Who should attend:

CNC programmer, CNC Machinist

Prerequisites:

Basic knowledge of Microsoft Windows and CNC machining experience and completed training in Mill Basic

Duration:

3 Days

Methodology:

Practical hands-on with using computers, lecturing, discussions and case studies

Introduction

Learn the fundamentals of working with milling machine. Participants will complete a series of 3D drawing exercises covering Coons, Ruled, Loft, Revolved, Swept, Offset entity, geometry modification and transformation. Create and move entities onto different levels, import and export files from other CAD systems. Participant will learn to machine 3D part using contour, engraving, pocketing and drilling toolpaths and also the use of radial, plunge, project, flowline, scallop, pencil, restmill and leftover.

Objective

At the end of this program participants are expected to:

On completion of this training the participant will be able to design 3D product drawing and create 3D Toolpaths focusing on advanced multi-surface roughing and finishing toolpaths such as Surface High Speed toolpaths used to efficiently machine both core shapes and pockets. Participant will also be able to use the legacy surface toolpaths like pocket, contour, radial, plunge, project, flowline, scallop, pencil, restmill and leftover.
KEY TOPICS

**Course Outline:**

**Day 1:**
- Introduction to Surface Machining
- Mastercam Roughing Options explained
- Mastercam Roughing Toolpaths applied to a model
- Mastercam Finish Toolpaths applied to a model
- Set up and machine a model to completion using the Surface Finish and Surface Rough toolpaths
- Student Question and Answer Session on day’s work

**Day 2:**
- Overview of Mastercam 3D Design functions
- Overview of 3D Wireframe Design
- Student Question and Answer Session on day’s work
- Overview of 3D Surface Creation
- Overview of 3D Solid Modeling

**Day 3:**
- Introduction to the Highspeed Surface Toolpaths
- High Speed Roughing Options
- High Speed Finishing Options
- Converting Solid Models to Surface Models and creation of Containment Boundaries
- Set up and machine a model to completion using the Surface High Speed Toolpaths
- Setting Operation defaults
- Student Question and Answer Session on day’s work.