Table of Contents

Introduction

About this book Intro-1
Templates to download Intro-1
About the Authors Intro-1
Configuring your system Intro-2
System Requirements Intro-8
Customizing your wheel mouse Intro-10

Lesson 1

Open Multiple Files 1-2
Switch between open drawings 1-4
Warm up drawings 1-5
Exercises 1A, 1B, 1C 1-6
Review Plotting from Model Space 1-9

Lesson 2

Customizing your Workspace 2-2
Creating a New Workspace 2-3
Creating a Ribbon tab 2-5
Add a Ribbon Panel to a tab 2-8
Create a New Ribbon panel 2-10
Add a command to a Ribbon panel 2-11
Customize the Status Bar 2-12
Customize Quick Access Toolbar 2-13
Export a Workspace 2-14
Import a Workspace 2-15
Delete a Workspace 2-16

Lesson 3 Master Decimal Setup

Exercises
3A - Create a Master Decimal Setup Template 3-2
3B - Create a Page Setup for 8-1/2 X 11 sheet 3-12
3C - Create a Border and Title Block 3-15
3D - Create a Viewport 3-16
3E - Plotting from Layout tab 3-17

Lesson 4 Master Feet and Inches Setup

Exercises
4A - Create a Feet-Inches Setup Template 4-2
4B - Create a Page setup for 8-1/2 X 11 sheet 4-6
4C - Create a Border and Title Block 4-9
4D - Create a Viewport 4-10
4E - Plotting from Layout tab 4-11
4F - Create a New Dimension Style 4-14

Lesson 5

Create a Table 5-2
Insert a Table 5-6
Insert a Block into a Table Cell 5-8
Insert a Formula into a Table Cell 5-9
Change the Data Format of a Cell 5-13
Modify a Table using the Ribbon tab 5-14
Modify a Table using grips 5-15
AutoFill grip 5-16
Table Breaking 5-18
Create a Field 5-21
Update a Field 5-22
Add a Field to a Table Cell 5-23
Editing Fields 5-24
Exercises
- 5A - Create a New Table Style 5-25
- 5B - Insert a Table 5-30
- 5C - Modify an existing Table 5-31
- 5D - Add Fields to an existing Table 5-32
- 5E - Update a Field 5-33
- 5F - AutoFill 5-34
- 5G - Table Breaking 5-35

Lesson 6

Isometric drawings 6-2
Isometric snap and grid 6-2
Isoplanes 6-3
Isometric Ellipse 6-4
Exercises
- 6A - Isometric Assembly 6-5
- 6B - Isometric Object 6-6
- 6C - Abstract House 6-7

Lesson 7

Copy, Clip and Cut 7-2
Paste 7-3
Change Space 7-5
Isometric text 7-6
Dimensioning an Isometric drawing (Oblique) 7-7
Exercises
- 7A - Oblique Dimensioning-Mechanical 7-8
- 7B - Oblique Dimensioning-Architectural 7-9
- 7C - Isometric Text 7-10

Lesson 8

Blocks 8-2
- Annotative 8-5
- Inserting-Review 8-6

Attributes 8-8
- Creating 8-8

Exercises
8A - Assigning Attributes to a Block 8-13
8B - Create a Floor Plan with Blocks and Attributes 8-17
8C - Assigning Attributes to Multiple Blocks 8-19

Lesson 9

Editing Attributes 9-2
Edit Objects in a Block 9-5
Extract Data from Block Attributes 9-7
Exercises
9A - Extracting Attributes to an AutoCAD table 9-13
9B - Extracting Attributes to an External File 9-14

Lesson 10

DesignCenter 10-2
Drag and Drop Blocks 10-5
Drag and Drop Layouts, Text Styles, etc. 10-6
Autodesk Seek 10-7
Autodesk Content Explorer 10-8
Exercise
10A - Inserting Blocks from the Design Center 10-9
10B - Borrowing settings from another drawing 10-11

Lesson 11

External Referenced Drawings (XREF) 11-2
Inserting 11-3
Image fade 11-5
Palette 11-6
Clipping an External Referenced drawing 11-10
Clipping Options 11-11
Edit an External Referenced drawing 11-12
Convert an object to a Viewport 11-14
Creating Multiple Viewports and Multiple Xrefs 11-15
Creating Multiple Viewports - A quick method 11-18
Missing External Reference Drawings 11-19
Exercises
11A - Xref Multiple Drawings 11-21
11B - Creating Multi-scaled views 11-26
11C - Clipping an External Reference 11-28

