



AUTODESK FUSION 360 ESSENTIAL TRAINING

Objectives

The main objective of this course is to guide new users in the use of the Autodesk® Fusion 360 software. After completing this course users will be able to:

- ✓ Understanding the Autodesk Fusion 360 interface
- ✓ Creating, constraining, and dimensioning 2D sketches
- ✓ Creating and editing solid 3D features
- ✓ Creating and using construction features
- ✓ Creating equations and working with parameters
- ✓ Manipulating the feature history of a design
- ✓ Duplicating geometry in a design
- ✓ Placing and constraining/connecting components in a single design file
- ✓ Defining motion in a multi-component design
- ✓ Creating components and features in a multi-component design
- ✓ Creating and editing T-spline geometry
- ✓ Documenting a design in drawings
- ✓ Defining structural constraints and loads for static analysis

Pre-requisites

This guide is designed for new users of Fusion 360. It is recommended that you have a working knowledge of:

- Microsoft® Windows® 7, Microsoft® Windows® 8 or Microsoft® Windows® 10
- Background in drafting of 3D parts.

Chapter 1: introduction to Autodesk Fusion 360

- Autodesk Fusion 360 Fundamental
- Getting Started
- Autodesk Fusion 360 Interface
- Design Navigation & Display

Chapter 2: Creating the First Feature with Quick Shapes

- Design Units and Origin
- Quick Shape Creation

Chapter 3: Creating Sketched Geometry

- Introduction to the Sketching Workflow
- Sketch Entities
- Dimensioning
- Sketch Constraints
- Extruding a Sketch
- Revolving a sketch

Chapter 4: Additional Sketching Tools

- Additional Entity Tapes
- Editing Tools
- Additional Dimension Tools
- Moving and Copying
- Rectangular Sketch Patterns
- Circular Sketch Patterns

Chapter 5: Sketched Secondary Features

- Sketched Secondary Features
- Using Existing geometry

Chapter 6: Pick & Place Features

- Fillets
- Chamfers
- Holes
- Editing Pick and Place Features

Chapter 7: Construction Features

- Construction Planes
- Construction Axes
- Construction Points

Chapter 8: Equation and Parameters

- Equations
- Parameters

Chapter 9: Additional Features and Operations

- Draft
- Shell
- Rib
- Split Face
- Scale
- Thread
- Press Pull

Chapter 10: Design and Display Manipulation

- Reordering Features
- Inserting Features
- Suppressing Features
- Measure and Section Analysis
- Direct Modeling

Chapter 11: Single Path Sweeps

- Sweeps

Chapter 12: Loft Features

- Lofts

Chapter 13: Feature Duplication Tools

- Mirroring Geometry
- Patterning Features

Chapter 14: Distributed Design

- Assembly Design Methods
- Distributed Design
- Joint Origins
- Assigning Joints

Chapter 15: Component Design Tools

- Rigid Group
- Interference Detection
- Miscellaneous Joint Tools

Chapter 16: Multi-Body Design

- Multi-Body Design
- Multi-Body Design Tools
- Components
- As-Built Joints

Chapter 17: Sculpting Geometry

- Introduction to the Sculpt Environment
- Surface Quick Shapes
- Creating Sketched T-Spline Surfaces
- Creating Faces & Filling Holes

Chapter 18: Editing Sculpted Geometry

- Editing Form Geometry
- Deleting Entities
- Working with Edges
- Working with Faces
- Working with Points
- Controlling Symmetry
- Thickening Geometry

Chapter 19: Drawing Basics

- Creating a New Drawing
- Additional Drawing views
- Exploded Views
- Manipulating Drawings

Chapter 20: Detailing Drawings

- Dimensions
- Other Annotations
- Parts List and Balloons
- Annotation and Dimension Settings
- Drawing Output

Chapter 21: Static Analysis Using the Simulation Environment

- Introduction to the Simulation Environment
- Setting up a Structural Static Analysis
- Setting up the Mesh
- Solving a Design Study
- Visualizing the Results