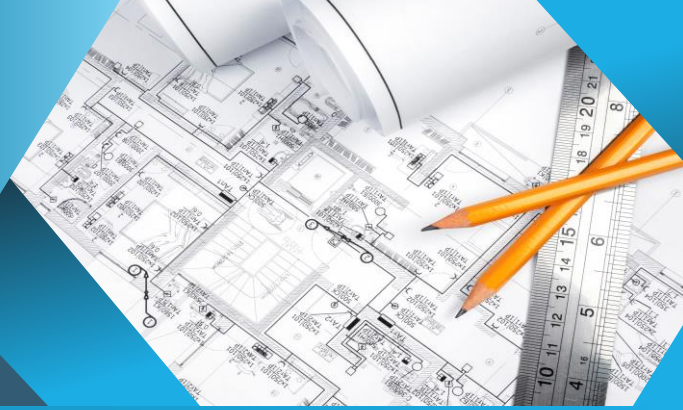


AUTODESK AUTOCAD ELECTRICAL 2D&3D



Course Objectives

Learning AutoCAD is a course I wrote for people looking to get a handle on this powerful software in a short amount of time. By the end of the course, you'll be comfortable with how to work with drawing files, controlling the views, creating basic geometry, editing, and creating text to accompany your work.

A great benefit of this course is the pause button; you're able to stop the video and try out the commands, continuing when you're ready. Let your curiosity lead you through the course, and try to apply it to the type of work you're expecting to use the software for.

Outline:

1. Introduction And Interface

- Document creation
- Units setup
- User interface
- Required shortcuts
- Grids and 2D work station

2. Drawing Tools

- Line
- Polyline
- Circle
- Arc
- Rectangle
- Polygon
- Ellipse
- Ellipse arc
- Spline fit
- Ray
- Contraction lines

3. Modification Tools

- Move
- Copy
- Rotate
- Mirror
- Scale
- Trim

- g. Extend
- h. Fillet
- i. Chamfer
- j. Blend curve
- k. Array
- l. Rectangular array
- m. Polar array
- n. Path array
- o. Explode
- p. Offset
- q. Join
- r. Break
- s. Align

4. Insert A Component

- a. Connecting a component Session
- b. Create a Library Symbol
- c. Symbol Builder
- d. Circuit Builder
- e. Inserting a One-line Motor Circuit
- f. Inserting a Dual One-line Power Feed Circuit
- g. Copy circuitry
- h. Save circuit to icon menu Session

5. Component Tools

- a. Inserting Components
- b. Relocating Components
- c. Inserting a Child Components
- d. Aligning and Editing the Components
- e. Catalog Information Session
- f. Component Attribute Tools

6. Wires

- a. Wire layers
- b. Wire types
- c. Insert wire
- d. Modify wire Session

7. Signal Arrows

- a. Source arrow
- b. Destination arrow
- c. Ladder tools
- d. Wire numbers
- e. Automatic wire numbers
- f. Wire tagging
- g. PLC I/O wire numbers
- h. Wire Number Edit Session

8. PLC

- a. Generate PLC Layout Modules

- b. PLC parametric selection

- c. Module layout
- d. Insert PLC modules
- e. Edit PLC module
- f. PLC Database File Session

9. Point to Point Wiring Tools

- a. Introduction to Connector Diagrams
- b. Inserting Connectors
- c. Editing & Modifying Connectors
- d. Link components by dashed lines
- e. Grouping Wires Session

10. Conversion tool

- a. Convert text
- b. Convert block
- c. Convert wires
- d. Convert arrows

11. Special Explode

- a. Panel Layout
- b. Foot Prints o
- c. Footprints from Schematic list
- d. Footprints from icon menu
- e. Din rails
- f. Balloons
- g. Wire Annotations
- h. Create Assembly
- i. Editing & Modifying Footprints
- j. Creating Own Footprint
- k. Terminals
- l. Placing a Terminal
- m. Terminal Editor Session

12. Layers Tools

- a. Creation of layers
- b. Setting on layer
 - i. Lock layer
 - ii. Freeze layer
 - iii. Layer color
 - iv. Layer line weight
 - v. Layer plot
 - vi. Layer delete

13. Properties

- a. Object color or color by layer
- b. Object style or style by layer
- c. Match properties

- d. 3D layers dimensions of object

14. Grouping And Clipboard

- a. Grouping objects
- b. Ungrouping
- c. Group editing
- d. Copy from document to document
- e. Paste as block
- f. Paste as link
- g. Paste as copy

15. Block Creation

- a. Creating editable block
- b. Editing block parameters
- c. Reusing block in other documents
- d. Sending blocks
- e. Attributes
- f. Insert blocks
- g. Edit attributes of block

