

Study Modules

Getting Started

- Starting AutoCAD
- Understanding Activation
- Introducing the Customer Involvement Program
- Introducing the AutoCAD Welcome Screen
- Understanding the Performance Tuner
- Understanding How Tools are Organized
- Switching Workspaces
- Adjusting Workspace Settings
- Using the Application Menu
- Using the Quick Access Toolbar
- Using the InfoCenter
- Using and Controlling the Help System
- Understanding Ribbon Fundamentals
- Controlling the Display of the Ribbon
- Changing the Location of the Ribbon
- Working with Sticky Panels
- Introducing the Drawing Aid Tools
- Introducing the Drawing Grid
- Changing Screen Colors
- Working with User Profiles
- Controlling the Application Status Bar
- Working Within the Drawing Window
- Working with Multiple Drawings
- Understanding Model and Layout Tabs
- Understanding Quick View Drawings and Quick View Layouts
- Understanding File Tabs
- Understanding the Command Line
- Typing Commands
- Understanding Dialog Box Fundamentals
- Understanding Palette Fundamentals
- Understanding Toolbar Fundamentals
- Starting a New Drawing from a Template File
- Setting the Default Template
- Starting a New Drawing Using the Startup Wizard
- Saving Drawings Using SAVE and QSAVE
- Saving Drawings Using QSAVE and SAVEAS
- Understanding the Autosave Options
- Understanding Backup Files
- Saving Drawings to Different Versions and Other Save Options
- Opening Drawings in Partial Open and Read-Only Modes
- Opening Drawings Using the Sheet Set Manager
- Importing and Exporting DGN Files
- Using a Mouse in AutoCAD
- Understanding the In-Canvas Viewport Controls
- Understanding the Navigation Bar
- Understanding the UCS Icon
- Understanding the ViewCube
- Understanding the SteeringWheels
- Understanding the Pull-Down Menus
- Using a 3D Mouse

2D Drawing Basics

- Drawing Lines Using the Command Line
- Drawing Lines Using Dynamic Input
- Drawing Lines Using the Right-Click Menu
- Repeating the Last Command
- Understanding Command Options
- Drawing Rectangles
- Drawing Rectangles Using the Area Option
- Drawing Rectangles Using the Dimensions Option
- Drawing Rectangles Using the Rotation Option
- Drawing Rectangles with Fillets
- Drawing Rectangles with Chamfers
- Drawing Rectangles Using the Width Option

- Resetting the Rectangle Default Options
- Using the Undo and Redo Commands
- Drawing Circles Using Radius and Diameter
- Drawing 2 Point and 3 Point Circles
- Drawing Circles Using the TTR and TTT Options
- Drawing Circles Using the Default Method
- Drawing Arcs
- Drawing Arcs by Specifying 3 Points
- Understanding Coordinate System Concepts
- Using Absolute Coordinates
- Using Relative Coordinates
- Understanding Drawing Units and Angle Measurements
- Erasing Objects by Picking
- Selecting Objects by Window and Crossing
- Selecting Objects by Window Polygon and Crossing Polygon
- Selecting Objects by Fence and Last
- Selecting Objects Using Undo and Previous
- Selecting Objects Using the Box Option
- Selecting Objects Using Implied Selection
- Selecting Objects Using Select Similar
- Adding New Objects Using Add Selected
- Hiding and Isolating Objects
- Restoring Erased Objects with OOPS
- Selecting and Deselecting Objects
- Selecting All Objects
- Controlling Selection Settings
- Using Selection Cycling

Drafting Settings

- Using and Adjusting the Grid
- Using Snap Mode
- Using Ortho Mode
- Using Grid and Snap in Combination with Ortho Mode
- Using Direct Distance Entry and Dynamic Input
- Understanding Absolute Angle Measurements
- Using Polar Tracking with Absolute Angles
- Understanding Relative Angle Measurements
- Using Polar Tracking with Relative Angles
- Using Polar Tracking with Incremental and Additional Angles
- Using Polar Tracking and Polar Snaps
- Understanding Object Snap Concepts
- Understanding Running Object Snaps
- Understanding Parallel Object Snap
- Understanding Extension Object Snap
- Using the Object Snap Overrides
- Using Object Snap Tracking from One Point Orthogonally
- Using Object Snap Tracking from Two Points Orthogonally
- Using Object Snap Tracking from One Point with Polar Angles
- Using Object Snap Tracking from Two Points with Polar Angles
- Using Object Snap Tracking with a Temporary Track Point
- Using Object Snap Overrides with Mid Between 2 Points
- Using Options to Control Object Snap System Variables

