

Introduction to AutoCAD Course

AutoCAD for Beginners: Level 1

Nature of the course: Theory + Practical

Total hours per day: 2 hours

Course duration: 1 week

Course Summary

Using AutoCAD software, students master the features and elements of computer-aided drafting. This course places an emphasis on learning the fundamental drawing and editing commands needed to create simple two-dimensional drawings. Topics include entering and using the drawing editor, setting up the drawing environment, constructing entities, editing a drawing, display control and zooming, creating dimensions, creating layers and assigning objects, drawing storage and retrieval, layer and line-type options, detailing, blocks creation and exporting blocks. This course requires the students to have a basic understanding of Windows and software.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

1. Has attended 90% of all classes held
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in assessments
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the second module.

Required Text Books

1. AutoCAD for Dummies book series
2. AutoCAD Essentials book series

Course Details

DAY 1

Introduction

- Introduction
- User Interface and Workspace
- Creating and saving drawings
- Drawing Units
- Pan and Zoom Tools
- Model space and Layout space

DAY 2

Creating Drawings

- LINE command
- RECTANGLE command
- CIRCLE command
- POLYLINE command

DAY 3

Modifying and Manipulating Drawings

- Making Selection
- MOVE and COPY commands
- ROTATE and SCALE commands
- OFFSET and MIRROR commands
- TRIM and EXTEND commands
- FILLET and CHAMFER commands
- RECTANGULAR and POLAR array

DAY 4

Dimensions and Text

- Creating Dimensions
- Creating dimension style
- Creating Single-line text and Multiline text
- Creating Text style

DAY 5

Layers and Blocks

- Creating Layers and assigning objects
- Using Layer properties manager
- Editing object properties
- Creating and editing blocks

DAY 6

Layout and Plotting

- Preparing Layout and adding title blocks
- Viewports and scale
- Plotting drawing

DAY 7

Revision and LAB Sessions

Learning Outcomes

- You will be familiar with the AutoCAD interface and able to use the command panel.
- Ability to design two-dimensional drawings.
- Ability to create Layers and Blocks and Prepare Layouts

Intermediate AutoCAD: Level 2

Nature of the course: Theory + Practical

Total hours per day: 2 hours

Course duration: 5 days

Course Summary

This course is appropriate for students who have a basic AutoCAD drawing skill and want to advance their careers, utilize AutoCAD in their current position, or are creative enthusiasts. Topics in this course include Precision Drawing, Object Properties, and Labelling and Annotating Architectural Plan.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

1. Has attended 90% of all classes held
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in assessments
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the second module.

Required Text Books

1. Mastering AutoCAD book series
2. AutoCAD for Dummies book series
3. AutoCAD Essentials book series

Course Details

DAY 1

Setting options for customized workflow and user preferences Introduction Precision Drawing in AutoCAD

- Polar and Ortho mode
- Dynamic Input
- Object Snap
- Object Snap Tracking
- Editing with Grips

DAY 2

Advanced Object Types

- Arcs
- Ellipses
- Polygons

- Construction Line
- Multiline
- Tables
- Multileader
- Hatches

DAY 3

Object Properties

- Modifying object properties
- Line types, Line scale and Line weights
- Match properties

DAY 4

Advanced Modify Commands

- STRETCH command
- BREAK command
- JOIN command
- ALIGN command
- LAYON, LAYOFF and LAYISO command

DAY 5

Creating a simple drawing

- Drawing a architectural plan of a house
- Creating Sections and Elevations
- Creating detail drawings
- Labelling and annotating architectural plan

Learning Outcomes

- Improved precision in drawing in AutoCAD
- Ability to use advanced commands
- Ability to modify object properties

Advanced AutoCAD: Level 3

Nature of the course: Theory + Practical

Total hours per day: 2 hours

Course duration: 4 days

Course Summary

This course is designed to teach the students everything that is needed to know to become an expert in AutoCAD. External References and Working with Other File Formats, Working with Dynamic Blocks, Inserting and Editing Locks with Attributes, Extracting data from drawings, and Batch Plotting will all be covered in this course.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

1. Has attended 90% of all classes held
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in assessments
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the second module.

Required Text Books

1. Mastering AutoCAD book series
2. AutoCAD Essentials book series

Course Details

DAY 1

External References and Working with other file formats

- Importing and working with other DWG file
- Importing and working with raster image
- Importing and working with pdf files

DAY 2

Dynamic Blocks

- Working with Dynamic Blocks
- Creating Dynamic Block Definitions

DAY 3

Attributes

- Inserting Blocks with Attributes
- Editing Attribute Values
- Defining Attributes
- Redefining Blocks with Attributes
- Extracting Attributes

DAY 4

Extracting data from drawings

Batch Plotting

Learning Outcomes

- Advanced AutoCAD tools will be familiar to you, and you will be able to use them.
- Learn how to use AutoCAD's lighting and material effects.
- Ability to extract data from drawings