JEFFERSON COLLEGE
COURSE SYLLABUS

CIM235
COMPUTER INTEGRATED MANUFACTURING
3 Credit Hours

Revised by
Michael D. McKinney
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CIM235 Computer Integrated Manufacturing

I. CATALOGUE DESCRIPTION

A. Pre-requisite: CIM225 Advanced CNC Programming and Reading Proficiency
Co-requisite: CIM240 Computer Aided Manufacturing

B. 3 Credit Hours

C. This course is designed to provide students with a thorough understanding of the integration of computers used in the Industry, and a thorough understanding of computer aided drafting (CAD) software, specifically AutoCadLite. Students will learn to create, modify, manipulate, and import geometry. Students will ultimately be able to create a computer aided drafting (CAD) drawing, simulate the machining, and generate CNC code to machine an actual part. (S)

II. EXPECTED LEARNING OUTCOMES / ASSESSMENT MEASURE

<table>
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<tr>
<th>Activity</th>
<th>P: drive and flash drive checks and class discussion</th>
<th>In-class exams as well as program printouts, homework and/or quizzes</th>
<th>Evaluation of drawings, instructor observation, printouts, and final exam</th>
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<td>Students will use vocabulary peculiar to the trade</td>
<td>Students will write programs using EIA format</td>
<td>Students will create part lines, arcs, and circle drawings using CAD software</td>
<td>Student will dimension, modify, and layer part drawings using CAD software</td>
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III. OUTLINE OF TOPICS

A. CAD

1. Part Origin
2. Drawing Origin
3. Views
4. Tools
5. Drawing set-up
6. Offsets
7. Points
8. Edit functions
B. Drawing Type
   1. Lines
   2. Arcs
   3. Circles
   4. Construction
   5. Dimensioning
   6. Modifying
   7. Layers
   8. Tools
   9. Plotting

C. Computer software
   1. File Storage.
   2. Updating Files
   3. Communication Rs-232
   4. Uploading Files
   5. Downloading Files
   6. Editing Files
   7. Beginning Offline Files
   8. G-M Code and EIA Format

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

V. REQUIRED TEXTBOOK(S)
   Mike Mattson, CNC Programming Principles and Applications, (Current Edition), Delmar, Cengage Learning

VI. REQUIRED MATERIALS
   A. Textbooks
   B. Pencil
   C. Calculator
   D. Safety Glasses
E. Data Traveler
F. Flash Drive
G. Composition Notebook
H. Spiral Notebook

VII. SUPPLEMENTAL REFERENCES
Machine Manuals are located at the machine tools in the lab.

VIII. METHOD OF EVALUATION
A. Attendance 20%
B. Lab Assignments 55%
C. Quizzes 10%
D. Final Examination 15%

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.