 8

1. Block
  - 1.1 Base point
  - 1.2 Object
  - 1.3 Behaviour
2. Insert block
  - 2.1 Intersection point
  - 2.2 Scale
  - 2.3 Rotation
3. Write block
  - 3.1 Base point
  - 3.2 Object
4. Trim
  - 4.1 Fence
  - 4.2 Crossing
  - 4.3 Project
  - 4.4 Edge
  - 4.5 Erase
  - 4.6 Undo
5. Extend
  - 5.1 Fence
  - 5.2 Crossing
  - 5.3 Project
  - 5.4 Edge
  - 5.5 Undo

### DAY 9

- 1.Dimensioning concepts
- 2.Need for dimensioning
- 3.Fundamental dimensioning terms

4. Dimension line
  - 4.1 Dimension text
  - 4.2 Arrowheads
  - 4.3 Extension lines
  - 4.4 Leader
  - 4.5 Center mark and center lines
  - 4.6 Alternate units
  - 4.7 Tolerances
  - 4.8 Limits
  - 4.9 Quick dimension
  - 4.10 Continuous
  - 4.11 Staggered
  - 4.12 Baseline
  - 4.13 Ordinate
  - 4.14 Radius
  - 4.15 Datum point
  - 4.18 Edit
  - 4.19 Settings

5. Linear dimension
  - 5.1 MText
  - 5.2 Text
  - 5.3 Angle
  - 5.4 Horizontal
  - 5.5 Vertical
  - 5.6 Rotated
6. Aligned dimension
  - 6.1 MText
  - 6.2 Text
  - 6.3 Angle