Display Control

- Zooming Using the Wheel Mouse
- Adjusting the ZOOMFACTOR Setting
- Adjusting the View Transitions
- Using Real-Time Pan and Zoom
- Zooming Using the Ribbon
- Panning Using the Ribbon Panel
- Zooming and Panning Using the Navigation Bar
- Using the View Back and View Forward Tools
- Using the SteeringWheels
- Creating Tiled Viewports
- Naming Tiled Viewports
- Using the View Manager to Restore Named Views
- Using the View Manager to Edit and Update Named Views

Using the View Manager to Create Named Views

Managing Layers

- Introducing Layer Concepts
- Establishing the Current Layer
- Understanding the On and Off Layer States
- Understanding the Freeze and Thaw Layer States
- Understanding the Unlock and Lock Layer States
- Understanding the Lock Layer Fade Control
- Controlling the Layer Color
- Introducing the Layer Properties Manager Palette
- Adjusting Columns in the Layer Properties Manager
- Controlling the Linetype of a Layer
- Controlling the Transparency of a Layer
- Controlling the Plot or No Plot Layer State
- Controlling the Viewport Freeze Layer State
- Controlling the New Viewport Freeze Layer State
- Creating a New Layer Frozen in All Viewports
- Freezing Layers in All But the Current Viewport
- Freezing Layers in All Viewports
- Thawing Layers in All Viewports
- Isolating Selected Layers
- Merging Layers Using the Layer Properties Manager
- Adjusting Other Layer Settings Using the Shortcut Menu
- Controlling Other Layer States on a Per-Viewport Basis
- Creating a New Layer
- Deleting a Layer
- Adding a Layer Description
- Using Layer Filters
- Creating New Layer Filters
- Working with Layer States
- Making an Objects Layer Current
- Matching Layers
- Restoring the Previous Layer State
- Isolating Layers
- Unisolating Layers
- Freezing Layers
- Turning Layers Off
- Turning All Layers On
- Thawing All Layers
- Locking a Layer
- Unlocking a Layer
- Changing an Object to the Current Layer
- Copying Objects to a New Layer
- Viewing Individual Layers
- Freezing Layers in All Viewports Except the Current Viewport
- Merging Layers Using the LAYMRG Command
- Deleting a Layer and Its Contents

Object Properties

- Understanding ByLayer and Object Property Concepts
- Setting the Color ByLayer
- Setting the Linetype ByLayer
- Setting the Lineweight ByLayer
- Setting the Transparency ByLayer
- Controlling the Object Color
- Controlling the Object Linetype
- Controlling the Object Lineweight
- Controlling the Object Transparency
- Understanding Object Property Creation and Control
- Modifying Properties Using the Property Panel and Layer Panel
- Modifying Properties Using the Quick Property Palette
- Controlling the Quick Property Palette Display Properties
- Modifying Properties Using the Properties Palette
- Setting Object Properties to ByLayer
- Understanding In-Canvas Property Preview

Utility and Inquiry Tools

- Introducing the Measure Tools
- Measuring Distance
- Measuring Radius
- Measuring Angles
- Measuring the Area of a Space
- Measuring the Area of an Object
- Performing Area Calculations
- Measuring Volume
- Using the Quick Calculator
- Applying Object Selection Filters
- Using Quick Select
- Listing Selected Objects
- Displaying the Coordinates of a Point

Complex Objects

- Understanding Polyline Property Concepts
- Drawing Polyline Line Segments
- Drawing Polyline Arc Segments
- Drawing Polylines with Variable Width
- Drawing Polylines Using Option Combinations
- Drawing Donuts
- Drawing Inscribed Polygons
- Drawing Circumscribed Polygons
- Drawing Polygons Using the Edge Option
- Editing Polylines Using the Close and Open Options
- Editing Polylines to Join Selected Segments
- Editing Polylines to Join Multiple Segments
- Converting Lines into Polylines
- Converting Polylines into Fit and Spline Curves
- Editing Polyline Vertices
- Exploding Polylines
- Drawing Ellipses Using the Center Option
- Drawing Ellipses Using the Axis End Option
- Drawing Isocircles
- Drawing Elliptical Arcs
- Drawing Points
- Understanding Point Styles
- Drawing Splines
- Editing Splines
- Drawing Construction Lines
- Creating Rays
- Creating Regions
- Creating Boundaries
- Creating Revision Clouds
- Creating Wipeouts

