EICC COURSE DEVELOPMENT MODEL (CDM)

CATALOG COURSE NUMBER: MFG-114
COURSE TITLE: Surface Grinding
Originating College: ☐CCC ☐MCC ☑SCC Effective Term/Year: Fall 2015
Initiating Faculty Member: Kenneth Darmody Initiating Department Coordinator: Ben Kettering

Reason for submission: Check all that apply
☐New Course If yes, type of course:
☐**A&S**
To be considered for General Education? ☐ Yes ☐ No Category:
To be part of an A & S Concentration? ☐ Yes ☐ No Concentration:
☐**CTE** Program Title: ☐Required ☑Elective
☑General Education or Program Review ☐Reactivation of an inactive course ☐Making course inactive
☐Changing course; please explain:
☐Other; please explain:

Contact Hours/Distribution of Contact Hours

Lecture Hours		Lab Hours		Clinical Hours		Coop Hours	
Hours per Week:	1.00	Hours per Week:	3.50	Hours per Week:	0	Hours per Week:	0
Number of Weeks:	16.50	Number of Weeks:	16.50	Number of Weeks:	16.50	Number of Weeks:	16.50
***Note: If offering a course for the full fall or spring semester, the number of weeks is 16.5*							
Total Lecture Hrs:	19.80	Total Lab Hrs:	69.30	Total Clinical Hrs:	0	Total Coop Hrs:	0

Semester Hours Credit: 2.50 if variable credit, give range:
Allow repeat* for credit: ☐Yes ☑No
If yes, total course repeats allowed: If yes, total credits:
*Note that repeat for credit means a student can pass the course and then repeat it for additional credit. An internship course is an example of a course that could be set up as repeatable for additional credit

Course or courses this CDM replaces, if any:

CATALOG COURSE DESCRIPTION: This course will begin with the development of basic off-hand and flat stock grinding techniques and will progress to the more complex techniques used in grinding. Special attention will be placed on the setup including jigs and fixture applications. Various grinding projects will strengthen the student's proper use of this equipment.

RECOMMENDED ENTRY LEVEL SKILLS/KNOWLEDGE: Ability to use measuring tools.

PRE-REQUISITE COURSES

CCN#	COURSE TITLE
MFG 113	Vertical and Horizontal Mills

CO-REQUISITE COURSES

CCN#	COURSE TITLE

PUBLISHED MATERIAL(S) USED FOR CDM DEVELOPMENT: Kibbe, Richard, John Neely, Warren White, and Roland Meyer. Machine Tool Practices. Upper Saddle River: Prentice Hall, 2010. Print.

In general it is expected that source material will be dated within 5 years of this CDM date. If all materials/ textbooks cited above are older than this, please explain:

GENERAL COURSE GOALS

Upon successful completion of this course the student should be able to:

Productively and efficiently operate a grinder in a manufacturing setting.

TOPICAL OUTLINE

1. Square A Block
2. Grind Angles
3. Operate Surface Grinder

COURSE OBJECTIVES

Upon successful completion of the course, a student should be able to:

1. Square a Block
   a. Identify safety precautions pertaining to grinders.
   b. Perform grinding wheel selection process.
   c. Dress a grinding wheel.
   d. Apply operational procedures for care of a grinding wheel.
   e. Grind a magnetic chuck.
   f. Grind a six-sided block square to print tolerances.
2. Grind Angles
   a. Grind angles on a part by using a sine bar or sine plate.
3. Operate Surface Grinder
   a. Describe the correct setup and operation of an automatic surface grinder.
   b. Describe how to mount and balance grinding wheels on an automatic grinder.
   c. Explain how to resurface the magnet on an automatic grinder.
   d. Operate all of the power controls on a grinder.
   e. Adjust all of the power controls on a grinder.
   f. Set up stops.

RECOMMENDED METHODS OF INSTRUCTION: *Check all appropriate methods of instruction to facilitate student learning of course objectives.*

☐ Case Studies	☐ Class Discussions
☐ Computer lab work	☑ Computer-assisted tools
☐ Computer-assisted writing	☐ Conducting experiments
☑ Demonstration or modeling	☐ Electronic interaction
☐ Field observation	☐ Field trips
☐ Guest speaker	☑ Guided practice
☐ In-class writing or editing workshops	☐ Journals
☑ Lecture	☐ Library instruction and resources
☐ Model building	☐ Peer review
☐ Readings	☐ Role play
☐ Service learning	☐ Simulation
☑ Student and instructor conferences	☐ Student collaborative learning
☐ Student presentation	☑ Student projects
☐ Tests or quizzes	☐ Worksheets/surveys
☐ Writing assignments/exercises (graded or not)	

☑ Other (please list specifics): Videotapes, Grinder Project

RECOMMENDED EVALUATION METHODS: *Check all appropriate methods of evaluation to assess student achievement of course objectives.*

☐ Class workshops	☐ Classroom discussions/participation

❑Collaborative work	☑Demonstration of skill(s)
☑Individual conferences	❑Journals
❑Laboratory reports	❑Oral presentations
❑Portfolios	❑Pretest/Posttest
☑Quizzes	❑Reading responses
❑Student presentations	☑Student projects
☑Tests	❑Writing Assignments

❑Other (please list specifics):

ATTENDANCE: Policies on attendance will be formulated by the instructor and communicated to the students on the course syllabus.

ACADEMIC DISHONESTY: Policies on academic dishonesty can be found in the EICC student code of conduct published in the student handbook.

CDM CREATION/REVIEW/REVISION INFORMATION	
Originally Written by:	Date:
Department Chair, Comments, & Date:	
Does similar curriculum exist at other EICC Colleges? ❑CCC ❑MCC ❑SCC ❑No	
If yes, Counterparts Consulted, College, Comments & Date:	
CDM Review or Revision Date:	
Faculty member(s) & College:	
Does similar curriculum exist at other EICC Colleges? ❑CCC ❑MCC ❑SCC ❑No	
Changes made to course which will require further review steps:	
❑ Making course inactive ❑ Credit hours ❑ Contact hours ❑ Course Description	
❑ 25% or more of course objectives ❑ Other minor revisions or no revisions	
Dean Review, Comments & Date:	
If changes made require further review and approval:	
College Curriculum Committee Sign-off & Date:	
IC Review Subcommittee Sign-off & Date:	
Instructional Council Approval:	