



**I. COURSE DESCRIPTION:**

Upon successful completion of this course, Heavy Duty System Maintenance, the student will be able to identify and describe the various types of off road heavy equipment. Course will focus on entry level maintenance procedures performed on various pieces of Heavy Equipment as well as safety precautions to be observed working on and around Heavy Equipment.

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

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

**1. Heavy Equipment Visual Identification**

Potential Elements of the Performance:

- Visually able to identify different pieces of heavy equipment
- Visually able to identify major components in heavy equipment.

**2. Work Practices**

Potential Elements of the Performance:

- Be aware of safety hazards that exist in a heavy equipment repair shop and take proactive measures to address them.
- Be aware and take proactive measures to the safety hazards that exist in performing routine maintenance on heavy equipment.
- Perform safe lifting procedures with every lift.
- Perform safe climbing procedures when climbing is required.
- Safely block a machine so maintenance can be performed as per manufactures recommendations.
- Perform routine maintenance on heavy equipment as per manufactures recommendations.

**3. Equipment Operation**

Potential Elements of the Performance:

- Be able to safely operate at least one piece of heavy equipment to perform routine maintenance on it as per manufactures' recommendations.

**III. TOPICS**

1. Machine and Major Component Identification
2. Safety hazards in a heavy equipment shop
3. Safety hazards around heavy equipment
4. Safe lifting procedures
5. Safe climbing procedures
6. Lockout procedures
7. Maintenance procedures
8. Equipment operating safety.

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

Pencil, paper, safety boots, safety glasses, coveralls

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

Assignments and classroom exercises	50%
Practical evaluation	50%

The following semester grades will be assigned to students:

<b>Grade</b>	<b><u>Definition</u></b>	<b><i>Grade Point Equivalent</i></b>
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.

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 enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.

Eye, Face and Foot Personal Protection Equipment (P.P.E):

Students are required to wear appropriate Personal Protection Equipment (P.P.E) in designated areas at all times. The designated areas for eye and foot protection in the Motive Power areas are: C1073 (Automotive), C1000, C1010, and C1040 (Truck/Coach and Heavy Equipment) and C1120 (Marine and Small Engines). Appropriate P.P.E must also be worn when facing hazards outside of these designated areas.

**Eye Protection:**

All protective eye wear shall meet the requirements of:

C.S.A. - Z94.3 or A.N.S.I. - Z87.1 +.

Approved safety glasses (lens and frames) shall have side protection such as wrap around design or fixed side shields.

**Foot Protection:**

1. Boot height- minimum 5 ½" uppers, measured from the top of the sole.
2. CSA Green Patch rating.

**VII. COURSE OUTLINE ADDENDUM:**

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

