

Master Syllabus

CAM 2214 - Advanced Computer Numerical Control (CNC) Applications

Division: Science, Mathematics and Engineering

Department: Computer Aided Manufacturing

Credit Hour Total: 3.0

Lecture Hrs: 2.0 **Lab Hrs:** 2.0

Prerequisite(s): CAM 1213 AND CAM 2204

Other Prerequisite(s): AND Other With a grade of C or higher

Date Revised: October 2012

Course Description:

Course covering the programming, setup and operation of 3, 4 and 5 axis vertical machining centers. Two classroom, two lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Program 3, 4, and 5 axis vertical machining centers

Demonstrate ability to correctly use CAD/CAM software to program 3, 4, and 5 axis parts to be machined in a vertical machining center.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students will earn 70% or higher on exams

Setup and operate 4 and 5 axis vertical machining centers

Demonstrate ability to correctly setup and operate 4 and 5 axis vertical machining centers.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students will earn 70% or higher on exams

Probing systems

Demonstrate ability to correctly use a probing system to set part origin and tool offsets on a vertical machining center.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students will earn 70% or higher on exams

Outline:

Programming vertical machining centers for machining 3, 4, and 5 axis parts using CAD/CAM software

Setup and operation of 4 and 5 axis vertical machining centers

Using the probing system to set part origins and tool offsets on a vertical machining center