Annotation Objects

- Understanding Annotation Object Concepts
- Understanding Annotation Scaling
- Creating Single-Line Text
- Controlling Single-Line Text Justification
- Creating Text Styles
- Modifying Text Styles
- Creating Multiline Text
- Controlling Multi-Line Text Justification
- Editing Text Objects
- Editing Text Objects Using the Properties Palette
- Performing a Spell Check
- Finding and Replacing Text
- Controlling Multiline Text Paragraphs
- Combining Multiple Paragraphs
- Converting Text to Uppercase or Lowercase
- Adding a Background Mask to Multiline Text
- Importing Text
- Importing Text Using Drag-and-Drop and Cut-and-Paste
- Inserting Special Text Characters

- Removing Multiline Text Formatting
- Undoing and Redoing Changes to Multiline Text
- Creating Stacked Text for Fractions
- Controlling Text Editor Settings
- Scaling Text
- Changing the Text Justification
- Creating Tables
- Controlling Table Appearance Using Table Styles
- Editing Text Inside a Table
- Modifying Tables
- Linking Data in Tables
- Working with Fields
- Introducing Hatches and Gradient Fills
- Adding Hatch Objects
- Selecting the Hatch Pattern to Apply
- Setting the Hatch Pattern Layer
- Setting the Hatch Colors and Transparency
- Setting the Scale and Angle of the Hatch Pattern
- Controlling Hatch Pattern Island Detection
- Selecting and Retaining Boundary Objects
- Controlling the Hatch Pattern Gap Tolerance
- Understanding Associative Hatch
- Understanding Annotative Hatch
- Controlling the Hatch Origin
- Creating Separate Hatches
- Matching the Properties of an Existing Hatch
- Controlling Hatch Pattern Draw Order
- Controlling Hatch Settings
- Modifying Existing Hatch Objects
- Adding Gradient Fills
- Adding Hatch Patterns and Gradient Fills Using the Tool Palette
- Introducing Multileaders
- Creating Multileaders
- Changing the Order of Multileader Content Creation
- Selecting Multileader Options
- Adding a Multileader with Block Content
- Controlling the Multileader Style
- Adding and Removing Leaders
- Aligning Multileaders
- Collecting Multileaders
- Editing Multileaders

Modify Objects - Manipulation Commands

- Introducing the Manipulation Commands
- Using the Move Command
- Using the Move Command with Object Snap
- Using the Move Command with Object Snap Tracking from One Point
- Using the Move Command with Object Snap Tracking from Two Points
- Using the Copy Command
- Using the Copy Command with Object Snap
- Using the Copy Command with Object Snap Tracking
- Using the Copy Command with the Array Option
- Using the Mirror Command
- Controlling Text Display with the Mirror Command
- Controlling Hatch Display with the Mirror Command
- Creating a Rectangular Array
- Adjusting Rectangular Array Rows and Columns
- Changing the Properties of Rectangular Arrays
- Editing Array Source Objects
- Removing Items from the Array
- Changing the Angle of Rectangular Arrays
- Creating Associative and Non-Associative Arrays
- Creating a Polar Array
- Adjusting Polar Arrays
- Creating a Path Array
- Changing the Base Point of a Path Array
- Changing the Path of a Path Array

- Replacing Items within an Array
- Using the Rotate Command
- Using the Rotate Command with a Reference Angle
- Using the Offset Command
- Offsetting Polylines with Fillets and Chamfers
- Using the Align Command
- Using the Reverse Command
- Creating and Working with Groups
- Modifying Groups

