

ADMFG 121: CNC Operations

This course is intended to provide students with the skills required to complete basic CNC machine set-ups and operations. Students will learn to use CNC set-up sheets, precision measuring tools, and working drawings and prints to verify parts. Students will also use G-Code to program CNC machines and become familiar with the use of canned cycles and parametric Macros to increase programming efficiency and speed. Basic fixture design will be discussed.

Course Student Learning Outcomes

1. Demonstrate ability to follow CNC set-up sheets.
2. Demonstrate a working knowledge of G-Code programming language.
3. Demonstrate ability to calculate correct speeds and feeds for cutting tools.
4. Demonstrate knowledge and use of precision measuring tools.
5. Demonstrate knowledge of part tracking and "Buy-off" as part of quality control.
6. Demonstrate the use of "Canned Cycle" and parametric programming.
7. Demonstrate ability to complete basic CNC operations.

Credits: 5

Program: **Advanced Manufacturing / Composites Technology**