

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: Trade Practices and Auxiliary Systems

CODE NO. : TCT811 **APP Level:** THREE

PROGRAM: Truck and Coach Technician – Level 3
Apprenticeship

AUTHOR: Sylvain Belanger

DATE: February 2017 **PREVIOUS OUTLINE DATED:** 2016 February

APPROVED: *“Corey Meunier”* Dec ‘16
CHAIR

TOTAL CREDITS: 3

PREREQUISITE(S): Truck and Coach Technician – Level 2

HOURS/WEEK: 24 hours/week for eight weeks

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

I. COURSE DESCRIPTION:

Trade practices, is designed to provide the theory and practical training to enable the student to describe the Regulatory Requirements of the Highway Traffic Act and how it applies to employers and employees involved in Repair Service and operation of On Highway Commercial Vehicles. The course content deals with the safe operating conditions that apply to the mechanical components on commercial vehicles and equipment falling under both the Federal and Canadian Motor Vehicle Standards Acts. Students will learn the provisions and the meaning of FMVSS and the CMVSA limits and Standards for Out Of Service Criteria inspections for On Highway Commercial Vehicles and Towing Equipment. Course content will also cover newer electronic systems involving Collision Warning Equipment and Lane Guidance Systems. Students will be taught about the Heating, Ventilation and Air Conditioning Systems used in On Highway Truck and Coach Vehicles. The Students will learn the theory and practical knowledge to test and repair the various types of components both mechanical and electrical that are involved in the operation of the HVAC System including the impact of the Environmental Laws and effects regarding the proper use and disposal for the refrigerants used in the HVAC Systems.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Define the fundamentals of safe practices required in the workplace when working with Air Conditioning Refrigerants.
2. Define the responsibilities of employers and employees relating to safe work practices and protection of the environment surrounding the use of mobile equipment Air Conditioning and Refrigeration Equipment.
3. Define the purpose, construction and fundamental operation of the components used to operate and control the Heating Venting and Air Conditioning systems.
4. Perform the proper inspection, testing, and repair procedures for the heating, venting and Air Conditioning System.
5. Outline the application and maintenance procedures of the CMVSA, FMVSS Act and the HVAC Systems according to Manufacturer procedures and specifications.

6. Review the Highway Traffic Act pertaining to Commercial Vehicle Fitness and Out of Service Criteria.
Perform Mechanical Fitness Checks on Brakes and Steering Systems, Electrical Systems and Emission Systems.

III. TOPICS:

1. Heating, Ventilation, and Air conditioning Systems and components
2. Safe handling and repair procedures of the Air Conditioning and Refrigeration Systems
3. Proper testing, maintenance and servicing of the A/C and Refrigeration Systems.
4. Regulatory Requirements of the Trucking Industry
5. Highway Traffic Act

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Text Book: Heavy Duty Truck Systems
5th ed., 12959# Edition
Author: Bennett
Publisher: Thomson Nelson Learning Canada

Pens, Pencils, Calculator and 3 Ring Binder

V. EVALUATION PROCESS/GRADING SYSTEM:

- *70% of theory testing.*
- *10% shop assignments.*
- *20% Practical tests.*

Note: Students must take part in shop practical testing to receive credit for their work.

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<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.	

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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.

It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.