

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



CICE COURSE OUTLINE

COURSE TITLE: Automotive Systems Vehicle Maintenance

CODE NO. : MPF121 **SEMESTER:** Winter
MODIFIED CODE: MPF0121

PROGRAM: Motive Power – Advanced Repair

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APPROVED: “Angelique Lemay” Jan. 2013

***Dean, School of Community Services
and Interdisciplinary Studies***

TOTAL CREDITS: 2

PREREQUISITE(S): MPF103/0103

HOURS/WEEK:

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I. COURSE DESCRIPTION:

This course is an automotive workplace preparation course. You will assist with performing entry level automotive maintenance tasks. Topics will include: vehicle component and systems identification, wheels and tires, vehicle lubrication and maintenance inspections, seasonal inspection programs and oil life and tire monitor system reset procedures. Work ethics and customer satisfaction will be stressed.

The majority of this course is hands on practical application of topics you have studied in the first two semesters. You will be graded on your ability to perform entry level tasks **SAFELY** and **EFFICIENTLY**.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the CICE student along with the support of a Learning Specialist, will demonstrate the basic ability to assist with:

1. Motive Power Information TechnologyPotential Elements of the Performance:

- Access manufactures service information
- Prepare documentation explaining a repair procedure
- Document vehicle maintenance inspection results
- Prepare a proper vehicle Work Order

2. Work PracticesPotential Elements of the Performance:

- Perform safe lifting procedures and a two post hoist
- Perform safe lifting procedures and a four post hoist
- Safely lift and support and vehicle using a floor jack and jack stands
- Repair a damaged thread
- Identify hand tools

3. ElectricityPotential Elements of the Performance:

- Demonstrate proficiency at using a DVOM
- Perform a wiring repair
- Test and starting and charging system
- Perform proper battery load test
- Perform proper battery charging techniques

4. BrakesPotential Elements of the Performance:

- Inspect and report on braking system condition
- Service disc and drum brakes
- Report on fluid condition
- Repair a brake line
- Repair a fuel line

5. Steering and SuspensionPotential Elements of the Performance:

- Repair a tire
- Balance tires
- Inspect condition of shocks and struts
- Lubricate steering and suspension components

6. EnginesPotential Elements of the Performance:

- Perform a vehicle maintenance inspection including engine oil and filter change
- Service a cooling system
- Remove and replace engine accessory drive belts
- Test engine oil pressure

III. TOPICS

1. Motive Power Information Technology
2. Work Practices
3. Electricity
4. Brakes
5. Steering and Suspension
6. Engines

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Automotive Technology, Canadian edition

The following items are mandatory for entrance to the Shop:

- shop coat or coveralls
- CSA approved steel toe boots (high top)
- CSA approved safety glasses

Pens, pencils, calculator, 3-ring binder

V. EVALUATION PROCESS/GRADING SYSTEM:*Practical evaluation = 80%**Assignments and classroom exercises = 20%*

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
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
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.	

VI. SPECIAL NOTES:

Cell phones are not to be used in the Shop environment as they pose a potential safety hazard.

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

It is the departmental policy that once the classroom door has enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.

Eye, Face and Foot Personal Protection Equipment (P.P.E):

Students are required to wear appropriate Personal Protection Equipment (P.P.E) in designated areas at all times. The designated areas for eye and foot protection in the Motive Power areas are: C1073 (Automotive), C1000, C1010, and C1040 (Truck/Coach and Heavy Equipment) and C1120 (Marine and Small Engines). Appropriate P.P.E must also be worn when facing hazards outside of these designated areas.

Eye Protection:

- All protective eye wear shall meet the requirements of C.S.A. - Z94.3 or A.N.S.I. - Z87.1 +.
- Approved safety glasses (lens and frames) shall have side protection such as wrap around design or fixed side shields.

Foot Protection:

- Boot height- minimum 5 ½" uppers, measured from the top of the sole.
- CSA Green Patch rating.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources. The professor, in conjunction with a Learning Specialist, will periodically assess the necessity of any further modifications to the course outline.

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. 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.

B. 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.

C. 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

D. Evaluation:

Is reflective of modified learning outcomes.