

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Auxiliary Systems

CODE NO. : MSE360 and MSE835 **SEMESTER:** TWO

PROGRAM: Motive Power Fundamentals – Small Engine Repair (5084)
Marine Engine Mechanic – Level 3 Apprenticeship (6089)

AUTHOR: Gord Strachan

DATE: March **PREVIOUS OUTLINE** March
2014 **DATED:** 2013

APPROVED:

“Corey Meunier”

CHAIR **DATE**

TOTAL CREDITS: THREE

PREREQUISITE(S):

HOURS/WEEK:

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For additional information, please contact Corey Meunier, Chair
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I. COURSE DESCRIPTION:

Upon successful completion of the reportable subject, the student is able to perform auxiliary system maintenance 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. Describe Climate Control System Maintenance Procedures.Potential Elements of the Performance:

- Define the fundamentals of basic marine ventilation and refrigeration/heating systems selection procedures.
- Perform inspection, testing and diagnosis of marine refrigeration/heating systems.
- Describe maintenance procedures of marine ventilation and refrigeration/heating systems.

2. Perform High Voltage A/C System Testing and Maintenance Procedures.Potential Elements of the Performance:

- Define the fundamentals of marine high voltage A/C shore power systems and selection procedures.
- Describe the construction features of marine high voltage A/C shore power systems.
- Explain the operating principles of marine high voltage A/C shore power systems.
- Perform inspection, testing and diagnosis of marine high voltage A/C shore power systems.
- Perform maintenance procedures of marine high voltage A/C shore power systems.

3. Operate and Repair Marine Safety Equipment.Potential Elements of the Performance:

- Identify the safety factors for operating and servicing marine safety equipment.
- Describe the maintenance features of manual and automatic fire extinguishing and prevention equipment.
- Perform marine accessory replacement procedures in accordance with required government and manufacturers' safety regulations.

4. Describe Safe Handling Procedures of Propane Appliances.

Potential Elements of the Performance:

- Identify the safety factors for operating marine propane appliances.
- Describe routine maintenance procedures for marine propane appliances.

5. Describe Maintenance Procedures for Marine Accessories.

Potential Elements of the Performance:

- Define the fundamentals of marine vessel accessories.
- Test and troubleshoot marine plumbing head systems.
- Describe routine maintenance procedures for marine accessories.

III. TOPICS:

1. Climate Control Systems
2. High Voltage A/C Shore Power Systems
3. Safety Equipment
4. Appliances
5. Accessories

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: Safe Boating Guide

Transport Canada

Free Publication

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 Testing	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.