



**I. COURSE DESCRIPTION:**

Upon successful completion of this course, Heavy Duty Truck/Coach Vehicle Systems, the student will be able to identify and describe the various types of On Road Equipment Truck, Tractors, and Trailer types and styles. Students will learn the procedures for servicing Truck and Coach Vehicle Systems for the purpose of routine maintenance, how to record and monitor service intervals of such vehicles and equipment by means of manual and electronic systems for a routine maintenance schedule. Students will perform engine oil changes, lubrication to chassis steering and suspension components and also perform fluid level checks for all driveline gear boxes and differential assemblies. Students will perform visual inspections of brake and brake adjustment systems and lighting systems. Students will also perform tasks such as cooling system testing, accessory drive belt tension tests, battery and battery cable connection service.

Students will be required to outline the proper safety procedures for performing the above tasks according to the both Sault College Motive Power Department as well as any vehicle Manufacturers safety regulations and specifications

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will demonstrate the basic ability to:

1. . Properly raise and support as well as lower vehicles and equipment such as trucks, tractors and trailers for the purpose of performing lubrication and service of such equipment
2. Perform the applicable engine lube service and chassis lubrication service procedures to a variety of on road vehicles and equipment
3. Perform a proper visual inspection of the lighting systems of on road vehicles and equipment.
- 4 Perform a proper circle check and inspection of tires and visual inspection brake chamber stroke on a combination vehicle as well as a truck or tractor type vehicle according to Trucking Industry Standards.
5. Perform Cooling System testing and Service using the proper methods and coolant handling equipment according to Mfg Specifications and Safety Policies.

6. Visually inspect batteries for loose and corroded cables and connections and clean with proper battery cleaning compounds and tools designed to safely do the job.
7. Perform battery load test with the either a carbon pile load tester or a electronic battery tester to confirm that the batteries are within the proper specifications for service.

### **III. TOPICS:**

1. Safe Jacking and Lifting Procedures for Heavy Truck Vehicles and Equipment.
2. Medium and Heavy Truck lubrication and Cooling Systems.
3. Hydraulic and Air Brake System Operation Overview
4. Trucks, Tractors and Combination Vehicle Descriptions
5. Highway Vehicle Circle Check Requirements.
6. Maintenance Schedule Intervals and Record Keeping Methods
7. Heavy truck batteries and service procedures.

### **IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Automotive Technology – Text & Workbook

Pens, pencils, calculator, 3-ring binder

\*shop coat or coveralls

\*CSA approved steel toe boots (high top)

\*CSA approved safety glasses

\*these items mandatory for shop

**V. EVALUATION PROCESS/GRADING SYSTEM:**

The final grade for this course will be based on the results of classroom, assignments and shop evaluations weighed as indicated:

Classroom – 60% of the final grade is comprised of term tests and performance of practical shop tasks

Assignments – 10% of the final grade is comprised of a number of technical reports

Shop – 30% of the final grade is comprised of attendance, punctuality, preparedness, student ability, work organization and general attitude  
(Student will be given notice of test and assignment dates in advance)

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
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:**Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Code of Conduct*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade "C", (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Student Portal:

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to <https://my.saultcollege.ca>.

Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

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.

**<Optional: It is the departmental policy that once the classroom door has enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.>**

**CICE Modifications:****Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

**A. Tests may be modified in the following ways:**

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

**B. Tests will be written in CICE office with assistance from a Learning Specialist.*****The Learning Specialist may:***

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

**C. Assignments may be modified in the following ways:**

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

***The Learning Specialist may:***

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

**D. Evaluation:**

Is reflective of modified learning outcomes.