

Course: Autodesk Fusion 360

Course Description

Fusion 360 is the first 3D CAD, CAM, and CAE tool of its kind. It connects your entire product development process in a single cloud-based platform. It combines industrial and mechanical design, simulation, collaboration, and machining in a single package. The tools in Fusion 360 enable fast and easy exploration of design ideas with an integrated concept-to-production toolset. This course is designed for the new aspirants as well as for existing users to sharpen their skills/knowledge of Fusion 360.

Class and Lab hours:

30 Hours

Prerequisite:

Need to be an engineer with basic knowledge of Modelling tools.

Course Objectives

Basic and Intermediate training course

Introduction to Fusion 360

Fusion 360 interface

Data Management and collaboration

Modelling

Creating 2D sketch

Dimensioning and constraints

Concept of fully defined, under defined and over constraint sketches

3D Modelling

Basic Extrude and Revolve features

Concept of adding and removing 3D features

Use of basic Measuring tools

Construction of Planes

Advanced 3D modelling tools (Sweep, loft)

Pre defined 3D features

Pattern and Mirror

Modifying tools for a 3D features

Editing Using Timeline

Surface Modelling Using Patch Module

Create Surface Tools
Modify Surface tools

Render

Adding Material Properties (Manage Materials)
Render Setup
Offline Rendering and Cloud Rendering

Create Drawing

Setting Drawing Sheet Information
Drawing Views
Dimensions and Geometry
Text, Symbols and Tables

**Advanced training course -- hr
Assembly**

Concept of Body and Component
Use of Joints in Fusion 360
As-built Joints
Motion Study
Rendering of Motion Study pf Assembly

Sculpt Module

Create Forms
Edit Forms
Symmetry tools
Convert form to body

Sheet Metal

Basis of Sheet Metal Design

Create toolpath in CAM workspace

CAM Setup
2D machining
3D Machining
Turning
Basic of Multi axis

Simulation

Creating Mesh
Structural Constraints and Loads
Static Stress analysis

Evaluation:

There will be one exam that every trainee/student must pass with at least 75% or more to get a certificate of completion from BIMNCAD.

Suggested Learning Approach

In this course, you will study individually or within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

BIMNCAD Syllabus