

Technical Drawing Using Autodesk AutoCAD

Course details

Description

AutoCAD now includes industry-specific features and libraries for architecture, mechanical design, electrical design, and more. It can automate floor plans, sections, elevations, and other drawings, draw piping, plumbing, and ducting for faster design with mechanical tools, design ductwork, electrical conduit, and circuiting for HVAC, plumbing, and electrical with MEP (mechanical, electrical, and plumbing).

AutoCAD create and edit 2D geometry and 3D models with solids, surfaces, and mesh objects. It can annotate drawings with text, dimensions, leaders, and tables. It customize the ribbon and tool palettes. It can also customize with add-on apps and APIs. In addition to that it can extract object data to tables. It attach and import data from PDF files.

The course offers professional understanding for different disciplines drawings; Architecture, Structure, Electrical, HVAC, Plumbing, Fire Fighting.

Course structure:

Technical Drawing using AutoCAD 40 hour

Resourcing, text books and reading material:

We recommend the following resources:

- Mastering Autodesk AutoCAD
- Autodesk AutoCAD Essentials

Web resources:

- <https://www.autodesk.com/products/autocad/overview>
- <http://seek.autodesk.com/>
- <https://help.autodesk.com/view/ACD/2019/ENU/>



Prerequisites:

- Basic knowledge and skills about using computers.
- Engineering background is recommended

Certificates:

Certificate from CAD MASTERS
Certificate from Autodesk

Grading:

Attendance	40%
Assignments	60%

To pass the course and receive both Autodesk certificate & CAD MASTERS certificate you should:

- Attend at least 80% of course hours
- Score more than 70% as a total score

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Course Objectives:

1. Understand technical architectural drawings
2. Ability to draw technical (Architectural, Structural, Electrical, HVAC....) drawings
3. Make any annotation as dimensions, text, hatch, symbols,...etc.
4. Prepare technical symbols and
5. Use AutoCAD program to produce technical drawings.
6. Print and convert the drawings.

Course Outline:

This course including the following:

Technical Track:

A. Architectural Drawings

1. Projection
2. Floor Plan
3. Elevation
4. Sections
5. Stairs drawings
6. Ceiling Plans
7. Technical Plans (Furniture Plans...)
8. Workshop Drawings & Details

B. Structural Drawings

1. Footings Drawings
2. Slab Drawings
3. Columns Drawings
4. Stairs Drawings

C. Electrical Drawings

1. Electrical Design Plan
2. Lighting Plan
3. Power Plan
4. Low current Plan
5. Single line Drawings

D. HVAC Drawings

1. HVAC Design Plan
2. Ducts Distribution

E. Plumbing Drawings

1. Supply Plan
2. Drainage Plan
3. Site Drainage

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AutoCAD Track:

A. Draw Commands

1. Line
2. Polyline
3. Rectangle
4. Polygon
5. Construction Line
6. Ray
7. Multiline
8. Hatch
9. Circle
10. Arc
11. Ellipse
12. Revision Cloud
13. Layers
14. Blocks
15. Text
16. Dimension
17. Print
18. Wipeout

B. Modify Commands

1. Erase
2. Move
3. Copy
4. Rotate
5. Mirror
6. Scale
7. Align
8. Stretch
9. Offset
10. Trim/ Extend
11. Fillet/ Chamfer
12. Array
13. Break
14. Explode
15. Join

C. Utilities Commands

1. Zoom
2. Grid Display
3. Dynamic Input
4. Ortho Mode
5. Polar Mode
6. Osnap
7. Properties
8. Inquiries

 **AUTODESK**. Make anything.

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