



DATAK ENGINEERING COURSE MODULE

AUTOCAD

INTRODUCTION

- System requirements
- Starting AutoCAD
- AutoCAD user interface
- Changing the Color Scheme
- Application Menu
- Quick Access Toolbar
- File tabs
- Graphics Window
- ViewCube
- Navigation Bar
- Command line
- Status Bar
- Menu Bar
- Changing the display of the Ribbon
- Dialogs and Palettes
- Tool Palettes
- Shortcut Menus
- Selection Window
- Starting a new drawing
- Command List
- 3D Commands

DRAWING BASICS

- Drawing Basics
- Drawing Lines
- Erasing, Undoing and Redoing
- Drawing Circles
- Drawing Arcs
- Drawing Polylines
- Drawing Rectangles
- Drawing Polygons
- Drawing Splines
- Drawing Ellipses
- Exercises

DRAWING AIDS

- Drawing Aids
- Setting Grid and Snap
- Setting the Limits of a drawing
- Setting the Line weight
- Using Ortho mode and Polar Tracking
- Using Layers
- Using Object Snaps
- Exercise



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EDITING TOOLS

- Editing Tools
- The Move tool
- The Copy tool
- The Rotate tool
- The Scale tool
- The Trim tool
- The Extend tool
- The Fillet tool
- The Chamfer tool
- The Mirror tool
- The Explode tool
- The Stretch tool
- The Polar Array tool
- The Offset tool
- The Path Array tool
- The Rectangular Array tool
- Editing Using Grips
- Modifying Rectangular Arrays
- Modifying Polar Arrays
- Exercises

MULTI VIEW DRAWINGS

- Multi view Drawings
- Creating Orthographic Views
- Creating Auxiliary Views
- Creating Named views
- Exercise 1

DIMENSIONS AND ANNOTATIONS

- Dimensioning
- Creating Dimensions
- Creating a Dimension Style
- Adding Leaders
- Adding Dimensional Tolerances
- Geometric Dimensioning and Tolerancing
- Editing Dimensions by Stretching
- Modifying Dimensions by Trimming and Extending
- Using the DIMEDIT command
- Using the Update tool
- Using the Oblique tool
- Editing Dimensions using Grips
- Modifying Dimensions using the Properties palette
- Matching Properties of Dimensions or Objects
- Exercise 1



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LAYOUTS & ANNOTATIVE OBJECTS

- Drawing Layouts
- Working with Layouts
- Creating Viewports in the Paper space
- Changing the Layer Properties in Viewports
- Creating the Title Block on the Layout
- Working with Annotative Dimensions
- Scaling Hatches relative to Viewports
- Working with Annotative Text
- Exercise 1

TEMPLATES AND PLOTTING

- Plotting Drawings
- Configuring Plotters
- Creating Plot Style Tables
- Using Plot Styles
- Creating Templates
- Plotting/Printing the drawing
- Exporting to PDF
- Exercise

3D MODELING BASICS

- 3D Modeling Workspaces in AutoCAD
- The 3D Modeling Workspace
- The Box tool
- Creating the User Coordinate System
- Creating a Wedge
- Creating a Cylinder
- Using Dynamic User Coordinate System
- Model Space Viewports For 3D Modeling
- Creating Other Primitive Shapes
- Creating Cones
- Creating a Sphere
- Creating a Torus
- Creating a Pyramid
- Using the Polysolid tool
- Using the Extrude tool
- Using the Revolve tool
- Using the Sweep tool
- Using the Loft tool
- Using the Presspull tool
- Performing Boolean Operations
- Using the Helix tool
- Exercises



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SOLID EDITING & GENERATING 2D VIEWS

- Using the Move tool
- Using the 3D Move tool
- Using the 3D Array tool
- Using the 3D Align tool
- Using the 3D Mirror tool
- Using the Fillet Edge tool
- Using the Taper Faces tool
- Using the Offset Faces tool
- Using the 3D Rotate tool
- Using the 3D Polyline tool
- Creating a 3D Polar Array
- Using the Shell tool
- Using the Chamfer Edge tool
- Using the Section Plane tool
- Using the Live Section tool
- Creating Drawing Views
- Setting the Drafting Standard
- Creating a Base View
- Creating a Projected View
- Creating Section Views
- Creating the Section View Style
- Creating a Full Section View
- Creating a Detailed View
- Exercises