COURSE INFORMATION FORM

DISCIPLINE
CIMM

COURSE TITLE
MasterCAM I

CR.HR 3 LECT HR. 2 LAB HR. 2 CLIN/INTERN HR. CLOCK HR.

CATALOG DESCRIPTION
This course is designed as an introduction to MasterCAM software. Menu screens and configuration of the software will be covered working thru 2-D projects on the lathe and mill.

PREREQUISITES
CSIS 100; CIMM 121 or CIMM 122

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)

Upon completion of this course, the student will be able to:

1.  Demonstrate the knowledge of computer essentials.
2.  Demonstrate a working knowledge of menu screens.
3.  Construct basic 2-D geometry.
4.  Construct advanced pocketing and contouring geometry.
5.  Properly modify existing geometry.
6.  Demonstrate 2-D toolpath generation.
7.  Create a job set-up.
8.  Define and manage tools and tool parameters.
9.  Demonstrate the understanding of associative toolpaths.
10. Demonstrate the ability to use toolpath verification.
11. Troubleshoot and modify a toolpath.
12. Use the post processor function.
13. Produce a completed project with “MasterCAM”.

Revised 12/9/13
GENERAL EDUCATION OUTCOMES (ESO)
Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.

Outcomes  ESO

PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

1. Students will demonstrate the ability to apply foundational skills in an industrial setting, safely and to industry guidelines.

2. Students will demonstrate professional oral and written communication skills.

3. The program will graduate individuals who exhibit competence in CNC programming, setup and operation.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes may be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

Student Evaluation: (1-13)
Employer Evaluations: (1-13)
Instructor Assessment & Evaluation: (1-13)
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Introduction to Computer Essentials
II. CAD
   A. Basic Drawing
   B. Geometry Modifications & Transformations
   C. Advanced Drawing Techniques
   D. Basic Contouring
   E. Basic Pocketing
   F. Drill Toolpaths
   G. Toolpath Modifications and Verification
   H. Post Advanced Pocketing
   I. Advanced Contouring
III. Working with CAD Data
IV. Lathe Toolpaths
V. Post Processors
VI. Introduction to Solid Modeling
VII. Program Setup and Execution