

Course: MAC 261

Title: 5-Axis Mill Programming

Long Title: 5-Axis Milling Machine Programming

Course Description: Covers how to create a 5-axis milling machine program using Computer-aided Design and Computer-aided Manufacturing (CAD/CAM) software.

Min Credit: 3

Max Credit:

Course Notes: NCE 12.5.14 JLG

Origin Notes: CCD

Status Notes: Updated 3.20.15

STANDARD COMPETENCIES

1. Create correct cutting tool speed and feed calculations for various rotary tools on the 5-axis milling machine.
2. Demonstrate programming and proper use of cutter compensation for the 5-axis milling machine.
3. Demonstrate proper use of controller system coordinates in the 5-axis milling machine.
4. Demonstrate proper use of crash detection software for a 5-axis milling machine.
5. Program and run multiple parts in a 5-axis milling machine.
6. Employ CAD/CAM software to program a 5-axis milling machine.
7. Demonstrate proper program management with CAD/CAM programs for the 5-axis milling machine.

TOPICAL OUTLINE

- I. Start up, load, run, and edit programs.
- II. Cutters and Surface Feet per Minute calculations.
- III. Cutter sizes and compensation techniques.
- IV. 5-axis milling coordinate systems.
- V. Part and program sequencing/coordinating.
- VI. Full CAD/CAM utilization.
- VII. CAM simulation and crash protection.
- VIII. Program management skills.