Lesson 12

Ordinate dimensioning 12-2
Creating 12-3
Jog 12-4
Qdim and ordinate 12-5
Alternate units 12-6
Tolerances 12-7
Geometric tolerances 12-9
Geometric tolerances and Qleader 12-10
Datum feature symbol 12-11

Datum triangle 12-12
Typing Geometric Symbols 12-13
Exercises
12A - Ordinate dimensioning 12-14
12B - Dual dimensioning 12-15
12C - Deviation & Symmetrical 12-16
12D - Limits 12-17
12E - Geometric tolerances 12-18

Lesson 13

Parametric Drawing 13-2
Geometric Constraints 13-3
Controlling the display of Geometric Constraint icons 13-15
Dimensional Constraints 13-16
Parameter Manager 13-20
Controlling the display of Dimensional Constraint icons 13-25
Exercises
13A 13-26
13B 13-27

Lesson 14

Geographic Overview 14-2
Set a Geographic Location on a Map 14-3
Edit an existing Geographic Location 14-9
Change the Map display 14-10
Position Markers 14-11
Place a Position Marker on the Map 14-12
Edit an existing Position Marker 14-14
Exercises
14A 14-15
14B 14-16

Lesson 15

Introduction to 3D 15-2
Enter the AutoCAD 3D Workspace 15-3
Viewing a 3D Model 15-5
ViewCube 15-6
Orbit 15-9
3D Views 15-11
Visual Styles 15-12
Wireframe Model 15-15
Surface Model 15-16
Solid Model 15-17
Exercises
15A - Create a Wireframe Model 15-18
15B - Create a Surface Model 15-19

Lesson 16

Drawing basic geometric shapes 16-2
- Box 16-3
- Cylinder 16-7
- Cone 16-9
- Sphere 16-11
- Pyramid 16-12
- Wedge 16-13
- Torus 16-17

Exercises
- 16A - Create 4 Solid Boxes 16-18
- 16B - Create 3 solid Cylinders 16-19
- 16C - Create 2 solid Cones 16-20
- 16D - Create 3 solid Wedges 16-21
- 16E - Create a solid Sphere 16-22
- 16F - Create 3 solid Torus' 16-23
- 16G - Create 2 solid Pyramids 16-24

Lesson 17

Configuring options for 3D 17-2
Understanding the UCS 17-3
Moving the UCS 17-4
Rotating the UCS 17-8
New direction for Z axis 17-10
Boolean Operations 17-12
- Union 17-12
- Subtract 17-13
- Intersection 17-14

Exercises
- 17A - Subtract 17-16
- 17B - Union and Subtract 17-18
- 17C - Assembling 3D solids 17-20

Lesson 18

Extrude 18-2
Region 18-5
Presspull 18-6
Polysolid 18-7
DELOBJ system variable 18-8
Plan View 18-9
Exercises
- 18A - Extrude 18-10
- 18B - Extrude along a path 18-11
- 18C - Extrude with taper 18-12
- 18D - Extrude or Presspull a Region 18-14
- 18E - Extrude or Presspull a Region 18-15

Lesson 19

3D Operations 19-2
- 3D Mirror 19-2
- 3D Rotate 19-3
- 3D Align 19-4
- 3D Array 19-5

Exercises
- 19A - 3D Mirror 19-7
- 19B - 3D Rotate 19-8
- 19C - 3D Align 19-9
- 19D - 3D Array 19-10

Lesson 20

Using the Gizmo tool 20-2
Move a sub-object using grips 20-3
Stretch using grips 20-5
Rotate using Gizmo 20-6
Scale using Gizmo 20-7

Exercises
- 20A - Create a Cube 20-8
- 20B - Presspull or grips 20-9
- 20C - Add Cylinder and subtract 20-10
- 20D - Move the hole 20-11
- 20E - Scale hole 20-12
- 20F - Delete 20-13
- 20G - Rotate 20-14

Lesson 21

Revolve 21-2
Slice 21-3
Section Plane 21-4
Sweep 21-8
Helix 21-9

Exercises
- 21A - Slice 21-10
- 21B - Revolve 21-11
- 21C - Create 2D and 3D Section 21-13
- 21D - Sweep 21-14
- 21E - Helix 21-15
- 21F - Solid Helix 21-16

Lesson 22

Plotting Multiple views 22-2
Creating Projected Views 22-4
Creating Section Views 22-7
Shell 22-9

Exercises
- 22A - Plot multiple views 22-10
- 22B - Create Projected Views 22-11
- 22C - Shell 22-12

Projects

Architectural
Electro-Mechanical
Mechanical

Appendix

A Add a Printer / Plotter
B Autodesk 360 Connectivity
C Command Line Enhancements

Index