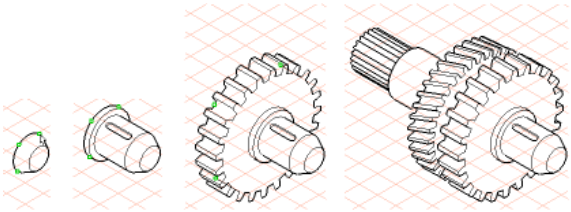
PTC university

Arbortext IsoDraw 7.2 Foundation with CADprocess

Overview

Course Code	TRN-2276–T
Course Length	4 Days

In this course, you will learn the basic and advanced drawing operations of Arbortext IsoDraw. This course emphasizes hands-on experience and a solid foundation in the essential drawing skills and commands needed to produce quality technical illustrations for publications. You will learn how to open, save, and close new and existing documents. You will also learn how to project geometry from one plane to another, and learn how to use the perspective and isometric tools. In addition, you will learn how to automate the creation of technical illustrations from existing 3-D CAD data. Finally, you will learn how to draw and view entities, understand 3-D projections, moves, and rotation and how to use the Objects window.



Course Objectives

- Understand Arbortext IsoDraw basics and fundamental drawing skills
- Understand advanced drawing techniques, annotation, and callouts
- Understand CADprocess and 3-D import options
- Understand 3-D projection and conversion options

Prerequisites

- Basic computer skills in a Microsoft Windows computing environment
- Background or related experience in an Engineering or Technical Publications Department

Audience

- Authors, editors, and illustrators of technical information
- Technical and administrative staff

Agenda

Day 1

Module	1	Arbortext IsoDraw Basic Illustration Process
Module	2	Introduction to Arbortext IsoDraw
Module	3	Fundamental Drawing Skills
Module	4	Intermediate Drawing Skills
Module	5	Composition and Layout

Day 2

Module	6	Advanced Transformation Tools
Module	7	Compound Paths
Module	8	Advanced Drawing Techniques
Module	9	Annotation and Callouts

Day 3

Module	10	Customizing the User Environment
Module	11	Project I
Module	12	Arbortext IsoDraw with CADprocess Illustration Process
Module	13	Introduction to Arbortext IsoDraw CADprocess and 3-D Import Options
Module	14	Selection of Assemblies

Day 4

Module	15	Working within the 3-D Window
Module	16	3-D Projection and Conversion Options
Module	17	Object Information
Module	18	Using the Browser Window
Module	19	Animation
Module	20	Project II

Course Content

Module 1. Arbortext IsoDraw Basic Illustration Process

i. Arbortext IsoDraw Basic Illustration Process

Module 2. Introduction to Arbortext IsoDraw

i. Understanding the Arbortext IsoDraw User Interface
ii. Main Menus
iii. Palette Toolbar and Floating Palettes
iv. The Status Bar and the Workspace
v. Configuring the Status Bar
vi. Drawing Basic Shapes
vii. Drawing Lines
viii. Drawing Rectangles
ix. Drawing Ellipses
x. Drawing Bézier Paths
xi. Using Delete Functions

Knowledge Check Questions

Module 3. Fundamental Drawing Skills

i. Applying Transformations and Manipulations
ii. Using the Double Arrow
iii. Deleting Hidden Lines
iv. Applying Thick and Thin Pens
v. Moving Elements
vi. Creating Concentric Ellipses
vii. Manually Modifying Ellipse Values
viii. Grouping Elements
ix. Scaling Elements
x. Drawing Polygons
xi. Drawing a Hexagon Head
xii. Converting Ellipses to Inner and Outer Threads