Modify Objects - Alteration Commands

- Introducing Alteration Commands
- Breaking an Object at One Point
- Breaking an Object Between Two Points
- Understanding Practical Uses for the Break Command
- Using the Trim Command with Pick Selection
- Using the Trim Command with Fence Selection
- Using the Trim Command with Edge Extend Mode
- Using the Extend Command
- Using Extend and Trim Together
- Understanding Practical Uses for the Trim and Extend Commands
- Using the Fillet Command with Fillet Radius
- Adding Fillets to Multiple Segments and Polylines
- Using the Chamfer Command with Distance and Angle
- Adding Chamfers to Multiple Segments and Polylines
- Using the Blend Command
- Using the Stretch Command
- Using the Join Command
- Using the Lengthen Command
- Using the Explode Command
- Deleting Duplicate Objects
- Using the Scale Command
- Using the Scale Command with Scale Reference

Modify Objects - Grips

- Introducing Grip Concepts
- Understanding Grip Status
- Using Grips to Modify Lines
- Using Grips to Modify Arcs
- Using Grips to Modify Hatch Objects
- Using Grips to Modify Polylines
- Using Grips to Modify Splines
- Using Grips to Move Objects
- Using Grips to Mirror Objects
- Using Grips to Rotate Objects
- Using Grips to Scale Objects
- Using Grips to Stretch Objects
- Changing the Base Point While Grip Editing
- Copying Objects While Grip Editing
- Changing the Reference Angle While Grip Editing
- Understanding Practical Applications of Grip Editing
- Changing Grip Option Settings
- Changing Grip Option Selection Modes
- Dragging While Grip Editing
- Moving Objects Using Nudge

2D Parametric Drawings

- Introducing Parametric Drawings
- Displaying Geometric Constraints
- Applying Geometric Constraints
- Applying Coincident Geometric Constraints
- Applying Collinear Geometric Constraints
- Applying Concentric Geometric Constraints
- Applying Fixed Geometric Constraints
- Applying Parallel Geometric Constraints
- Applying Perpendicular Geometric Constraints
- Applying Horizontal Geometric Constraints

- Applying Vertical Geometric Constraints
- Applying Tangent Geometric Constraints
- Applying Smooth Geometric Constraints
- Applying Symmetric Geometric Constraints
- Applying Equal Geometric Constraints
- Removing Individual Geometric Constraints
- Applying Auto Constrain
- Controlling Auto Constraint Settings
- Applying Geometric Constraints Using Inferred Constraints
- Applying Dimensional Constraints
- Applying Linear Dimensional Constraints
- Applying Aligned Dimensional Constraints
- Applying Horizontal Dimensional Constraints
- Applying Vertical Dimensional Constraints
- Applying Angular Dimensional Constraints
- Applying Radius Dimensional Constraints
- Applying Diameter Dimensional Constraints
- Creating Dynamic or Annotational Dimensional Constraints
- Converting Dimensions into Dimensional Constraints
- Controlling Dimensional Constraint Settings
- Showing and Hiding Dimensional Constraints
- Controlling Other Dimensional Constraint Settings
- Avoiding Over-Constrained Geometry
- Understanding the Parameters Manager
- Changing an Expression Using the Parameters Manager
- Adding User Variables Using the Parameters Manager
- Deleting Parameters Using the Parameters Manager
- Changing Dimensional Constraints Using Grip Editing

Dimensioning

- Introducing Dimensioning Object Concepts
- Understanding Associative Dimensions
- Creating Linear Horizontal and Vertical Dimensions
- Creating Linear Aligned Dimensions
- Creating Linear Baseline Dimensions
- Creating Linear Continued Dimensions
- Creating Angular Dimensions
- Creating Angular Baseline Dimensions
- Creating Angular Continued Dimensions
- Dimensioning Circles and Arcs Using Radius and Diameter Dimensions
- Dimensioning Circles and Arcs Using Arc Length Dimensions
- Dimensioning Circles and Arcs Using Jogged Dimensions
- Creating Ordinate Dimensions
- Adding and Modifying Dimension Text
- Changing the Location of Dimension Components
- Adjusting Spacing Between Dimensions
- Breaking Dimension and Extension Lines
- Jogging Dimension Lines
- Dimensioning Multiple Objects Using Quick Dimensions
- Dimensioning Multiple Objects Using Ordinate Quick Dimensions
- Controlling the Appearance of Dimensions Using Dimension Styles
- Creating New Dimension Styles
- Applying a New Dimension Style
- Updating Dimension Styles
- Overriding Dimension Styles Using Properties

