



# COURSE OUTLINE

## MCH0134

Prepared: Cam Pucci    Approved: Corey Meunier

<b>Course Code: Title</b>	MCH0134: MATERIALS AND FASTENERS										
<b>Program Number: Name</b>	1120: COMMUNITY INTEGRATN										
<b>Department:</b>	C.I.C.E.										
<b>Semester/Term:</b>	17F										
<b>Course Description:</b>	To provide students with a working knowledge of the theory behind the procedures that is used in the making and working with carbon steels, aluminum and its alloys, and other construction materials as well as knowledge and applications of fasteners. Practical lab and shop activities will be used to enhance and or demonstrate theoretical concepts where possible.										
<b>Total Credits:</b>	2										
<b>Hours/Week:</b>	2										
<b>Total Hours:</b>	32										
<b>Essential Employability Skills (EES):</b>	#6. Locate, select, organize, and document information using appropriate technology and information systems. #7. Analyze, evaluate, and apply relevant information from a variety of sources. #9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. #10. Manage the use of time and other resources to complete projects.										
<b>Course Evaluation:</b>	Passing Grade: 50%, D										
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	tests exams assignments labs presentations										
<b>Evaluation Process and Grading System:</b>	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Assignments</td> <td>25%</td> </tr> <tr> <td>Final Test</td> <td>15%</td> </tr> <tr> <td>Student Performance Attendance</td> <td>10%</td> </tr> <tr> <td>Term Tests</td> <td>50%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Assignments	25%	Final Test	15%	Student Performance Attendance	10%	Term Tests	50%
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<b>Books and Required Resources:</b>	Machining Fundamentals by John R Walker and Bob Dixon Publisher: The Goodheart willcox company Inc Edition: ninth edition										



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### 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.

Understand Metals and Alloys

#### Learning Objectives 1.

Identify and describe properties of metals and alloys  
Identify and describe the effects of temperature on metals and alloys.  
Perform assignments to reinforce this knowledge

#### Course Outcome 2.

Define the following properties of metals and alloys

#### Learning Objectives 2.

- Define and describe each of the following mechanical and physical .properties and / or terms:
    - o Elasticity
    - o Yield Point / Strength
    - o Tensile ,Compressive, Shear, Bearing strength
    - o Conductivity
    - o Corrosion
    - o Ductility
    - o Malleability
    - o Hardness
    - o Impact Strength
    - o Temperature effects
- Assignment



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### Course Outcome 3.

Describe the purpose for adding the following to steel:

### Learning Objectives 3.

- Carbon
- Sulphur
- Phosphorus
- Silicon
- Manganese
- copper

Perform a class presentation that describes process

### Course Outcome 4.

Identify and describe the uses of non-metallic materials:

### Learning Objectives 4.

- Identify the types, applications and qualities of fasteners including
    - o Unified - American - National - Acme
    - o Metric and Pipe thread systems
- Identify and select bolts, nuts, clips, chemical fasteners and adhesives as well as their potential use and application
- Describe methods of securing machinery and components using bolts, anchors, fasteners, grouting and epoxy resins
- Perform practical and theory assignments to reinforce this knowledge

#### 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.



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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



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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:**

Wednesday, September 6, 2017

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