SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	Engine Systems		
CODE NO. :	MSE303	**SEMESTER:**	THREE
PROGRAM:	Marine & Small Powered Equipment Mechanic (8066)		
AUTHOR:	Chris Delyzer & Gord Strachan		
DATE:	March 2013	**PREVIOUS OUTLINE DATED:**	March 2012

APPROVED: *"Corey Meunier"*

CHAIR **DATE**

TOTAL CREDITS: TWO

PREREQUISITE(S):

HOURS/WEEK:

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 marine engine and drive system installation procedures in accordance with government safety regulations, manufacturers'' recommendation 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. Perform Outboard Engine System Installation.

Potential Elements of the Performance:

- Identify the fundamental principles of transom preparation.
- Perform transom drilling operation.
- Perform outboard engine fastening procedures.

2. Perform Inboard Engine System Installation.

Potential Elements of the Performance:

- Identify the fundamental principles of engine mounting preparation.
- Perform engine lift and mounting fabrications.
- Perform inboard engine fastening procedures.

3. Perform Stern Drive Engine System Installation.

Potential Elements of the Performance:

- Identify the fundamental principles of engine and stern drive mounting preparation.
- Perform engine and stern drive lift and mounting fabrications.
- Perform engine and stern drive fastening techniques.

4. Describe Engine and Drive System Control Installation.

Potential Elements of the Performance:

- Identify the fundamentals of engine and drive system controls.
- Perform the installation layout of engine and drive system controls.
- Describe engine and drive mechanical and electrical controls installation.

III. TOPICS:

1. Outboard Engine Systems
2. Inboard Engine Systems
3. Stern Drive Engine Systems
4. Engine and Drive System Controls Installation

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Title: Understanding the Outboard Motor
Edition: 3rd 03 ed., 3232#
Author: Stagner
Publisher: Pearson Education Canada

Title: Boat Owner's Mechanical and Electrical Manual
Edition: 03 ed.
Author: Nigel Caulder
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	10%
Application Experiences	60%
Final Assessment	30%

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:

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 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 noted 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.