JEFFERSON COLLEGE

COURSE SYLLABUS

CIM225

ADVANCED CNC PROGRAMMING

5 Credit Hours

Revised by
Michael D. McKinney
August 16, 2012

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CIM225 Advanced CNC Programming

I. CATALOGUE DESCRIPTION

A. Pre-requisite: CIM155 CNC Programming II and Reading Proficiency
B. 5 Credit Hours
C. In this course the students will learn different types of conversational programming such as, Haas Intuitive programming for both CNC Turning Centers and CNC Machining Centers, and Mazatrol Programming. Students will perform tooling selections, part setups, and program the Machine Tool to produce a finished part. (F)

II. EXPECTED LEARNING OUTCOMES / ASSESSMENT MEASURE

<table>
<thead>
<tr>
<th>Students will use vocabulary peculiar to the trade</th>
<th>In-class discussion</th>
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<tr>
<td>Students will write programs using EIA format</td>
<td>Part program printouts</td>
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<tr>
<td>Students will prove out and run CNC Turning Center programs</td>
<td>Program printouts, setup sheets, lab exercises and final exam</td>
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<tr>
<td>Students will program and set up Haas Machining Centers and Turning Centers using Haas Intuitive Programming</td>
<td>Program printouts, setup sheets, lab exercises and final exam</td>
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<tr>
<td>Students will select proper tooling and work holding for Haas Machining Center and Turning Centers</td>
<td>Program printouts, setup sheets, lab exercises and final exam</td>
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<tr>
<td>Students will create part programs using Mazatrol conversational programming.</td>
<td>Program printouts, setup sheets, lab exercises and final exam</td>
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<tr>
<td>Students will create parts on CNC Machining Centers and Turning Centers</td>
<td>Lab exercises</td>
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III. OUTLINE OF TOPICS

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

IV. METHOD(S) OF INSTRUCTION
   A. Lecture
   B. Discussion
   C. Lab

V. REQUIRED TEXTBOOK(S)

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. Lab Assignments 45%
   (parts, program printouts, etc.)

C. Final Examination 20%

D. Quizzes 20%

IX. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library 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.