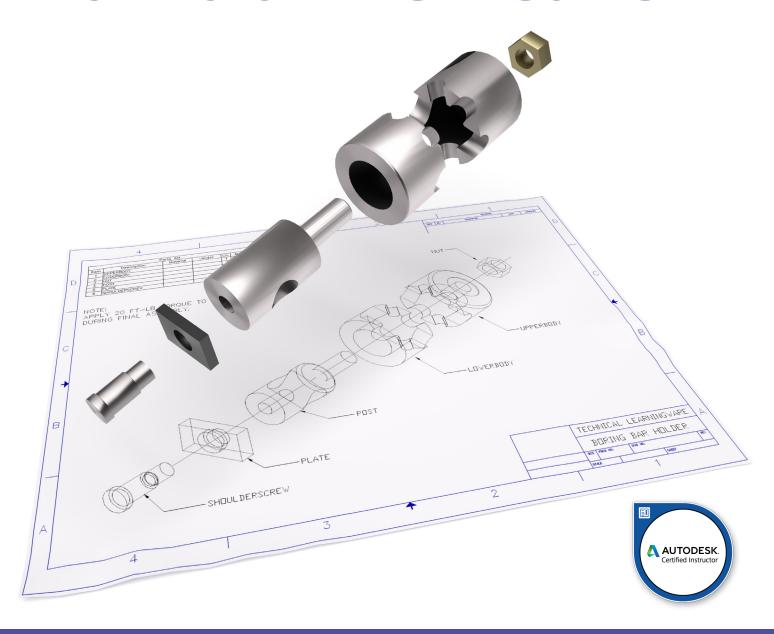
Autodesk[®]

AutoCAD 2020 Fundamentals



Visit the following websites to learn more about this book:



amazon.com





Table of Contents

Preface	i
Acknowledgements	ii
Classroom Setup	iii
Lesson 1.0 – The AutoCAD Environment	
Exercise 1-1: Workspace	1-4
Exercise 1-2: Using the Mouse	1-10
Exercise 1-3: Start Page	1-28
Exercise 1-4: Dynamic Input	1-32
Exercise 1-5: Create an Autodesk 360 Account	1-35
Exercise 1-6: Create a Profile	1-37
Exercise 1-7: Export a Profile	1-40
Review Questions	1-42
Lesson 2.0 – View Commands	
Exercise 2-1: Real Time Zoom	2-8
Exercise 2-2: Zoom	2-10
Exercise 2-3: Modifying the View Ribbon	2-12
Exercise 2-4: Saving Named Views	2-16
Exercise 2-5: Multiple Viewports	2-21
Exercise 2-6: Viewing Drawings	2-27
Exercise 2-7: View Commands	2-28
Review Questions	2-29

Lesson 3.0 – Drawing Lines	
Exercise 3-1: Line using Direct Distance Method	3-6
Exercise 3-2: Parametric Constraints	3-11
Exercise 3-3: Line Using Polar Tracking	3-15
Exercise 3-4: Line Using Cartesian Coordinates	3-18
Exercise 3-5: Absolute Coordinates	3-22
Exercise 3-6: Relative Coordinates	3-24
Exercise 3-7: Polar Coordinates	3-26
Exercise 3-8: Drag Method	3-27
Exercise 3-9: Erase	3-29
Review Questions	3-30
Lesson 4.0 – Draw Commands	
Exercise 4-1: Polyline	4-6
Exercise 4-2: Polyline	4-8
Exercise 4-3: Polygon	4-10
Exercise 4-4: Rectangle	4-14
Exercise 4-5: Arc	4-17
Exercise 4-6: Circle and Donut	4-22
Exercise 4-7: Spline	4-25
Exercise 4-8: Ellipse and Ellipse Arc	4-27
Exercise 4-9: Add Selected	4-31
Exercise 4-10: Standard Bracket	4-33
Exercise 4-11: Plate	4-34
Exercise 4-11: Simple House	4-35
Exercise 4-13: Hatch	4-37
Exercise 4-14: HPLAYER	4-39
Exercise 4-14: HPLAYER REPRISED	4-39 4-41
Review Questions	4-41

