

## Complete AutoCAD Mechanical

AutoCAD' is considered as the basic CAD software for engineering. CAD stands for Computer Aided Design. It is used for normal design and for high level 2D design. AutoCAD is like a base of engineering designing software. It is prominently used for 2D machine programming like, laser machine, punching, bending etc. latest version of AutoCAD also covers 3D modelling and its drawing. Its cover Draft analysis, Rendering and Path animation. This is why AutoCAD is used as the first step for any designing field like, Mechanical, Automobile, Aeronautical, Civil, Arct, and Electrical.

The unique properties of AutoCAD are no limitations in 2D design. it has many advanced level features for 2D design like Block, layers, parametric, groups etc. AutoCAD 3D also cover all basic features for modelling software.

AutoCAD is useful software for 2D program and design which is essential for, sheet metal industry, automobile, plant layout Etc are used AutoCAD software for drawing and designing. And also used for basic 3D modelling and drafting. latest AutoCAD software many features for 3D part design. This course has been designed with the aim to understand the fundamentals of basic CAD and engineering drawing which ease the learning procedure of high- level designing software such as Solid works, Creo, NX, Ansys, etc.

### Where is AutoCAD Used?

- AutoCAD is used in the applications related to designing and drafting, such as those deployed by Bloomberg and Reuters. Utilized in the developing 3D design software, such as Modelling software.
- AutoCAD is used in Sheet metal industry which is used for bending, punching, cutting etc. and making program the help of AutoCAD file.
- As mentioned earlier AutoCAD is used in drafting to drawing.
- Majorly used for creating engineering drawings, 2d design etc.
- To create plant layout, line diagram of machine etc.
- AutoCAD is basic software for design department in industry. It is like base part of cad. For advance modelling Software like (Solid works, Creo, NX, Ansys, solid edge etc.

## Course Content

- **Section 1 Introduction about AutoCAD.**
  - Different types of mode and its use.
  - Menu bar, Toolbar
  - Practical exercise.
- **Section 2 2D Drawing**
  - Different type of 2d drawing methods
  - Coordinate system.
  - Understanding about different draw tools
  - line, polyline, multiline, circle, rectangle, polygon, point, divide, arc, spline.
  - Practical exercise.
- **Section 3 Section view hatching**
  - Draw a section view
  - Hatching in this drawing.
  - Revision cloud.
  - Practical exercise.
- **Section 4 Dimensions**
  - Liner dimension
  - Area and volume.
  - Angular dimensions, base line, Dimension style.
  - Practical exercise.
- **Section 5 Layer**
  - What is layer? How to create layer?
  - New layer, delete layer, current layer, lock layer, on/off layer.
  - Practical exercise.
- **Section 6**
  - Understanding about different modify tools
  - Trim, extend, array, move, copy, rotate, scale, break, offset, overkill.
  - Practical exercise.
- **Section 7 Properties**
  - Line-type, Color, line-weight.
  - Match properties.
  - Practical exercise.
- **Section 8 3D Modeling tool.**
  - Extrude, Revolve
  - Sweep, Loft
  - Press-pull
  - Poly solid
  - Practical exercise
- **Section 9 3D editing**
  - Extract edge, shell, sub-tract.
  - Union, intercept, thicken.
  - Edit faces options, basic surface design.
  - Practical exercise.

- **Section 10 Isometric drawing.**
  - To understanding about isometric drawing.
  - Practical exercise.
- **Section 11 View port.**
  - Plotting view on layout sheets.
  - Section view.
  - Projection of view.
  - Detail view.
  - Editing in view.
  - Practical exercise.
- **Section 12 UCS**
  - Basic method
  - Dynamic UCS
  - Manual UCS changes
  - Practical exercise
- **Section 13 Parametric**
  - Geometric Parametric
  - Dimensional Parametric
  - Auto Parametric
  - Practical exercise.
- **Section 14 Plotting & Template**
  - Plotting of drawing
  - Make view
  - Template
  - How to create own Template.
  - Practical exercise.
- **Section 15 Block**
  - What is block?
  - How to create block?
  - Application of block and block edit.
  - Design center, Tool palates
  - Practical exercise.
- **Section 16 Materials, Lighting, Rendering**
  - How to apply material?
  - How to create own material?
  - Lighting
  - Rendering
  - Practical exercise.
- **Section 17 Options**
  - Options and Motion animation.
  - Practical exercise.