SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: AUTOMOTIVE SYSTEMS VEHICLE MAINTENANCE

CODE NO. : MPF121 **SEMESTER:** TWO

PROGRAM:
- Motive Power Technician – Advanced Repair (4041)
- Motive Power Fundamentals – Automotive Repair (4044)

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DATE: March 2013 **PREVIOUS OUTLINE DATED:** March 2012

APPROVED:

"Corey Meunier"

CHAIR **DATE**

TOTAL CREDITS: TWO

PREREQUISITE(S): MPF103

HOURS/WEEK: Four

For additional information, please contact Corey Meunier, Chair
School of The Natural Environment, Technology & Skilled Trades
(705) 759-2554, Ext. 2610

I. COURSE DESCRIPTION:

This course is an automotive workplace preparation course. You will perform 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 student will demonstrate the ability to:

1. Motive Power Information Technology

Potential 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 Practices

Potential 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. Electricity

Potential 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. Brakes

Potential 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 Suspension

Potential Elements of the Performance:

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

6. Engines

Potential 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	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

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.