

# Fusion CAM and CNC Essentials

## Training course outline



Autodesk Fusion's integrated CAM functionality brings enterprise-class machining capabilities to the desktop.

*Fusion CAM and CNC* training teaches how to output your Fusion models to CNC.

You'll learn to create CNC strategies, create a CAM setup, plot toolpaths, simulate and post process them to G-code to program your CNC machine.



### Course summary

Sessions include:

- Creating a suitable CAM setup
- Designing fixtures
- Tool path strategy
- Creating a tool library
- Drilling
- 2/2.5 axis milling
- 3D milling
- Turning
- Multi axis (4 and 5) milling – a high-level introduction
- Patterns and templates
- Post processing

### Duration

Two days.

### Who should attend?

Existing Autodesk Fusion users who want to start exporting their Fusion models to their CNC machine.

### Prerequisites

Delegates should be familiar with the fundamentals of Fusion, i.e. the topics covered in our *Fusion Essentials* course (see [armada.co.uk/fusion/syllabus](http://armada.co.uk/fusion/syllabus)).

### Windows or Mac

Fusion works similarly running on a Windows computer or Mac, and our course is suitable for users of both platforms.

If you attend a course in-class, you can choose to use a Windows computer or a Mac to practice the techniques taught.

### In-class or live online

You can attend in-person at our centres, or participate live online from your place of work or home.

To read about our approach to online training, see [armada.co.uk/liveonline](http://armada.co.uk/liveonline).

### General information

Armada is a long-standing Autodesk authorised Training Centre (ATC), and our *Fusion CAM and CNC Essentials* courses are accredited by Autodesk.

Courses are hosted by Autodesk Certified Instructors (ACIs) with vast experience of using Fusion professionally.

### Course materials and certificate

You'll receive:

- A comprehensive training guide and practice files.
- An e-certificate confirming successful completion of an accredited *Fusion CAM and CNC Essentials* course.

### After course support

Following training, you're entitled to 30 days' email support from your trainer.

### Further information

For prices, dates and further details, see [armada.co.uk/course/fusioncamcnc](http://armada.co.uk/course/fusioncamcnc) or scan the QR code above.

### Course syllabus

See over.

### Other Fusion courses

- *Fusion Essentials* (2 days).
- *Fusion Intermediate* (2 days).
- *Fusion Advanced* (2 days).
- *Fusion CAM and CNC Advanced* (2 days).
- *Fusion Sheet Metal Design* (1 day).
- *Fusion Technical Drawings* (1 day).
- *Fusion Additive Manufacturing* (2 days).
- *Fusion Simulation and FEA Stress Analysis* (1-3 days).
- *Fusion Generative Design* (2 days).

# Course syllabus

Session	Topics
<b>Creating a CAM setup</b>	<ul style="list-style-type: none"> <li>Exploring the Fusion CAM environment</li> <li>Creating a job setup</li> <li>Configuring tools and stock material</li> <li>Creating and using tools in the library</li> <li>Defining toolpaths for a variety of cut types.</li> <li>Holding the components</li> </ul>
<b>Designing fixtures</b>	
<b>Tool Path Strategy</b>	
<b>Creating a Tool Library</b>	
<b>Drilling</b>	
<b>2/2.5 Axis Milling</b>	<ul style="list-style-type: none"> <li>Drilling and hole making</li> <li>Contouring</li> <li>Pocket</li> <li>Facing</li> <li>Adaptive clearing</li> </ul>

Session	Topics
<b>3D Milling</b>	<ul style="list-style-type: none"> <li>Parallel</li> <li>Contour</li> <li>Horizontal clearing</li> <li>Pencil</li> <li>Scallop/constant stepover</li> <li>Spiral</li> <li>Morphed spiral</li> <li>Radial</li> <li>Pocket</li> <li>Adaptive clearing</li> </ul>
<b>Turning</b>	<ul style="list-style-type: none"> <li>Turning profile</li> <li>Turning groove</li> <li>Turning face</li> <li>Turning single groove</li> <li>Turning chamfer</li> <li>Turning part</li> <li>Turning thread</li> </ul>
<b>Multi Axis (4 and 5) Milling</b>	A high-level introduction to milling and drilling on compound faces
<b>Patterns and Templates</b>	
<b>Post Processing</b>	<ul style="list-style-type: none"> <li>Introduction to posts</li> <li>Exporting G-code for your CNC machine</li> <li>Setup sheets</li> </ul>