16. Annotations

- a. Adding dimensions
- b. Creating custom dimension style
- c. Annotative dimensions
- d. Adding dimensions to layers

17. Text

- a. Multiline text
- b. Single line text
- c. Editing the text styles
- d. Creating custom style
- e. Adding layer styles to text
- f. Annotative text size

18. Leaders And Tables

- a. Adding leaders to parts
- b. Adding table of content
- c. Annotative editing leaders and tables
- d. Incorporating with text dimension style
- e. Creating custom style of leader and tables
- f. Adding layer style to leaders and tables

19. Creating Layout

- a. Creating page setup
- b. Inserting views
- c. Editing the annotations and text
- d. Final pdf export

20. Documenting Project

- a. Saving project as pdf
- b. Setting up the paper size
- c. Reusing pdf
- d. Importing pdf

21. Miscellaneous

- a. Applications options tab
- b. Printing options
- c. File save as formats
- d. Design center

22. 3D Interface

- a. Interface over view
- b. 3D workstation
- c. Visual styles
- d. Pan and orbit
- e. 3D view cube
- f. Importing 2D drawing

23. 3D Modelling Tool

- a. 3D pre exists models
- b. Polysolid
- c. Press pull

24. 2D-3D Modelling Tools

- a. Extrude
- b. Loft
- c. Revolve
- d. Sweep
- e. Combination of extrude and press pull
- f. Difference between solid , surface and mesh
- g. Solid from polyline
- h. Surface from line
- i. Join and explode to made solid or surface

25. 3D Modification Tools

- a. Union
- b. Subtract
- c. Interface
- d. Thicken
- e. Extrude surface
- f. 3D mirror
- g. 3D gizmo move, rotate and scale

26. Sections

- a. Creation of 3D sections
- b. Editing in section view
- c. Setting for rendering

- d. Saving as picture

27. Coordination System

- a. The view settings
- b. Face setting
- c. Work coordination system
- d. Unnamed editing

28. Solid Tools

- a. 3D fillet
- b. 3D chamfer
- c. 3D slice
- d. Extract edges
- e. Face offset
- f. Shell
- g. Clean up
- h. Imprint
- i. Taper face

29. Surface Tools

- a. Blend
- b. Patch
- c. Surface fillet
- d. Network
- e. Planar
- f. Surface extrude, revolve, sweep, loft
- g. Nurbs creation
- h. Surface offset
- i. Creation curves
- j. Spline CV
- k. Extend
- l. Trim or Untrim
- m. Sculpt

30. Visualizing

- a. Lights
 - i. Point light
 - ii. Web light
 - iii. Spot light
 - iv. Distant light
- b. shadow
- c. Sun setting
- d. Background clouds and illuminations
- e. View configuration
- f. Camera creation
- g. Materials editor
 - i. Creating materials
 - ii. Editing cut off and bumps
 - iii. Editing picture materials

31. Rendering

- a. Render setup
- b. Render window setting
- c. Render time and levels
- d. Render saving
- e. Walkthrough
- f. Creating point and path walkthrough
- g. Saving walkthrough into video

32. 3D Layout Creation

- a. Creating page layout
- b. Saving project
- c. Adding render picture into layout

33. Project -1

Creating a Simple Residential Electrical Plan.

This project includes the architectural drawing on which first you will be thought how to adding the 2D layout of the ELECTRICAL for the entire house and then adding the required annotations and final saving it into pdf. Then the same drawing will be utilize to creation of 3D model of ELECTRICAL plan of the house. This drawing both 2D and 3D will be completed in the class under the guidance of the instructor.

34. Project -2

Creating an Complex Commercial Electrical Plan

This project will include the architectural plan on which you will be learning to create complex commercial ELECTRICAL plan. On which first you will be thought how to adding the 2D layout of the ELECTRICAL for the entire house and then adding the required annotations and final saving it into pdf. Then the same drawing will be utilize to creation of 3D model of ELECTRICAL plan of the house. This drawing both 2D and 3D will be completed in the class under the guidance of the instructor.

35. Project -3

3D Models from 2D Layout Drawings

You will be given 2D and 3D printouts of ELECTRICAL. You will be learning how to read a 2D drawing and create 3D model on it.

36. Project -4

Final Project Creation

In this you will be given the 2D plan on which you should create a 3D model by the skills you have learned in this course. This project you will be doing by yourself. You can ask for guidance from the instructor. This project should be progressive as the course goes on. By the end of course you should submit the project as pdf format only.

37. Final Briefings

The last hour of the class will be taken as over view of the entire course along with the final project submission.