



Wayne County Community College District

COURSE SYLLABUS

NC 230 CNC Machining Center Operation and Graphics I

CREDIT HOURS: 3.00

CONTACT HOURS: 45.00

COURSE DESCRIPTION:

Programming, setup and operations of vertical machining centers. This is a study of 21/2 dimensional CAM graphics as an interface between design and manufacturing from part drawings to finished product. Graphics programs, care modified, verified and simulated. The students gain more experience by manufacturing parts.

PREREQUISITES: NC 111

EXPECTED COMPETENCIES:

Upon completion of this course, the student will be familiar with:

- Setup and operate a numerically controlled machining center
- Create and edit 2D part geometry
- Use associative graphics and associative tool path editing
- Develop the fundamental skills of graphics programming
- Create, edit, modify, and verify 2D tool paths
- Use a variety of viewing and verification techniques
- Use milling tool libraries
- Use a post processor for machine tools
- Customize Cad/Cam environment settings
- Apply machining center tooling to the graphics program
- Import and edit geometry from Cad systems
- Apply machining center operations for parts making
- Sequence and reorder machining feature functions
- Develop an understanding of 2D Cad design for manufacturing
- Use on-line help functions to solve cad/cam problems
- Control the customization of manufacturing through automation

ASSESSMENT METHODS:

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

GRADING SCALE:

90%-100% = A

80%-89.9%= B

70%-79.9%= C

60%-69.9%= D

<60% = E