

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Fuel Systems

CODE NO. : MSE150 and MSE619 **SEMESTER:** ONE

PROGRAM: Motive Power Fundamentals – Small Engine Repair (5084)
Small Engine Mechanic – Level 1 Apprenticeship (6090)

AUTHOR: Gord Strachan

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

APPROVED:

“Corey Meunier”

CHAIR

DATE

TOTAL CREDITS: TWO

PREREQUISITE(S):

HOURS/WEEK:

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

I. COURSE DESCRIPTION:

Upon successful completion of the reportable subject, the student should be able to test and recommend repairs for fuel, intake and exhaust systems in accordance with manufacturers' recommendations and specifications, government safety regulations and approved industry standards.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. *Service Gasoline Engine Fuel Systems***Potential Elements of the Performance:**

- Define the essential basic information and fundamentals of gasoline fuel systems.
- Describe the basic function, composition and construction of gasoline and alternate fuel systems.
- Explain the basic operating principles of gasoline and alternate fuel systems.
- Inspect and test carbureted fuel systems.
- Perform fuel system seasonal storage procedure.

2. *Service Intake and Exhaust Systems***Potential Elements of the Performance:**

- Define the essential basic information and fundamental of intake and exhaust systems.
- Describe the basic function, composition, and construction of intake and exhaust systems.
- Explain the basic operating principles of intake and exhaust systems.
- Inspect and test intake and exhaust systems and components.
- Describe manufacturers' system maintenance procedures of air filters and perform assigned operations.

3. *Describe the Fundamentals and Construction Features of Emission Control Systems***Potential Elements of the Performance:**

- Define the essential basic information and fundamentals of emission control systems.
- Describe the basic function, composition and construction of emission control systems.

III. TOPICS:

1. Gasoline Fuel Systems
2. Intake & Exhaust Systems
3. Emission Control Systems

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Title: Understanding the Outboard Motor

Edition: 3rd

Author: Stagner

Publisher: Pearson Education

Title: Boat-owner's Mechanical and Electrical Manual

Edition: 3rd

Author: Calder

Publisher: McGraw Hill

Title: Small Gas Engines

Edition: 10th

Author: Roth

Publisher: Goodheart-Willcox

Title: Small Gas Engines (workbook)

Edition: 10th

Author: Roth

Publisher: Goodheart-Willcox

CSA Certified 6 inch Leather Safety Boots

CSA Certified & Impact Resistant Safety Glasses

Coveralls (non-flammable material - i.e. cotton)

Shop Coat (optional)

V. EVALUATION PROCESS/GRADING SYSTEM:

Theory	40%
Application Experiences	30%
Final Assessment	30%

The following semester grades will be assigned to students:

Grade	Definition	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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: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.

Attendance is mandatory except with a valid excuse. If late you will be marked absent for the whole hour. For every unexcused absence you will be deducted 1% per class period. Previous notification or a call the day of absence is required for excusal.

If you miss a test with an unexcused absence you will not be allowed to write that test.

If a class is missed or going to be missed it is your responsibility to notify your instructor and make arrangements for handouts and notes taken while you were away.

CSA approved safety glasses and safety boots must be worn in the shop at all times. Please have safety boots and safety glasses available because you may not have a lot of warning when going into the shop.

CELL PHONES OR PAGERS MUST BE TURNED OFF IN ANY CLASS.

VII. COURSE OUTLINE ADDENDUM:

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