

CP322761

A Journey of Discovery with FDM Printing and Fusion 360

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Learning Objectives

1. Explore the design considerations and conception process from an engineering standpoint
2. Learn about the limitations discovered during the design and modeling process, and the alternative workflows
3. Learn how to model by exploring the design considerations and conception process from an engineering standpoint
4. Explore how printing with FDM 3D printers affected the design and learn how to anticipate printing requirements

Description

In this class, we'll explore the journey one person has taken to create numerous 3D prints and designs—with a case study of two specific, very popular, 3D-printed designs—using Fusion 360 software and other Autodesk tools. These designs help demonstrate the value of Fusion 360 software's multiple workspaces, while requiring the user to find alternative workflows to overcome some limitations. Both projects are 3D-printable items that can be printed on most home 3D printers or through any commercial service. Come and share my experience.

Speaker(s)

I am an Enterprise Support Specialist at Autodesk specializing in AutoCAD, AutoCAD Plant 3D, AutoCAD P&ID, Navisworks, Vault, Fusion 360 and little in BIM 360. I have worked in as an industrial steam plant (boiler) design draftsman as well as in the Oil and Gas industry (Refining) as a Piping Design Draftsman for over 19 years in industry where we worked on all manner of projects. The scope and variety of the work required that I be flexible in what I worked on, while I spend most of the time as a piping design draftsman, I have also taken on roles as System Administrator and Trainer for the design team. In addition to piping design, I have also worked as a draftsman and designer in most disciplines, ranging from electrical schematics to structural arrangements and details to concrete details, fabrication design and even a small portion of Automotive body design. I developed an interest in 3D Printing in the last few years which supports my long history of desire to make and build.

Links and Resources:

Autodesk ADDITIVE MANUFACTURING Image
Available at: <https://www.autodesk.com/solutions/additive-manufacturing>

<https://www.3dhubs.com>

<https://www.3dhubs.com/knowledge-base/how-design-parts-fdm-3d-printing/#advanced-design>

TRex Tape Dispenser:

Model on Thingiverse: <https://www.thingiverse.com/thing:3098020>

Model in Fusion 360 Gallery: <https://gallery.autodesk.com/projects/131829/t-rex-tape-dispenser>

Build example Video: <https://youtu.be/Muhmd0leNHY>

Dehumidifier Designs:

<https://www.thingiverse.com/thing:3930621>

<https://www.thingiverse.com/thing:3930725>

<https://www.thingiverse.com/thing:3930740>

Further Reading and Learning Resources:

[Autodesk Knowledge Network](#)

[Fusion 360 Help](#)

[Autodesk University Online](#)

[Self-paced learning for Fusion 360](#)

YouTube

[Autodesk Fusion 360](#)

[Maker's Muse](#)

[Lars Christensen](#)

[CNC Kitchen](#)

[3D Printing Nerd](#)

[Design Considerations for FDM Additive ... - Stratasys](#)

[3d Hubs Knowledge Base - https://www.3dhubs.com/knowledge-base/](https://www.3dhubs.com/knowledge-base/)