Interface Customization

- Introducing Tool Palettes
- Controlling Tool Palette Display
- Using Palette Tools
- Creating Palettes
- Controlling Palette Tool Properties
- Creating Palette Tools for Hatch
- Creating Palette Tools for Blocks
- Creating Palette Tools Using Objects and Fly-outs
- Creating Palette Tools Using DesignCenter
- Customizing the User Interface

- Customizing the Ribbon Tabs
- Customizing the Ribbon Panel
- Adding a Tab and Panel to Workspaces
- Customizing the Quick Properties Palette
- Customizing Rollover Tooltips
- Customizing Menu Search Tags
- Customizing the Quick Access Toolbar

Print and Plot Prep

- Introducing Print and Plot Concepts
- Understanding Model Space and Paper Space
- Choosing a Printer
- Placing a Title Block on a Layout
- Creating Layout Viewports
- Setting a Layout Viewport Scale
- Controlling Viewport Display
- Placing Annotations on a Layout
- Changing the Space of an Object
- Printing the Drawing
- Previewing Plotted Output
- Controlling Plot Options and Orientation
- Viewing Print and Publish Details
- Understanding Plot Style Tables
- Accessing the Plotter Manager
- Plotting Multiple Drawings at Once

Blocks and Attributes

- Understanding Block Concepts
- Creating Blocks from Existing Objects
- Understanding Block Properties
- Changing Block Properties
- Using Blocks within a Drawing
- Using Multiple Blocks at Once
- Exploding Blocks into Objects
- Changing the Insertion or Reference Point
- Understanding Dynamic Blocks Concepts
- Understanding Dynamic Block Examples
- Creating Dynamic Blocks from Existing Blocks
- Adding Parameters to Dynamic Blocks
- Adding Constraints to Dynamic Blocks
- Adding Additional Parameters to Dynamic Blocks
- Changing the Properties of Dynamic Block Parameters
- Changing Dynamic Block Parameters by Using Lists
- Changing the Appearance of Dynamic Blocks
- Adding Additional Constraints to Dynamic Blocks
- Controlling Dynamic Blocks Using Block Tables
- Adding Special Properties to Blocks
- Introducing Attributes
- Adding an Attribute to a Block
- Adding Additional Attributes to a Block
- Controlling the Visibility of Attributes
- Synchronizing Attribute Data
- Managing Attributes
- Extracting Attribute Data from a Drawing
- Dividing and Measuring Using Blocks

External References and Reusable Content

- Understanding Reusable Content Concepts
- Understanding External References Concepts
- Understanding Practical Applications of External References
- Attaching and Detaching External References
- Loading and Unloading External References
- Adjusting the External Reference Path
- Understanding the Difference Between Attachment and Overlay
- Changing the External Reference Attachment Type
- Clipping an External Reference
- Binding and Inserting External References

- Editing Blocks and External References
- Copying Nested Objects
- Working with Images
- Using DesignCenter
- Attaching a DWF File as an Underlay
- Attaching a PDF File as an Underlay
- Attaching a DGN File as an Underlay
- Using Autodesk Seek
- Using Autodesk Content Explorer
- Inserting OLE Objects
- Attaching Hyperlinks
- Using the Geographic Location Settings
- Setting the Geographic Location
- Editing the Geographic Location
- Reorienting the Geo-Marker
- Changing the Latitude or Longitude of the Geographic Marker
- Changing the Current Map View
- Marking Geographic Positions
- Hiding and Displaying the Geographic Marker
- Removing a Location

AutoCAD Utilities

- Removing Unused Items
- Checking the Drawing for Errors
- Changing the Display Order
- Importing Files from Other Programs
- Using the Drawing Recovery Manager
- Recovering Damaged Drawings
- Converting AutoCAD Drawing Files

Command Customization

- Introducing the Action Recorder
- Using Existing Action Macros
- Creating Simple Action Macros
- Editing Action Macros
- Sharing Action Macros
- Creating and Editing Complex Action Macros
- Controlling Action Macro Dialog Settings
- Creating Command Aliases
- Customizing the AutoCorrect List
- Customizing the Synonym List

