



SolidCAM

The Ecosystem for Digital Manufacturing

Training Course Overview



CAD Courses

SolidWorks for SolidCAM (1 Day)

No Pre-requisites

This course is designed as an introduction to SolidWorks CAD specifically for use in a CAM environment. It is suitable beginners and programmers looking for a refresher course.

- SolidWorks basics including Sketching, Extruding, Cutting and Revolving
- Creating Assemblies, Configurations and Surfaces
- Creating and dimensioning 2D Drawings
- Preparing models such as tools, shanks and holders for importing into the SolidCAM Toolkit

Turning Courses

Turning (1 Day)

Pre-requisites: SolidWorks for SolidCAM

This is a beginner SolidCAM course designed for programmers who are new to SolidCAM Turning.

- Introduction to SolidCAM Turning
- Part Setup including Coordinate Systems, Stock Definition and Fixture Definition
- Toolkit Setup of basic Turning Tools, Importing Tool Models and creating Tool Libraries
- Turning Operations including Turning, Boring, Grooving, Threading and Drilling
- Sub-spindle Transfer and other MCO's
- Simulation and Verification of Project
- Setup Sheet Creation

Mill-Turn (1 Day)

Pre-requisites: Turning

This course focuses on Milling operations for both Fixed and Sliding Head Mill-Turn machines.

- Add-on to Turning Course
- Toolkit Setup of Driven Tools
- Milling Operations including Profile, Pocket, Drill, Threadmill and Engrave
- Wrapped Milling operations
- 3+1 Indexial Machining
- Template Creation

Advanced Mill-Turn (1 Day)

Pre-requisites: Mill-Turn

This is an advanced SolidCAM course which focuses on programming techniques for Multi-Channel machines, as well as advanced Turning operations.

- Add-on to Mill-Turn Course
- Toolkit Setup of Multi-Station Toolholders
- Multi-Channel Programming and Channel Synchronisation
- Advanced Programming techniques for both Fixed Head and Sliding Head Multi-Channel machines such as Balanced Turning and Milling, Superimposition and Simultaneous Tilted Turning

Milling Courses

2.5D Milling (AFRM Optional) (3 Days)

Pre-requisites: SolidWorks for SolidCAM

This is a beginner SolidCAM course designed for programmers who are new to SolidCAM Milling.

- Introduction to SolidCAM Milling
- Part Setup including Coordinate Systems, Stock Definition and Fixture Definition
- Toolkit Setup of basic Milling Tools, Importing Tool Models and creating Tool Libraries
- Milling Operations including Profile, Pocket, Drill, Threadmill and Engrave
- Simulation and Verification of projects
- AFRM (Automatic Feature Recognition Machining) operations including Hole and Pocket Recognition and Automatic Edge Debur (3-Axis)
- Setup Sheet Creation
- Template Creation

HSR Milling (High Speed Roughing) (1 Day)

Pre-requisites: 2.5D Milling

This course covers High Speed Roughing of complex 3D surfaces with Solid Carbide tooling as well as Indexable Insert tooling.

- Pro 3D HSR Programming
- 3+2 Indexial HSR
- Defining Pre-Drill Locations and Transformations
- Constraint Boundaries and Fixture Avoidance
- Rest-Machining strategies

HSM Milling (High Speed Machining – Finishing) (1 Day)

Pre-requisites: 2.5D Milling

This course covers the programming and optimisation of high-speed finishing toolpaths for complex 3D surfaces.

- Pro 3D HSM Programming including Finishing technologies such as Constant Z, Linear, Horizontal and Pencil
- Rest-Machining strategies
- Constraint Boundaries and Drive Curves
- CAD Surface creation to aid with toolpath precision

HSS Milling (High Speed Surfacing – Finishing) (1 Day)

Pre-requisites: 2.5D Milling

This course covers the programming and optimisation of high-speed surface toolpaths for localised areas of complex 3D models.

- HSS Finishing and Semi-Finishing programming
- Geometry and Boundary Definition
- Linking Control, Gouge Checking and Collision Avoidance strategies

Milling Courses

Simultaneous 4-Axis Milling (1 Day)

Pre-requisites: HSS Milling

This is an advanced SolidCAM course for programming parts using continuous 4-axis movements.

- Rotary (Screw) Machining
- Rotary Finishing
- SWARF Machining
- Multi-Axis Drilling
- Automatic 4-Axis Edge Debur
- 4-Axis Simultaneous operations
- Gouge Checking and Collision Avoidance strategies

Simultaneous 5-Axis Milling (1 Day)

Pre-requisites: Simultaneous 4-Axis Milling

This is an advanced SolidCAM course for programming parts using continuous 5-axis movements.

- 5-Axis Simultaneous operations
- Toolpaths utilising latest cutting-tool technologies including Barrel and Lens cutters
- Advanced Tilting strategies
- SWARF Machining
- Multi-Axis Drilling
- Automatic 5-Axis Edge Debur
- Multi-blade (Impeller) Machining
- Gouge Checking and Collision Avoidance strategies

iMachining 2D + 3D (1 Day)

Pre-requisites: 2.5D Milling

This course covers SolidCAM's patented iMachining technology for programming intelligent high-speed milling operations.

- Database Creation for both Machines and Materials
- Overview of the iMachining theory
- iMachining 2D strategies including iRough, iFinish and Wrapped toolpaths
- iMachining 3D strategies including 3+2 Indexial
- Fixture and Tool Holder collision avoidance

AFRM (Advanced Feature Recognition Machining)

Pre-requisites: 2.5D Milling

This course covers SolidCAM's Automatic Feature Recognition technologies. This is an optional add-on for 2.5D Milling.

- Automatic Pocket Recognition
- Automatic Drill Recognition
- Automatic 2.5D Edge Deburring Recognition