

MFG 257 : CNC MILL SETUP & OPERATION

Transcript title

CNC Mill Setup Operation

Credits

4

Grade mode

Standard letter grades

Contact hours total

80

Other hours

80

Prerequisites

MFG 100 and MFG 110.

Prerequisites with concurrency

MFG 256.

Description

Introduces basic operation and setup used with Fanuc compatible CNC Mill machining centers.

Learning outcomes

1. Apply machine shop safety concepts and safety practices.
2. Demonstrate the functions of automatic and manual CNC Mill machine operations.
3. Explain five CNC Mill modes of operation including manual, manual data input (MDI), edit, and program operation - memory (automatic) and tape.
4. Describe the key sequences of a CNC Mill machine operation for machining centers.
5. Demonstrate CNC Mill program verification such as: safety priorities, running good parts, and verification of programs.

Content outline

- CNC Mill Machine safety
- CNC Mill Machine nomenclature
- Controller modes and operation of CNC Mill including the use of the buttons, switches, and keys found on CNC Mill machine control units (MCU), the control panel display, machine operation, feed, spindle speed, tool changing, and axis motion, and automatic/manual operation of the machine tool.
- Tool holder setups
- Establishing cutter tool length compensation for CNC Mill
- Tooling page editing
- Part cutting operations
- Conversational programming basics for CNC Mill

Required materials

Requires textbook and required tools for second term machining students.

Grading methods

Grades based on: participation of lab activities, and a final in the form of a written exam and/or practical application.