Knowledge Check Questions

Module 4. Intermediate Drawing Skills

i. Using the Attributes Window
ii. Toggling Grids
iii. Adding Elements to Create Complex Shapes
iv. Centering Elements Using the Align Operation
v. Converting Elements
vi. Ungrouping Elements
vii. Understanding Tangent Tools
viii. Using the Fillet Tool

ix. The Tangent to a Point Tool
x. The Tangent to an Ellipse Tool
xi. The Chamfer Tool
xii. Subtracting Elements
xiii. Inserting Deletion Points
xiv. Calculating Bore Positions
xv. Project from One Plane to Another
xvi. Perspective Rotation
xvii. Drawing Additional Connecting Lines
xviii. Applying Appropriate Pens to Ellipses
xix. Rotating Elements

Knowledge Check Questions

Module 5. Composition and Layout

i. Fitting Elements
ii. Aligning Elements
iii. Distributing Elements

Knowledge Check Questions

Module 6. Advanced Transformation Tools

i. Creating the Flange End of the Pipe
ii. Calculating the Pipe Bend
iii. Performing the Find Ellipse Operation
iv. Using Projection Tools
v. Project from One Plane to Another
vi. Using Wrapping Tools
vii. Using Penetration Tools
viii. Accessing the Projection Window
ix. Using the Parallel Paths Tool
x. Adding Depth to the Flange Ends of the Pipe
xi. Configuring the Profile for Transformation
xii. Using the Rotational Surfaces Tool
xiii. Creating Paths Automatically
xiv. Applying Color Fills to Paths
xv. Arranging Elements from Front to Back
xvi. Creating a Pipe Joint
xvii. Creating a Hexagon Plug
xviii. Drawing Center Lines

Knowledge Check Questions

Module 7. Compound Paths

i. Understanding Compound Paths
ii. Configuring a Compound Path

iii. Extruding a Compound Path
iv. Using Basic Layer Operations
v. Creating an Advanced Compound Path
vi. Creating an Outer Contour
vii. Creating an Inner Contour
viii. Converting Multiple Paths into a Compound Path

Knowledge Check Questions

Module 8. Advanced Drawing Techniques

i. Advanced Drawing Techniques
ii. Best Practices for Creating a Compound Path
iii. Configuring a Complex Compound Path
iv. Joining Polylines
v. Applying Advanced Selection Techniques
vi. Extruding a Profile to Match a Custom Grid
vii. Applying 3D Transformation
viii. Creating Complex Shafts
ix. Using the Shear Tool to Modify Elements

Knowledge Check Questions

Module 9. Annotation and Callouts

i. Applying Callouts Manually
ii. Using the Callout Tool
iii. Renumbering Callouts
iv. Connected Callouts
v. Modifying Callout Style
vi. Selecting Elements Based on Criteria
vii. Generating Callouts for Groups and Objects
viii. Options for Generating Callouts
ix. Applying Dimensions to an Illustration
x. Applying Linear Dimensions
xi. Applying Angular Dimensions
xii. Applying Radii Dimensions
xiii. Applying Diameter Dimensions

Knowledge Check Questions

Module 10. Customizing the User Environment

i. Customizing Toolbars
ii. Creating Custom Toolbars
iii. Adding Functionality to Toolbars
iv. Docking Toolbars
v. Configuring the Library Window
vi. Understanding the Structure of the Library Window

vii. Inserting Library Parts Automatically
viii. Inserting Favorites
ix. Creating Custom Library Parts
x. Library Parts File and Folder Structure
xi. Creating a Template
xii. Defining Preferences
xiii. Defining the Drawing Sheet
xiv. Defining Distances for Thread Turns
xv. Defining Dimension Preferences
xvi. Defining Miscellaneous Preferences
xvii. Defining a Drawing Frame in the Template File
xviii. Defining Attributes in the Template File
xix. Performing a Visual Check for the Template File
xx. Defining Layers in the Template File
xxi. Saving the File as a Template

