

District Syllabus For

ETI2414

Computer-Aided Manufacturing (*MasterCam – Mill & Lathe*)

Last Revised: November 16, 2007

Credit Hours: 4

Contact Hours: 4

Laboratory Fee: \$25

Prerequisites: ETI2416, EGS1111C or Program Coordinator Approval

Corequisites: No Corequisites exist for this course.

Catalog Description:

An in-depth study of CAD/CAM work stations, programming methods, set-up and operation of Haas CNC machining centers and plasma cutting machine programming and operations. Computer-assisted programming is emphasized through the use of computer aided drafting (CAD) and computer aided manufacturing (CAM) software. The course objective is to offer students a working knowledge in MasterCam Mill and Lathe . The course will give the students hands on applications in CAD-to-CAM formats, tool path operations, CNC code generation, editing CNC programs and part production using the Haas VF-2 mill, TL-1 Lathe. A strong computer drafting and CNC background is recommended prior to taking this course.

Required Materials:

Mastercam Training Guide Mill 2D/Lathe Combo ISBN: 13 9781897466094
CamInstructor.com , by Widder Publishing 1-877-873-6867 <http://caminstructor.com/>

Supplemental Materials:

Fitzpatrick, Machining and CNC Technology, McGraw Hill, ISBN # 0-07-829860-1. www.mhhe.com

Special Requirements: None

Major Learning Outcomes:

- 1 Computer Aided Drafting file conversion into Computer aided Manufacturing programs.
2. Working knowledge of MasterCam Lathe & Mill.
3. Working knowledge of the Haas VF-2, TL-1, and Plasmacam to Design & fabricate projects
4. Set-up tooling on the Haas VF-2, & TL-1, CNC router and plasma cutter
5. Project development and production

Specific Performance Objectives:

See expanded syllabus developed by the instructor for each section being taught.

Methods of Evaluation:

Students enrolled in this course will be graded using several factors including attendance, participation, project completion and the demonstrated ability to use specific Equipment, hand and power tools. However, each **Major Learning Outcomes** will be evaluated during the semester to the instructor's satisfaction in order to pass the course. The student will submit a portfolio of completed tasks and projects completed during the course. A Mid term and Final exam will be given to test the student on concepts, procedures and operational check-off on specific equipment used in class. The student Assignments / projects will be graded based on quality of completed work. . These projects can come from text books and from other sources approved by the instructor.