3D Basics

- Introducing 3D Concepts
- Introducing the 3D Workspace
- Using the ViewCube to View 3D Models
- Using 3D Orbit to View 3D Models
- Using 3D View Presets to View 3D Models
- Using SteeringWheels to View 3D Models
- Using 3D Object Snap
- Understanding Visual Styles
- Understanding 3D Coordinate Systems
- Understanding Dynamic UCS
- Manipulating the User Coordinate System

Creating 3D Objects

- Creating a Solid Box
- Creating a Solid Cylinder
- Creating a Solid Cone
- Creating a Solid Sphere
- Creating a Solid Pyramid
- Creating a Solid Wedge
- Creating a Solid Torus
- Creating 3D Objects by Extruding 2D Objects
- Creating 3D Objects by Revolving 2D Objects
- Creating 3D Objects by Lofting 2D Objects
- Creating 3D Objects by Sweeping 2D Objects

- Creating 3D Objects Using Polysolid
- Creating 3D Objects Using Presspull
- Creating a 3D Mesh Box
- Creating a 3D Mesh Cone
- Creating a 3D Mesh Cylinder
- Creating a 3D Mesh Pyramid
- Creating a 3D Mesh Sphere
- Creating a 3D Mesh Wedge
- Creating a 3D Mesh Torus
- Creating a 3D Revolved Mesh
- Creating a 3D Edge Mesh
- Creating a 3D Ruled Mesh
- Creating a 3D Tabulated Mesh
- Controlling Mesh Primitive Options
- Creating a 3D Helix
- Creating a 3D Polyline

Modifying 3D Mesh Objects

- Introducing Mesh Editing
- Converting Objects into Meshes
- Smoothing More
- Smoothing Less
- Refining a Mesh
- Adding a Crease
- Removing a Crease
- Controlling Mesh Tessellation Options
- Splitting a Mesh Face
- Extruding a Mesh Face
- Merging Mesh Faces
- Creating a Hole in a Mesh
- Closing a Hole in a Mesh
- Collapsing a Face or Edge
- Spinning a Triangle Face
- Converting a Mesh to a Solid
- Converting a Mesh to a Surface
- Deforming a Mesh

Working with Surface Objects

- Introducing Surface Modeling
- Creating a Network Surface
- Creating a Lofted Surface
- Creating a Swept Surface
- Creating a Planar Surface
- Creating an Extruded Surface
- Creating a Revolved Surface
- Creating a Blend Surface
- Creating a Patch Surface
- Creating an Offset Surface
- Filleting a Surface
- Trimming a Surface
- Untrimming a Surface
- Extending a Surface
- Sculpting a Surface
- Converting a Surface into a NURBS Surface
- Editing Control Vertices on a NURBS Surface
- Displaying and Hiding Control Vertices on NURBS Surfaces
- Rebuilding Control Vertices
- Adding Control Vertices
- Removing Control Vertices
- Extracting Isolines
- Projecting Curves onto a Surface
- Performing Surface Continuity Analysis
- Performing Surface Curvature Analysis
- Performing Draft Analysis

Working with Point Clouds

- Introducing Point Clouds

- Creating Point Clouds from Scan Files
- Attaching a Point Cloud
- Controlling Point Cloud Density
- Working with Color Maps to Display Point Cloud Intensity
- Clipping Point Clouds
- Creating Geometry Using Point Clouds
- Starting Autodesk ReCap
- Importing Scan Files
- Saving and Exporting a Project
- Viewing and Navigating in ReCap
- Changing the Appearance of a Point Cloud
- Selecting and Clipping Points
- Limiting Volumes within a Point Cloud
- Working with Scan Regions
- Working with Scan Locations
- Deleting Points
- Adding Dimensions
- Inserting Notes

