KOENIG
step forward

AUTODESK
Authorized Training Center

Autodesk Fusion 360

Target Audience

This course is designed for product designers, engineers, and manufacturing professionals who want to leverage Autodesk Fusion 360 for 3D modeling, simulation, and collaborative product development. It is ideal for beginners and professionals transitioning to cloud-based CAD/CAM/CAE tools.

Course Objective

The objective of this course is to equip participants with the skills to design, simulate, and document 3D models, while utilizing Fusion 360's integrated tools for collaborative product development and digital prototyping.

Course Outcome

- Learn to navigate the Fusion 360 interface and create parametric 3D models with precision.
- Develop skills in assembling components and analyzing motion and interference in designs.
- Understand how to perform simulations for stress, thermal, and motion analysis to optimize designs.
- Gain proficiency in generating technical drawings, rendering models, and preparing designs for manufacturing using CAM tools.

Course Outline: The course comprises **40-hours** of theory and labs and is divided into **14** different chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Chapter 1. Introducing Fusion 360

Chapter 2. Drawing Sketches with Autodesk Fusion 360

Chapter 3. Editing and Modifying Sketches

Trimming Sketch Entities
Extending Sketch Entities
Offsetting Sketch Entities
Creating Construction Entities
Mirroring Sketch Entities
Patterning Sketch Entities
Creating a Sketch Fillet
Creating a Sketch Chamfer
Scaling Sketch Entities
Breaking Sketch Entities

Chapter 4. Applying Constraints and Dimensions

Working with Constraints
Applying Constraints
Controlling the Display of Constraints
Applying Dimensions
Modifying/Editing Dimensions
Working with Different States of a Sketch
Working with SKETCH PALETTE

Chapter 5. Creating Base Features of Solid Models

Creating an Extrude Feature
Creating a Revolve Feature
Navigating a 3D Model in Graphics Area

Chapter 6. Creating Construction Geometries

Creating a Construction Plane
Creating a Construction Axis
Creating a Construction Point

Chapter 7. Advanced Modeling - I

Using Advanced Options of the Extrude Tool
Using Advanced Options of the Revolve Tool
Working with a Sketch having Multiple Profiles
Projecting Edges onto a Sketching Plane
Creating 3D Curves

Chapter 11. Working with Assemblies - I

Working with Bottom-up Assembly Approach
Working with Top-down Assembly Approach
Creating an Assembly by Using Bottom-up Approach
Inserting Components in a Design File
Fixing/Grounding the First Component
Working with Degrees of Freedom
Applying Joints
Editing Joints
Editing Joint Limits
Animating a Joint
Animating the Model
Locking/Unlocking the Motion of a Joint
Driving a Joint
Defining Relative Motion between Two Joints
Grouping Components Together
Enabling Contact Sets between Components
Capturing the Position of Components

Chapter 12. Working with Assemblies - II

Creating an Assembly by Using Top-down Approach
Creating Components within a Design File
Creating Features of an Empty Component
Fixing/Grounding the First Component
Applying As-Built Joints
Defining a Joint Origin on a Component
Editing Assembly Components

Chapter 13. Creating Animation of a Design

Invoking the ANIMATION Workspace
Capturing Views on the Timeline
Capturing Actions on the Timeline
Customizing Views and Actions on the Timeline
Deleting Views and Actions of a Storyboard
Creating a New Storyboard
Toggling On or Off Capturing Views
Playing and Publishing Animation

Chapter 14. Working with Drawings

Invoking the DRAWING Workspace
Creating the Base View of a Design
Creating Projected Views
Working with the Angle of Projection
Defining the Angle of Projection
Defining Drawing Preferences
Editing Document and Sheet Settings
Editing and Inserting a New Title Block
Creating Auxiliary Views
Creating Section Views
Creating Detail Views
Creating Break Views
Creating an Exploded Drawing View
Invoking DRAWING Workspace From Animation
Editing Properties of a Drawing View
Editing Hatch Properties of a Section View
Creating a Sketch
Moving a Drawing View
Rotating a Drawing View
Deleting a Drawing View
Adding Geometries in Drawing Views
Applying Dimensions
Editing a Dimension
Arranging Dimensions
Breaking Dimension Lines
Adding Text/Note
Adding Text/Note With Leader
Adding the Surface Texture Symbol
Creating the Bill of Material (BOM)/Part List
Adding Balloons Manually
Renumbering Balloons
Adding Drawing Sheets
Creating a New Drawing Template
Exporting a Drawing