

## Technical Education Services

### Autodesk Factory Design Utilities Essentials

#### Course Length: 4 days

The Autodesk Factory Design Utilities Essentials course instructs users in the best practices of developing a factory layout consisting of architectural elements and manufacturing assets. The course is an introduction to the basic practices and principles for each of the applications that utilize the Autodesk Factory Design Utilities. The Autodesk Factory Design Utilities are utilized in the following Applications:

- AutoCAD Architecture
- Autodesk Inventor
- The Autodesk Factory Design Utilities
- Autodesk Navisworks

Specific instruction is given to each of the four applications as a factory facility layout is designed from the ground up. This course is designed for new or novice users to develop a general understanding of the factory layout process used by the Autodesk Factory Design Utilities. It is not designed to deliver complete training in any of the core applications, but to instruct users in the applicable commands generally used in factory layout design.

#### Prerequisites:

- As an introductory course, Autodesk Factory Utilities Essentials, does not assume prior knowledge of any 3D modeling or CAD software.
- Students do need to be experienced with the Windows operating system and a background in drafting of 3D parts is recommended.
- A familiarity with basic AutoCAD commands is assumed.

*Topics, curriculum, and/or prerequisites may change depending on software version.*



## Training Guide Contents

### Chapter 1: Autodesk Factory Design Utilities

- Core Products
- AutoCAD Architecture
- Inventor Factory Design Utilities
- Navisworks

### Chapter 2: AutoCAD Architecture Basics

- Understanding the Concept
- Ribbon Overview
- Application Menu
- Tools and Tools Palettes
- Content Browser

### Chapter 3: Creating the Shell

### Chapter 4: Creating Interior Features

### Chapter 5: Autodesk Inventor Getting Started

- Autodesk User Interface
- Geometric Constraints
- Dimension Sketches

### Chapter 6: Basic Sketching Techniques

- Creating 2D Sketches
- Intermediate Sketching
- Dimensioning Sketches

### Chapter 7: Basic Shape Design

- Creating Basic Sketched Features
- Intermediate Sketching
- Editing Parametric Parts
- Using Parameters
- Create Work Features

### Chapter 8: Detailed Shape Design

- Creating Chamfers and Fillets
- Creating Holes and Threads
- Patterning and Mirroring Features

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### **Chapter 9: Creating Layouts and Placing Assets**

- Factory User Interface – Getting Started
- Placing Factory Assets
- Inserting a Model
- Reposition Components
- Aligning Components
- Modify Asset Properties

### **Chapter 10: Factory Asset Publishing**

- Asset Creation
- Defining Key Parameters
- Publishing Assets

### **Chapter 11: Workflow and Best Practices**

- Using Project Files for Factory Design
- Factory Templates
- Supporting Directories
- Workflow – Divide and Conquer
- Best Practices

### **Chapter 12: Basic View Creation**

- Drawing Creation Environment
- Base and Projected Views
- Section Views
- Detail Views
- Crop Views
- Dimensions, Annotation, and Parts Lists
- 2D Drawings and AutoCAD Interoperability

### **Chapter 13: Navisworks Getting Started**

- User interface
- Workflow
- Publishing an NWD File

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### Chapter 14: Visualization/Digital Mockup

- Navigation
- Viewpoints
- Animations
- Digital Mockup
- Factory layout Tools
- Item Tools
- Measuring Tools
- Cross Section Tools
- TimeLiner

### Chapter 15: Interference/Collaboration

- Clash Detection
- Selection Tree and Selecting Objects
- Point Cloud Data Clashing
- Collaboration
- Redline Tools
- Export Data

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## Cancellation Policy

The following cancellation policy shall apply to all training engagements, Live Online, Consulting Services and Dedicated/Custom Training:

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.
- For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, the Customer is entitled to a full refund of its payment or reschedule enrollment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.
- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company's Training Coordinator ([trainingcoordinator@rand.com](mailto:trainingcoordinator@rand.com))
- For all Training orders, cancellation notices must be submitted to [trainingcoordinator@rand.com](mailto:trainingcoordinator@rand.com). Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

To request more information or to see training locations, visit [www.imaginit.com/contact-us](http://www.imaginit.com/contact-us).

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