Modifying 3D Objects

- Using Gizmos
- Using Object Culling
- Mirroring Objects in 3D
- Moving Objects in 3D
- Aligning Objects in 3D
- Rotating Objects in 3D
- Creating a 3D Rectangular Array
- Creating a Stepped 3D Rectangular Array
- Creating a 3D Polar Array
- Creating a Stepped 3D Polar Array
- Creating a 3D Path Array
- Scaling Objects in 3D
- Editing Solid Primitives
- Editing 3D Sub-objects
- Creating Composite Solids Using Boolean Operations
- Creating a Composite Solid Using Boolean Union
- Creating a Composite Solid Using Boolean Subtract
- Creating a Composite Solid Using Boolean Intersect
- Adding a Chamfer to a Solid
- Adding a Fillet to a Solid
- Chamfering Edges of a Solid
- Filleting Edges of a Solid
- Editing Subobjects within Composite Solids
- Extracting Edges from 3D Objects
- Editing Edges of a Solid by Imprinting onto a Solid
- Editing Edges of a Solid by Changing the Edge Color
- Editing Edges of a Solid by Copying Edges
- Editing Faces of a Solid by Extruding Faces
- Editing Faces of a Solid by Tapering Faces
- Editing Faces of a Solid by Moving Faces
- Editing Faces of a Solid by Copying Faces
- Editing Faces of a Solid by Offsetting Faces
- Editing Faces of a Solid by Deleting Faces
- Editing Faces of a Solid by Rotating Faces
- Editing Faces of a Solid by Changing the Color
- Editing Entire Solids by Separating Solids
- Editing Entire Solids by Cleaning Solids
- Editing Entire Solids by Shelling Solids
- Editing Entire Solids by Checking Solids
- Checking Solids for Interference
- Slicing Solids
- Creating a Solid by Thickening a Surface
- Creating Curves by Offsetting Edges
- Creating Sections Using Section Planes
- Adding Jogs to a Section Plane
- Creating and Updating Cross Sections
- Creating Elevations Using Section Planes

- Controlling Section Settings
- Creating a 2D Representation of a 3D Object
- Creating Orthographic Views with Solid View
- Adjusting Orthographic Views with Solid Drawing
- Adding 2D Profile Views with Solid Profile

Model Documentation

- Creating Drawings from 3D Models
- Creating a Base View
- Creating a Base View of a Model Created in Inventor
- Creating a Base View in a Drawing with Multiple Parts
- Creating Projected Views
- Editing Drawing Views
- Creating Section Views
- Creating a Full Section View
- Creating a Half Section View
- Creating an Offset Section View
- Creating an Aligned Section View
- Creating a Section View from an Object
- Creating Cross Section Views
- Changing the Hatch Pattern of a Component in a Section View
- Editing Section Views
- Modifying the Cutting Plane
- Modifying a Section Line Identifier
- Modifying the Section View Label
- Excluding Components from Drawing Views
- Creating Detail Views
- Creating a Circular Detail View
- Creating a Rectangular Detail View
- Modifying Detail Views
- Editing the Detail View Boundary
- Modifying a Detail View Identifier
- Modifying the Detail View Label
- Constraining Drawing Views to Model Geometry
- Controlling the Section View Style
- Controlling the Detail View Style
- Setting the Drafting Standards for Drawing Views
- Updating Drawing Views
- Monitoring Drawing View Annotations

Collaborating with Others

- Exporting to PDF
- Sending Models to a 3D Print Service
- Sending Electronic Transmittal Sets
- Exporting to DWF
- Exporting a Model to a 3D DWF File
- Working with Autodesk 360
- Syncing Your Settings Online
- Choosing Which Settings are Synchronized
- Configuring Online Options
- Saving and Opening Drawings Using Autodesk 360
- Managing Autodesk 360 Documents
- Sharing Documents with Others
- Collaborating Using AutoCAD WS
- Using Design Feed
- Working with Marked-up DWF Files
- Using the Layer Translator
- Configuring Drawing Standards
- Checking for Standards Violations

Rendering

- Introducing Rendering in AutoCAD
- Working with Lights
- Placing a Point Light
- Placing a Spot Light
- Placing a Distant Light
- Placing a Web Light

Working with Sunlight
Controlling the Sky Background and Illumination
Using Luminaire Objects
Controlling the Location and Properties of Lights
Working with Materials
Applying Materials to Objects and Faces
Creating and Modifying Materials
Using Texture Maps
Working with Procedural Maps
Creating Your Own Materials
Saving Materials to a User Library
Adjusting Material Mapping
Creating a Rendering
Setting the Render Destination
Rendering Portions of What You See
Setting the Render Output Resolution
Understanding Rendering Settings
Controlling the Rendering Environment
Placing Cameras and Creating Views
Adding a Background to a View
Saving and Redisplaying Rendered Images
Rendering in the Cloud
Understanding the Render Gallery
Creating Walkthroughs and Flythroughs