COURSE INFORMATION FORM

DISCIPLINE CIMM

COURSE TITLE CIMM 100, Introduction to Machining and Manufacturing

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

CATALOG DESCRIPTION

This course is designed to introduce the student to the manufacturing environment, requirements and career opportunities of major technologies in industry. The course will cover the history, setting of manufacturing and industry, safety, measurement and layout and an introduction to basic shop equipment.

PREREQUISITES

None

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)

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

1. Operate safely in a manufacturing setting in compliance with appropriate OSHA and EPA guidelines.
2. List machine shop safety rules and regulations.
3. Describe how manufacturing affects the workforce and the evolution of tools.
4. Identify and select appropriate fasteners.
5. Identify and use common tools to safely produce a layout and complete bench work.
6. Perform mathematical calculations necessary to interpret blueprints and operate basic machine shop equipment.
7. Perform measurement and inspection using direct-reading instruments, transfer instruments, precision measuring instruments, surface plate, instruments and comparison instruments.
8. Identify, select appropriate tool and perform common operations using hand tools.
9. Fabricate parts to meet product specifications.
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.

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<th>Outcomes</th>
<th>ESO</th>
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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 think critically and apply problem-solving skills.

3. The program will graduate individuals who exhibit competence in the entry-level skills of technical profession manufacturing technology.

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.)

1. Classroom discussion / Participation: (1-9)
2. Assignments/Labs: (1-9)
3. Written Exam: (2-9)
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 Machining Technology
II. Shop safety
III. Occupations in manufacturing and related industry*
IV. Measurement
   A. Common measurement tools
   B. Direct reading instruments
   C. Transfer instruments
   D. Precision measuring instruments
   E. Surface plate instruments
   F. Comparison instruments
V. Layout
VI. Hand tools
VII. Fasteners
VIII. Basic Machine Shop equipment
IX. Sawing and cutoff machines
X. Drill Press
XI. Pedestal Grinders
XII. Teamwork*