

Course Objectives/Course Outline
Spokane Community College

Course Title: CNC Theory III

Prefix and Course Number: MACH 231

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Understand the use of sub programs
- Understand the use of macros in programming
- Identify G & M codes used in multi axis programming
- Write intermediate G & M code for CNC mills and lathes

Course Outline:

- I. Rotary Fourth Axis
 - A. Create G code
 - B. Fixtures and setup techniques

- II. Sub programs
 - A. Create a sub program for a mill.
 - B. Create a sub program for a lathe.

- III. ADVANCED TOPICS
 - A. Chip Thinning
 - B. Tool Coatings
 - C. Vacuum Fixtures
 - D. Off-Line Tool Pre-Setting