AUTODESK UNIVERSITY

MFG125527-L

CAM Certificate 4 of 5: Multi-Axis

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Learning Objectives

- Application of advanced CAM concepts to complex geometry
- How and when to use Wrapped toolpaths
- How and when to use 3+2 toolpaths
- How and when to use simultaneous 5-axis toolpaths

Description

This class will cover the core concepts of multi-axis programming in Fusion 360 software, including positional and simultaneous 5-axis—areas of the CAM workspace that can add significant value, but are often ignored for the more accessible 2D and 3D toolpaths. Pick up tips, tricks, and best practices from product experts. Attendees should expect to learn full multi-axis workflows, including generating, containing, and controlling complex toolpaths.

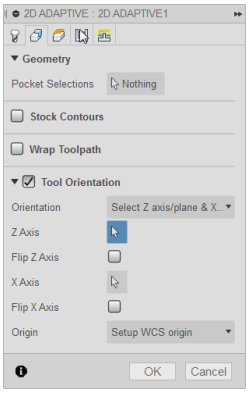
Speaker(s)

Autodesk CAM Product Manager. I am based out of the Autodesk Pier 9 Workshop and spend my days pushing the limits of our CAM software.

Multi-Axis Setup

The normal Setup command can be used when creating a setup for multi-axis operations, especially when taking advantage of Fusion 360's model awareness.

Positional Multi-Axis

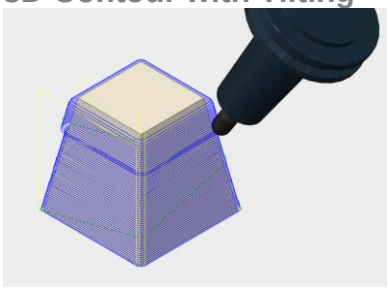


Any toolpath can become a positional multi-axis toolpath by checking the Tool Orientation box in the Geometry Tab.

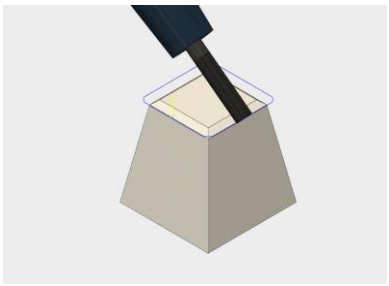
Simultaneous 5-Axis

While most features and necessary geometry can be created using 3+2 strategies, Fusion 360 also has simultaneous 5-axis capabilities.

3D Contour with Tilting



Swarf



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Additional Resources

Fusion 360 Adoption Content

Positional Multi-Axis: http://f360ap.autodesk.com/courses/positional-multi-axis

Fusion 360 YouTube Videos

Wrap Toolpath: https://www.youtube.com/watch?v=NpUxAm_ybkQ

Swarf Toolpath: https://www.youtube.com/watch?v=cHVfTIhosC0
https://www.youtube.com/watch?v=w_GjjzlG4b0