



COURSE OUTLINE: MCH0145 - MACHINE SHOP PRAC II

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Approved: Martha Irwin, Chair, Community Services and Interdisciplinary Studies

Course Code: Title	MCH0145: MACHINE SHOP PRACTICAL II
Program Number: Name	1120: COMMUNITY INTEGRATN
Department:	C.I.C.E.
Semesters/Terms:	19W, 19S
Course Description:	This course will continue to build on the study of shop machines, safety, and tool care, measurements and layout, bench work and hard tools, material identification, heat treatment and testing, basic lathe, saws, drill presses, grinder, and milling machine, theory and practices, speeds, feeds, tapers, and threads.
Total Credits:	4
Hours/Week:	4
Total Hours:	4
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Essential Employability Skills (EES) addressed in this course:	<p>EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
Course Evaluation:	
Other Course Evaluation & Assessment Requirements:	<p>Each absence will reduce a portion of the attendance mark. If the student accumulates 3 absences in the semester, a meeting will be scheduled with the Dean of this program. Continued enrollment in this program will be decided by the Dean, the Coordinator and the instructor of this program.</p> <p>Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89%</p>



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B 70 - 79% 3.00
 C 60 - 69% 2.00
 D 50 - 59% 1.00
 F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.
 S Satisfactory achievement in field /clinical placement or non-graded subject area.
 U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
 X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
 NR Grade not reported to Registrar's office.
 W Student has withdrawn from the course without academic penalty.

Books and Required Resources:

Machining Fundamentals textbook by John R. Walker
 Publisher: Goodheart-Wilcox Edition: 9th
 ISBN: 978 1 61960 209 0
 Scientific Calculator not cell phone)

Safety Glasses

Safety Boots

Course Outcomes and Learning Objectives:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:

Course Outcome 1	Learning Objectives for Course Outcome 1
<p>COURSE DESCRIPTION: This course is a continuation of Machine Shop Practical I. The student will continue to develop the skills required to safely setup and operate various machines used in Machine Shops. Focus will be on enhancing existing skills using lathes, milling machines and other machines used in the manufacture of components.</p>	<ul style="list-style-type: none"> - Working safely in a shop environment. - Use and care of measuring tools. - Safe setup and operation of lathes - Safe setup and operation of milling machines - Safe setup and operation of drill presses - Safely operate arbour press - Safely perform bench work and assembly
Course Outcome 2	Learning Objectives for Course Outcome 2
<p>Work safe in a shop environment whether running machines or doing bench work.</p>	<ul style="list-style-type: none"> - Use all shop safety rules. - Wear and use proper safety equipment. - Operate machines in a safe manner. - Practice safe working habits.
Course Outcome 3	Learning Objectives for Course Outcome 3
<p>Use all of the various measuring tools to verify dimensions of machined parts.</p>	<ul style="list-style-type: none"> - Use measuring tools such as scales, inside and outside micrometers and vernier calipers. - Use transfer measuring tools such as inside and outside calipers, telescopic gauges, small hole gauges and dividers.



Course Outcome 4	Learning Objectives for Course Outcome 4
Setup and Safely operate lathes.	<ul style="list-style-type: none"> - Use four jaw chucks for centering work - Select correct speeds and feeds - Select proper pitches using quick change gear box - Understand and cut threads using different methods and pitches
Course Outcome 5	Learning Objectives for Course Outcome 5
Setup and safely operate Milling Machines.	<ul style="list-style-type: none"> - Setup milling machines using various work holding methods - Select proper speeds and feeds and verify correct cutter rotation - Perform various operations such as squaring stock - Learn about keys and keyways and how to successfully setup and cut
Course Outcome 6	Learning Objectives for Course Outcome 6
Select and operate different types of drill presses.	<ul style="list-style-type: none"> - Operate sensitive and radial arm drill presses safely. - Select proper size drills for drilling and tapping. - Perform operations such as drilling, reaming, and counter boring. - Perform safe work holding using clamps, vises, angle plates, vee blocks and parallels.
Course Outcome 7	Learning Objectives for Course Outcome 7
Safely operate arbour press.	<ul style="list-style-type: none"> - Using an arbour press correctly install bushings or bearings - Learn about internal keyways and how to cut them using an arbour press
Course Outcome 8	Learning Objectives for Course Outcome 8
Safely perform bench work and assembly.	<ul style="list-style-type: none"> - Assemble machined components - Make necessary adjustments to allow components to fit together - Verify accuracy of finished assembled components

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight	Course Outcome Assessed
Attendance and Safety	20%	
Attitude and Participation	10%	
Projects	70%	

CICE Modifications:

Preparation and Participation

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will



always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

B. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

C. Tests will be written in CICE office with assistance from a Learning Specialist.

The Learning Specialist may:

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

D. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

E. Evaluation:

Is reflective of modified learning outcomes.

NOTE: Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

Date:

February 5, 2019



Please refer to the course outline addendum on the Learning Management System for further information.

