

EICC COURSE DEVELOPMENT MODEL (CDM)

CATALOG COURSE NUMBER: MFG-118

COURSE TITLE: Machine Tool Project

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: 6.00 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: 118.80 Total Clinical Hrs: 0 Total Coop Hrs: 0

Semester Hours Credit: 4.00 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 capstone course will provide the student the opportunity to integrate all skills gained in manual machining courses to design, build, and produce an instructor approved project. Special attention and emphasis will be placed upon accuracy and proper use of equipment and tools following safe work practices in the lab setting.

RECOMMENDED ENTRY LEVEL SKILLS/KNOWLEDGE:

PRE-REQUISITE COURSES

CCN#	COURSE TITLE
MFG 112	Drills and Saws
MFG 117	Cylindrical Grinding

CO-REQUISITE COURSES

CCN#	COURSE TITLE

PUBLISHED MATERIAL(S) USED FOR CDM DEVELOPMENT: Kibbe, Richard. et al. Machine Tool Practices, Upper Saddle River, NJ: 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:

- Design a product which incorporates manual machining skills.
- Produce a product which incorporates manual machining skills.

TOPICAL OUTLINE

1. Propose a project for a product which incorporates manual machining skills.
2. Design a project plan for a product which incorporates manual machining skills.
3. Produce a product which incorporates manual machining skills
4. Complete project to design specifications.

COURSE OBJECTIVES

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

1. Propose a project for a product which incorporates manual machining skills.
 - a. Compile list of potential projects.
 - b. Identify level of complexity and application of skills learned from prerequisite coursework including the operation of drills, saws, grinders, lathe, and mills for each potential project.
 - c. Evaluate potential project ideas for top choice.
 - d. Discuss top choice with instructor.
 - e. Select project with approval from instructor before moving to the design phase.
2. Design a project plan for a product which incorporates manual machining skills.
 - a. Produce working drawings.
 - b. Construct a project plan.
 - c. Defend project plan to instructor for project approval.
3. Produce a product which incorporates manual machining skills.
 - a. Operate drills, saws, grinders, lathe, and mills to manually complete the project.
 - b. Demonstrate safe practices when working with tools and equipment.
 - c. Troubleshoot project issues as they develop.
 - d. Show timely progress on project deadlines assigned.
4. Complete project to design specifications.
 - a. Test product for specification requirements.
 - b. Inspect product for quality.
 - c. Measure product for specifications.

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Case Studies | | <input type="checkbox"/> Class Discussions |
| <input type="checkbox"/> Computer lab work | | <input type="checkbox"/> Computer-assisted tools |
| <input type="checkbox"/> Computer-assisted writing | | <input type="checkbox"/> Conducting experiments |
| <input checked="" type="checkbox"/> Demonstration or modeling | | <input type="checkbox"/> Electronic interaction |
| <input type="checkbox"/> Field observation | | <input type="checkbox"/> Field trips |
| <input type="checkbox"/> Guest speaker | | <input checked="" type="checkbox"/> Guided practice |
| <input type="checkbox"/> In-class writing or editing workshops | | <input type="checkbox"/> Journals |
| <input type="checkbox"/> Lecture | | <input type="checkbox"/> Library instruction and resources |
| <input checked="" type="checkbox"/> Model building | | <input type="checkbox"/> Peer review |
| <input type="checkbox"/> Readings | | <input type="checkbox"/> Role play |
| <input type="checkbox"/> Service learning | | <input type="checkbox"/> Simulation |
| <input checked="" type="checkbox"/> Student and instructor conferences | | <input type="checkbox"/> Student collaborative learning |
| <input type="checkbox"/> Student presentation | | <input checked="" type="checkbox"/> Student projects |
| <input type="checkbox"/> Tests or quizzes | | <input type="checkbox"/> Worksheets/surveys |

Writing assignments/exercises (graded or not) |

Other (please list specifics):

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

Class workshops

Collaborative work

Individual conferences

Laboratory reports

Portfolios

Quizzes

Student presentations

Tests

Other (please list specifics):

Classroom discussions/participation

Demonstration of skill(s)

Journals

Oral presentations

Pretest/Posttest

Reading responses

Student projects

Writing Assignments

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: