

MFG 210 : VERTICAL MILLING

Transcript title

Vertical Milling

Credits

2

Grading mode

Standard letter grades

Total contact hours

60

Lab hours

60

Prerequisites

instructor approval.

Recommended preparation

MFG 100.

Course Description

Vertical milling machine operations. Includes safety, work holding, table set-ups, power feeds, digital read-out operation, cutter selections, climb and conventional cutting and spindle speed changes.

Course learning outcomes

1. Safely perform vise setups and cutting operations using the vertical milling machine.
2. Calculate the correct RPM to run different size cutting tools based on material cutting speed.
3. Setup and safely perform fly cutting operations to create a flat surface.
4. Use the digital read out to accurately position the milling table.
5. Perform offset boring head operations to bore holes to within one thousandth of an inch.
6. Perform dividing head operations using simple, angular, and direct indexing methods.
7. Accurately drill bolt circle patterns using the digital read out.
8. Perform a CNC mill setup and monitor operations to produce a part.