Knowledge Check Questions

Module 11. Project I

i. Project Lab: Drawing a Cut-Away Cylinder

Module 12. Arbortext IsoDraw with CADprocess Illustration Process

i. Arbortext IsoDraw with CADprocess Illustration Process

Module 13. Introduction to Arbortext IsoDraw CADprocess and 3-D Import Options

i. Determine the Workflow From 3-D to 2-D
ii. Identifying Solid Model Types
iii. Configuring Preferences: 3-D Options
iv. 3-D Options: Smooth Rendering Preferences
v. 3-D Options: Tesselation Accuracy Preferences
vi. Understanding 3-D Options Preferences
vii. Configuring IGES Import Options
viii. Configuring More IGES Options
ix. Configuring IGES Entity Options

Knowledge Check Questions

Module 14. Selection of Assemblies

i. Enabling the Select Assemblies Option
ii. Reading Structures within an IGES File
iii. Using the Selection of Structures Window
iv. Reading Structures from an XML File
v. Exploring Methods for Importing Sub-Assemblies

Knowledge Check Questions

Module 15. Working within the 3-D Window

i. Using the Window Menu
ii. Using the Palette Toolbar
iii. Working with Objects
iv. Using Redraw to Refresh the Screen
v. Using Functions within the 3D Tools Toolbar
vi. 3-D Axes Tools
vii. 3-D Move Tools
viii. Rotating Components
ix. 3-D Composition Tools
x. Using 3-D Transparency Tools to Create Phantom Effects
xi. Converting to a 2-D Illustration
xii. Using 3-D Cut Tools to Create Cut-Away Effects
xiii. Using the Spacebar to Reposition Images
xiv. Duplicating a Surface
xv. Converting a Surface to 2-D as Wireframe

Knowledge Check Questions

Module 16. 3-D Projection and Conversion Options

i. Placing Files
ii. Applying 3-D Projections
iii. Applying 3D Transformation
iv. Applying 3-D Projections: Keep 3D Data Option
v. Applying 3-D Projections: Shaded Option
vi. Applying 3-D Projections: As Wireframe Option
vii. Applying 3-D Projections: Remove Hidden Lines Option
viii. Remove Hidden Lines Options
ix. Using Advanced Layer Operations
x. Removing Hidden Lines Using the Thin Line Threshold
xi. Smooth Surface Accuracy
xii. Removing Transparency
xiii. Combining 3-D Projections to Create Special Effects
xiv. Breaking Links to Placed Files

Knowledge Check Questions

Module 17. Object Information

i. Creating Object Information
ii. Accessing Object Information
iii. Definition of Objects
iv. Identifying Components
v. Applying Hotspots
vi. Using Object Information to Generate Callouts Automatically
vii. Generating Callouts to a Specific Level of Depth

viii. Generating Callouts from Object Names
ix. Generating Callouts from an Object List
x. Generating Connected Callouts from a BOM
xi. Using Functions in the Objects Menu
xii. Using the Objects Window
xiii. Using Layers with Objects
xiv. Saving Layers Using the Write Layers Operation
xv. Importing Layers Using the Read Layers Window
xvi. Using File Formats that Support Object Information
xvii. Using Companion Files

Knowledge Check Questions

Module 18. Using the Browser Window

i. Configuring the Browser Window
ii. Using the Browser Window
iii. Finding Objects
iv. Using the Browser Window to Paste Files
v. Applying Threads to a Pasted File
vi. Using the Browser Window to Place Files
vii. Applying Threads to a Placed File
viii. Managing and Updating Placed Files
ix. Pasting Files versus Placing Files
x. Restrictions for Working with 2-D and 3-D Data

Knowledge Check Questions

Module 19. Animation

i. Creating an Animation Sequence
ii. Accessing Animation Capability
iii. Edit Animation Sequence Settings and Options
iv. Edit Animation Step Settings and Options
v. Edit Animation Window Transformation Settings
vi. Edit Animation Window Flyout Menu Settings
vii. The Timeline Window
viii. Exploding Hidden Components
ix. Animating a Rotation Sequence
x. Animating a Change in Color
xi. Playing a 3-D Animation Sequence

Knowledge Check Questions

Module 20. Project II

i. Project Lab: Create a Cut-Away Illustration Using 3-D Tools