

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: STEERING SUSPENSION AND BREAK SYSTEMS

CODE NO. : TCT 706 **SEMESTER:** 8 WEEK

PROGRAM: TRUCK & COACH TECHNICIAN (APPRENTICESHIP)

AUTHOR: JOHN AVERY

DATE: SEPT 2010 **PREVIOUS OUTLINE DATED:** MAY 2010

APPROVED: _____
“Corey Meunier”
CHAIR DATE

TOTAL CREDITS: SIX

PREREQUISITE(S): APPRENTICESHIP

HOURS/WEEK: 46 HOURS TOTAL DURING 8 WEEK PERIOD

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

The suspension , steering and brake systems portion of the TCT course is designed to provide the Truck Coach Technician with the necessary theoretical training and hands on testing and repair procedures required to service the many different applications and types of equipment used in the on road commercial vehicle market. Students taking this course will learn the theory involved in the construction and operation of the types of suspension systems, steering systems and braking systems that are currently used and have been used on all types of highway trucks, tractors, buses, trailers, and hauling equipment in the Truck and Coach Commercial on road Vehicle Industry. Students will be taught in depth theory and diagnostic procedures associated with respect to maintenance service and repair and how to safely perform them.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

- Define the purpose, construction and operation of suspension, steering and braking systems
- Describe the different types and functions of the braking systems
- Perform diagnostic procedures for trouble shooting hydraulic brake systems and air brake systems
- Perform the proper service procedures to repair and or overhaul both hydraulic and air braking systems safely according to Manufacturer procedures and government regulations
- Define the different types of suspension systems used for truck and coach and trailers used in the on highway application
- Perform routine maintenance and service according to Manufacturer specifications
- Perform adjustment required for proper suspension ride heights according to service manual procedures
- Describe the functions, constructions, compositions, types and styles and application of tire and wheel end assemblies
- Perform proper wheel bearing installation and adjustment according to manufacturer specifications.
- Perform diagnosis and repair for tire wear patterns and steering problems according to service manual procedures.

III. TOPICS:

1. Truck and Coach Suspension Systems
2. Truck and Coach Air Braking Systems
3. Truck and Coach Hydraulic Braking Systems
4. Truck and Coach Tire and Wheel Assemblies
5. Truck and Coach Steering Systems

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Hand outs provided by instructor as well as text books requested by department as per booklist.

V. EVALUATION PROCESS/GRADING SYSTEM:

Students will be tested on the material covered per apprenticeship curriculum by multiple choice questions, assignments, and practical tests. The weigh factor for each area of testing will be as follows

Theory Tests	50 %
Practical Tests	30 %
Assignments	20 %

This evaluation can change depending on the emphasis placed on each of the above testing procedures.

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%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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.

VII. COURSE OUTLINE ADDENDUM:

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