

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Work Practices & Procedures

CODE NO. : MSE120 and MSE616 **SEMESTER:** ONE

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

AUTHOR: Gord Strachan

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

APPROVED:

“Corey Meunier”

CHAIR **DATE**

TOTAL CREDITS: THREE

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 perform workplace practices and procedures in accordance with government safety regulations, approved industry standards and equipment manufacturers' recommendations and specifications.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. *Identify the essential fundamentals of Information, Parts and Warranty Control Systems***Potential Elements of the Performance:**

- Identify the essential basic information and fundamentals of parts inventory control systems.
- Identify the essential basic information and fundamentals of industry warranty claims.

2. *Identify effective Customer Relations and Communication Techniques***Potential Elements of the Performance:**

- Listen attentively and employ communication techniques in gathering relevant data to provide for diagnostic procedures and work descriptions.
- Process messages accurately to ensure customer satisfaction with work orders and service calls.
- Develop skills in customer relations and promote the business in areas of product, service and facilities.
- Explain to customer the malfunction, nature of repair and recommendations for future avoidance.
- Accurately complete the work order and discuss with the customer.

3. *Use and perform maintenance procedures for Tools and Equipment***Potential Elements of the Performance:**

- Define the essential basic information and fundamentals of precision and non-precision tool.
- Describe the basic function and construction of precision and non-precision tools.
- Explain the basic principles of operation of precision and non-precision tools

- Describe the manufacturers' system maintenance and calibration procedures of precision and non-precision measuring tools and power tools and perform assigned operations.

4. Describe the use and application of Fastening and Sealing Techniques

Potential Elements of the Performance:

- Define the essential basic information and fundamentals of fastening and sealing techniques.
- Describe the construction features and applications of fastening and locking devices, thread repair devices, seals, sealants and gaskets.
- Explain the basic principles of operation of fastening and locking devices, thread repair devices, seals, sealants and gaskets.
- Describe the installation and removal procedures for various fastening, locking and sealing applications and perform drilling, tapping, hacksawing and filing procedures using the prescribed service tools and equipment.

5. Perform Applied Trade Calculations

Potential Elements of the Performance:

- Perform arithmetic operations related to fractions, decimals, and percentages.
- Perform conversion between the Metric and Imperial systems.
- Use the rules of algebra to manipulate formulae and solve equations.

6. Perform Basic Heating, Cutting and Welding Techniques.

Potential Elements of the Performance:

- Define the essential basic information and fundamentals set up and safety procedures for the oxyacetylene and ARC welding equipment.
- Describe the construction features of oxyacetylene and ARC welding equipment.
- Explain the safe principles of operation of oxyacetylene and ARC welding equipment.
- Describe the manufacturers' system maintenance procedures of oxyacetylene and ARC welding equipment and perform assigned operations.
- Perform basic heating, cutting and welding procedures.

III. TOPICS:

1. Information, Parts and Warranty Control Systems
2. Customer Relations and Communication Techniques
3. Tools and Equipment
4. Fastening and Sealing Techniques
5. Trade Calculations
6. Heating, Cutting & Welding

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)
Welding Gloves
Shop Coat (optional)

V. EVALUATION PROCESS/GRADING SYSTEM:

| | |
|-------------------------|-----|
| Theory Testing | 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% | |
| 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.