Lesson 5.0 – Modify Commands

Exercise 5-1: Copy	5-3
Exercise 5-2: Copy Multiple	5-4
Exercise 5-3: Mirror	5-6
Exercise 5-4: Mirror Text	5-8
Exercise 5-5: Offset	5-11
Exercise 5-6: Rectangular Array	5-14
Exercise 5-7: Rectangular Array at an Angle	5-15
Exercise 5-8: Polar Array	5-17
Exercise 5-9: Path Array	5-18
Exercise 5-10: Associative Array	5-20
Exercise 5-11: Polar Array Challenge	5-22
Exercise 5-12: Move	5-24
Exercise 5-13: Rotate	5-27
Exercise 5-14: Rotate Using Reference	5-29
Exercise 5-15: Rotate and Copy	5-30
Exercise 5-16: Rotate Using Reference	5-31
Exercise 5-17: Scale	5-33
Exercise 5-18: Scale Using Reference	5-34
Exercise 5-19: Stretch	5-36
Exercise 5-20: Stretch	5-37
Exercise 5-21: Trim	5-41
Exercise 5-22: Extend	5-44
Exercise 5-23: Fillet	5-47
Exercise 5-24: Undo and Redo	5-49
Exercise 5-25: Modify Commands	5-50
Exercise 5-26: Modify Commands	5-51
Exercise 5-27: Area	5-53
Review Questions	5-55

Lesson 6.0 – Selecting Objects	
Exercise 6-1: Selecting Objects	6-5
Exercise 6-2: Selecting Objects Using Properties	6-7
Exercise 6-3: Select Similar	6-9
Exercise 6-4: Quick Select	6-12
Exercise 6-5: Customize Quick Properties	6-14
Exercise 6-6: Use Quick Properties	6-15
Exercise 6-7: Selection Cycling	6-17
Review Questions	6-19
Lesson 7.0 – Object Properties	
Exercise 7-1: Layer Control	7-5
Exercise 7-2: Drawing on Layers	7-14
Exercise 7-3: Creating Layers	7-18
Exercise 7-4: Rename Layers	7-21
Exercise 7-5: Identifying Layers	7-23
Exercise 7-6: Using the Layer Translator	7-25
Exercise 7-7: Match Properties	7-29
Exercise 7-8: Create a Group Layer Filter	7-32
Exercise 7-9: Create a Properties Layer Filter	7-36
Exercise 7-10: Save a Layer State	7-42
Exercise 7-11: Apply a Layer State to a Layout	7-45
Exercise 7-12: Publish Layouts with Layer States	7-47
Exercise 7-13: Change Properties	7-51
Exercise 7-14: Change Properties (Reprised)	7-53
Exercise 7-15: Organize Your Drawing— MCAD	7-55
Exercise 7-16: Organize Your Drawing –AEC	7-56
Review Questions	7-57
Lesson 8.0 – Drafting Settings and Object Snaps	
Exercise 8-1: Drafting Settings	8-3
Exercise 8-2: Object Snap	8-8
Exercise 8-3: Object Snap	8-10

