COURSE INFORMATION FORM

DISCIPLINE  CIMM
COURSE TITLE  Grinding Operations
CR.HR  2  LECT HR.  1  LAB HR.  2  CLIN/INTERN HR.  CLOCK HR.  

CATALOG DESCRIPTION

This course covers the fundamentals of safely operating various pieces of grinding equipment. The emphasis will be on the care and use of surface grinders. This course is designed for students in machining and manufacturing careers.

PREREQUISITES

CIMM 100, 105, 110 & 115

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)

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

1. Demonstrate the safe use of grinding equipment.
2. Change and properly balance the grinding wheel on the arbor.
3. Dress the grinding wheel properly.
4. Properly maintain the magnetic chuck on the machine.
5. Describe processes for surface grinders, cylindrical grinders, tool and cutter grinders and jig grinders.
6. Describe the types of grinding wheels and their specifications.
7. Grind flat, parallel, and perpendicular surfaces to print specifications.
8. Grind fillet radii to print specifications.
9. Grind slots to print specifications.
10. Perform preventive maintenance on the grinding machine.
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 think critically and apply problem-solving skills.

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. Exams 1-10
2. Lab projects 1-10
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. Grinding safety
II. Types of grinders
III. Types of grinding wheels
   A. Wheel sizes
   B. Wheel shapes
   C. Wheel designations
IV. Grinding processes
V. Wheel mounting
VI. Wheel dressing
VII. Care and maintenance of machines