



## COURSE OUTLINE: MPF0129 - TC CHASSIS/SUSP SYS.

Prepared: Stephen Kent

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

<b>Course Code: Title</b>	MPF0129: TRUCK COACH CHASSIS/SUSPENSION SYST-CICE
<b>Program Number: Name</b>	1120: COMMUNITY INTEGRATN
<b>Department:</b>	C.I.C.E.
<b>Semesters/Terms:</b>	20F, 21W
<b>Course Description:</b>	<p>Upon successful completion of this course, students in the CICE Program, with the assistance of a Learning Specialist, will learn about the types of chassis, frames the suspension systems and tire and wheel assemblies used for On Road Truck, Tractor, and Tractor Trailer Systems. Students will identify &amp; describe the various types of the above systems and there purpose. Students will perform visual inspections &amp; routine service &amp; maintenance checks for lose and worn components of frames and chassis, suspensions, tires and wheel assemblies. Students will be required to outline the proper safety procedures for performing the above tasks according to the both Sault College Motive Power Department as well as any vehicle Manufacturers safety regulations and specifications.</p> <p>Students will be required to follow proper safety procedures when performing the above tasks according to both Sault College Motive Power Department Standards &amp; Vehicle Manufacturers safety regulations and specification</p>
<b>Total Credits:</b>	1
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	24
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Essential Employability Skills (EES) addressed in this course:</b>	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <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>

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.



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	EES 11 Take responsibility for ones own actions, decisions, and consequences.
<b>Course Evaluation:</b>	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>The final grade for this course will be based on the results of classroom, assignments and shop evaluations weighed as indicated:  Classroom 35% of the final grade is comprised of term tests  Assignments 10% of the final grade is comprised of a number of technical reports  Shop 45% of the final grade is comprised of attendance, punctuality, preparedness, student ability, work organization and general attitude</p> <p>Employability Skills 10% of final grade is comprised of attendance, class participation, show ability to follow direction and being a team player.</p> <p>(Student will be given notice of test and assignment dates in advance)</p> <p>NOTE: All assignments will be in typed format. NO hand written assignments will be accepted.</p> <p>The following semester grades will be assigned to students:</p> <p>Grade  Definition Grade Point Equivalent  A+ 90 100% 4.00  A 80 89%  B 70 - 79% 3.00  C 60 - 69% 2.00  D 50 59% 1.00  F (Fail)49% and below 0.00</p> <p>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.</p>
<b>Books and Required Resources:</b>	<p>Heavy Duty Truck Systems by Bennett  Publisher: Cengage Learning Edition: 7th ed</p>
<b>Course Outcomes and Learning Objectives:</b>	<p>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</p>

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outcomes:

<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>
Properly identify the chassis styles, frame types used, suspension components, and the tire and wheel assembly type used on a specific type of truck, tractor and tractor trailer unit.	<ul style="list-style-type: none"> <li>Identify the figuration style of cab and chassis (eg) Truck or Tractor or Tractor Trailer</li> <li>Identify frame style of vehicle (eg) C-channel, box, X-style, steel frame, aluminum frame, double frame or single frame construction</li> <li>Note the type of suspension system used (eg) Air Ride, Multiple Leaf, Rubber Block, Independent</li> <li>List the type and size of the tire and rim assemblies</li> </ul>
<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
Perform inspection of the frame and suspension for:	<ul style="list-style-type: none"> <li>Cracks in the frame rails and cross member</li> <li>Loose fasteners holding the cross members to frame.</li> <li>Loose or damaged shocks</li> <li>Broken leaf spring, loose U-bolts, worn bushings</li> <li>Shifted axle assemblies</li> </ul>
<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
Perform a proper tire and wheel inspection.	<ul style="list-style-type: none"> <li>Check tire pressures and valve stem location.</li> <li>Check wheel assemblies visually for loose fasteners.</li> <li>Check drive wheel ends for lubrication leaks.</li> <li>Check tires for tread wear and unusual wear patterns</li> <li>Check dual wheel configurations for proper size tires and tread design</li> </ul>
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
Perform service checks on front axles.	<ul style="list-style-type: none"> <li>Inspect front wheels hubs for lube level and seal leaks</li> <li>Inspect tie rod ends for excessive wear and looseness</li> <li>Inspect king pins and king pin bushings turning ease and excessive wear</li> <li>Test spring shackles, spring pins and bushings</li> </ul>
<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>
Perform visual inspection and normal serving of fifth wheel assemblies	<ul style="list-style-type: none"> <li>Check for loose mounting hardware</li> <li>Check mounting bushings for excessive wear</li> <li>Check sliding fifth wheel for proper operation</li> <li>Visually check jaws for loose or broken components</li> <li>Check fifth wheel plate for gouges and cracks.</li> </ul>

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Assignments	10%
Employability Skills	10%
Shop	45%
Theory Tests	35%

**CICE Modifications:**

**Preparation and Participation**

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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.

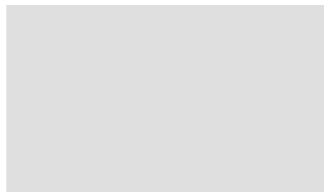
***The Learning Specialist may:***

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

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**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:**

December 18, 2020

**Addendum:**

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

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