

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Engine Systems

CODE NO. : MSE260 and MSE720 **SEMESTER:** TWO

PROGRAM: Motive Power Fundamentals – Small Engine Repair (5084)
Small Engine Mechanic – Level 2 Apprenticeship (6091)

AUTHOR: Gord Strachan

DATE: January 2015 **PREVIOUS OUTLINE DATED:** January 2014

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 is able to recommend repairs for engine assemblies in accordance with government safety regulations, manufacturers' recommendations and specifications 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. *Measure and Assemble Engine Assemblies.***Potential Elements of the Performance:**

- Define the essential information and fundamentals of major engine stationary and moving components.
- Define the failure analysis procedures for engine systems and components.
- Describe the repair procedures for engine repair practices.
- Select and use appropriate tools to repair engine components.
- Perform the repair procedures for engine components to meet the manufacturers' specifications.
- Reassemble engine components as established by the manufacturer maintaining all clearance limitations and specifications.

III. TOPICS:

1. Engine Assemblies

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 | 30% |
| Application Experiences | 40% |
| Final Assessment | 30% |

The following semester grades will be assigned to students:

| Grade | <u>Definition</u> | <i>Grade Point Equivalent</i> |
|--------------|--------------------------|-----------------------------------|
| A+ | 90 – 100% | |
| A | 80 – 89% | 4.00 |
| 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:

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.