



## Fusion 360 Essentials for Existing 3D CAD Users

### Course Length: 1 Day

This course is designed for users that are new to Fusion 360 but have a strong working knowledge in other 3D CAD applications. In this course students will learn the fundamental functions required to quickly get started using Fusion 360 to create part designs and associated documents.

### Prerequisites:

Students must have a basic knowledge of designing in a 3D CAD application such as Inventor or Inventor Pro, or similar products. Students should have a solid understanding of common 3D CAD functions like creating sketches, features and part level design.

This hands-on training class will also include assembly design and documentation.

Course description shown for Autodesk Fusion 360. Topics, curriculum, and/or prerequisites may change depending on software version.

## Learning Guide Contents

### 1. Create an account if not already created (The process)

- Create accounts for all users in the workshop if not already done
- User Name
- Password
- Account GUI

### 2. Understanding GUI and navigation

- Graphical Interface
- How to Pan, Zoom, Orbit
- How to select things
- Application bar
- Tool bar
- Data panel
- Browser
- Marking menu

### 3. Create a project and folders

- Create the Workshop Project
- "Basic Fusion 360 Workflow"
- Create two folders
- "Download"
- "Design"

### 4. Download files provided for the workshop

- Download part files to the Design folder, that will be used in the design later
- Parts and Names still to be decided

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### 5. Create a Base Feature and two secondary features for one part

- Save the initial file in the Design folder
- Create a design with the base feature, a join feature and a subtract feature
- Create a “Base” Box Feature
- Provide Dimensions

### 6. Create additional features/ solids for creating as a part files

- Create some additional features for a second part
- Create a Sketch Feature to Revolve with a Cut
- Create a Projected Feature using an Offset to Extrude with an Intersect
- Create a second solid from multiple features
- Create the second solid into a saved part file
- Show the difference between the first solid and the new part from the second solid

### 7. Add Constraints to the parts

- Show how joints work with the parts to assemble them together, animate to show function
- Add joints to constraint the part and the solid together
- Edit the joint limits
- Animate to show the limits

### 8. Add a downloaded part to the file

- Add one of the downloaded parts to the file to be constraint
- Add joints to constraint the new part to the assembly

### 9. Patterns at sketch, feature and part level

- Open a file to pattern a sketch
- Undo the pattern and extrude the sketch profile
- Pattern the feature
- Bring in second part
- Pattern the Part to the Pattern Feature

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## 10. Add an assembly to another assembly

- Start a new Assembly
- Insert downloaded part and Ground it
- Add a downloaded assembly as a sub-assembly
- Constraint the sub-assembly to the grounded part file
- Copy the sub-assembly two more times and constraint to the grounded part in other locations

## 11. How to apply materials and appearances

- Add Material to parts
- Add appearances to faces and features
- How to create custom materials and appearances
- How to save variations of materials to show on the part

## 12. Insert 3D Geometry and Graphics:

- 3D geometry
- Decals
- Attached Canvas

## 13. How to Inspect:

- Measure
- Interference analysis
- Zebra analysis
- Draft analysis
- Component Color cycling

## 14. How to setup a library of parts

- Add the part file used for the pattern and place in a Library folder for future use.
- Replace the part file in the assembly with the part file now in the library.

## 15. Drawings and Annotation

- Create a drawing from an open assembly
- Annotate with title block, notes and dimensions
- Create another drawing and drop a base view of an unopened part file

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## 16. How to remove data

- How to delete files and folders from a project
- How to archive a project

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- 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.
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