JEFFERSON COLLEGE
COURSE SYLLABUS

CIM155
CNC PROGRAMMING II

5 Credit Hours

Revised by
Michael D. McKinney
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CIM155 CNC PROGRAMMING II

I. CATALOGUE DESCRIPTION

A. Pre-requisite: CIM125 CNC Programming I and Reading Proficiency

B. 5 Credit Hours

C. In this course the students will learn intermediate to advanced levels of G & M (EIA) code programming for both CNC Turning Centers and CNC Machining Centers. Student will perform tooling selections, part setups, and program the Machine Tool to produce a finished part. (S)

II. EXPECTED LEARNING OUTCOMES / ASSESSMENT MEASURE

| Students will use vocabulary peculiar to the trade | In-class discussion |
| Students will write programs using EIA format | Part program printouts |
| Students will prove out and run intermediate level CNC Turning Center programs | Program printouts, set up sheets, lab exercises and final exam |
| Students will setup Haas Machining Centers and Turning Centers | Program printouts, set up sheets, lab exercises and final exam |
| Students will select proper tooling and work holding for Haas Turning Centers | Program printouts, set up sheets, lab exercises and final exam |
| Students will select proper tooling and work holding for Haas Machining Centers | Program printouts, set up sheets, lab exercises and final exams |
| Students will create parts on CNC Machining Centers and Turning Centers | Lab exercises |
III. OUTLINE OF TOPICS

A. Hass Machining and Turning Centers
   1. EIA Part program
   2. Tool selection
   3. Part zero set
   4. Tool offsets
   5. Dry run feature
   6. Program simulation
   7. Producing Part

B. Haas Turning Center
   1. EIA Part program
   2. Tool selection
   3. Part zero set
   4. Tool offsets
   5. Dry run feature
   6. Program simulation
   7. Producing Part

C. Intermediate Programs
   1. G40 Cutter Comp off
   2. G41 Comp Left
   3. G42 Comp Right
   4. G80 Cancel Canned Cycle
   5. G81 Spot Drill
   6. G83 Peck Drill
   7. G84 Tap
   8. G02 Circular Interpolation CW
   9. G03 Circular Interpolation CCW

IV. METHOD(S) OF INSTRUCTION

A. Lecture

B. Discussion

C. Lab

V. REQUIRED TEXTBOOK(S)

Mattson, Mike. *CNC Programming Principles and Applications*, (Current Edition), Cengage
VI. REQUIRED MATERIALS

A. Textbooks
B. Pencil
C. Calculator
D. Safety glasses
E. Calipers
F. Edge Finder
G. Indicator
H. Allen Wrenches
I. Adjustable Wrench
J. Flash Drive
K. Composition Notebook
L. Spiral Notebook

VII. SUPPLEMENTAL REFERENCES

Machine Manuals are located at the machine tools in the lab.

VIII. METHOD OF EVALUATION

A. Attendance 15%
B. Homework 10%
C. Lab Assignments 35%
   (parts, program printouts, etc.)
D. Final Examination 20%
E. Quizzes 20%
IX. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Technology Center 101; phone 636-481-3169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook (see College website, http://www.jeffco.edu).

XI. ATTENDANCE STATEMENT

Regular and punctual attendance is expected of all students. Any one of these four options may result in the student being removed from the class and an administrative withdrawal being processed: (1) Student fails to begin class; (2) Student ceases participation for at least two consecutive weeks; (3) Student misses 15 percent or more of the coursework; and/or (4) Student misses 15 percent or more of the course as defined by the instructor. Students earn their financial aid by regularly attending and actively participating in their coursework. If a student does not actively participate, he/she may have to return financial aid funds. Consult the College Catalog or a Student Financial Services representative for more details.

XII. OUTSIDE OF CLASS ACADEMICALLY RELATED ACTIVITIES

The U.S. Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to spend substantial time outside of class meetings engaging in academically related activities such as reading, studying, and completing assignments. Specifically, time spent on academically related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.