Exercise 8-4: Running Object Snap	8-12
Exercise 8-5: Extended Intersection Object Snap	8-14
Exercise 8-6: Object Tracking	8-15
Exercise 8-7: Geometric Center	8-20
Exercise 8-8: Drawing Layout	8-25
Exercise 8-9: Plate	8-26
Exercise 8-10: Clamp	8-27
Exercise 8-11: Quick Measure	8-30
Review Questions	8-32
Lesson 9.0 – Dimensions	
Exercise 9-1: Linear and Aligned Dimensions	9-5
Exercise 9-2: Continuous and Baseline Dimensions	9-7
Exercise 9-3: Angular, Radius and Diameter Dimensions	9-10
Exercise 9-4: Centerline Annotations	9-13
Exercise 9-5: Quick Dimensions	9-16
Exercise 9-6: Automatic Dimensions	9-21
Exercise 9-7: Ordinate Dimensions	9-24
Exercise 9-8: Dimension Space	9-26
Exercise 9-9: Dimension Break	9-28
Exercise 9-10: Dimension Styles	9-34
Exercise 9-11: Architectural Dimension Style	9-39
Exercise 9-12: Add Architectural Dimensions	9-42
Exercise 9-13: Edit Dimension	9-49
Exercise 9-14: Edit Dimension Text	9-51
Exercise 9-15: Edit Dimension Using Grips	9-52
Exercise 9-16: Edit Dimension Using Stretch	9-54
Exercise 9-17: Dimension Constraints	9-57
Exercise 9-18: Dimension a Drawing –MCAD	9-59
Exercise 9-19: Dimension a Drawing –MCAD	9-60
Exercise 9-20: Dimension a Drawing—AEC	9-61
Exercise 9-21: Reassociate Dimensions	9-62
Review Questions	9-65

Lesson 10.0 – Text Tools	
Exercise 10-1: Single Line Text	10-4
Exercise 10-2: Single Line Text Options	10-5
Exercise 10-3: Multiline Text	10-10
Exercise 10-4: Formatting Multiline Text	10-11
Exercise 10-5: Creating Text Styles	10-15
Exercise 10-6: Architectural Text Style	10-17
Exercise 10-7: Purging Text Styles	10-20
Exercise 10-8: Edit Text	10-23
Exercise 10-9: Edit Text Properties	10-24
Exercise 10-10: Edit Text with Grips	10-26
Exercise 10-11: Edit Text Properties	10-28
Exercise 10-12: Spell Check	10-31
Exercise 10-13: Adding Fields to Objects	10-33
Exercise 10-14: Adding a Table	10-36
Exercise 10-15: Exporting a Table	10-40
Exercise 10-16: Adding Blocks and Symbols to a Table	10-41
Review Questions	10-43
Lesson 11.0 – Title Blocks and Templates	
Exercise 11-1: Define Attribute	11-4
Exercise 11-2: Inserting a Title Block	11-15
Exercise 11-3: Create a Template	11-18
Exercise 11-4: Use a Template	11-21
Exercise 11-5: Creating a Block	11-26
Exercise 11-6: Creating a Block—AEC	11-32
Exercise 11-7: Creating a Circuit Diagram with Blocks	11-37
Exercise 11-8: Modifying a Block	11-51
Exercise 11-9: Creating a Dynamic Block	11-56
Exercise 11-10: Adding Length Increments to a Dynamic Block	11-61
Exercise 11-11: Using a Table to Define a Dynamic Block	11-66
Exercise 11-12: Adding a Flip Action to a Dynamic Block	11-71
Exercise 11-13: PDF Import	11-77
Review Questions	11-79

Lesson 12.0 – Viewports and Layouts Exercise 12-1: Creating a New Layout 12-5 Exercise 12-2: Adding a Viewport 12-8 Exercise 12-3: Insert View 12-11 Exercise 12-4: Converting Existing Dimensions to Annotative 12-14 12-18 **Exercise 12-5: Using Annotative Scales** Exercise 12-6: Rotating a Viewport 12-20 **Exercise 12-7: Controlling Viewport Properties** 12-21 Exercise 12-8: **Nonrectangular Viewport** 12-24 Exercise 12-9: Controlling Layers per Viewport 12-30 Exercise 12-10: Layout Setup 12-37 Exercise 12-11: Create a New Sheet Set 12-39 Exercise 12-12: Add a Sheet to a Sheet Set 12-42 Exercise 12-13: Copy Text Styles Using Design Center 12-43 Exercise 12-14: Creating a Sheet List Table 12-45 Exercise 12-15: Publishing a Sheet Set 12-48 **Review Questions** 12-50

About the Author