

MFG 256 : CNC MILL PROGRAMMING

Transcript title

CNC Mill Programming

Credits

4

Grading mode

Standard letter grades

Total contact hours

40

Lecture hours

40

Prerequisites

MFG 100 and MFG 110.

Recommended preparation

MFG 257.

Course Description

Introduces basic programming skills used on the CNC Mill.

Course learning outcomes

1. Analyze and apply machine shop safety concepts and practices.
2. Interpret fundamental CNC Mill concepts and formatting.
3. Create and demonstrate the use of programs for CNC Mill machining centers.
4. Demonstrate the basic machining practices and tooling as it applies to CNC Mill using simulation software.

Content outline

- Machine and shop safety
- CNC Mill – set up, order of operations, and coordinate systems to program CNC Mill machines
- Mill machining/turning centers including machine configurations, general flow of the programming process, determining program zero assignment values and three ways to assign program zero and programming words used in machining
- Types of formatting
- Mill Machine language/operations
- Programming CNC Mill including programming computer numerical control mills and machining centers, identifying G and M codes, programming canned cycles, subroutines, profile milling and cutter diameter compensation
- Tooling and tool offsets for CNC Mill
- Program simulation for CNC Mill

Required materials

Text book, and tools (as required for second term students).