

SAULT STE. MARIE, ONTARIO



HOURS/WEEK: FIVE

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I. COURSE DESCRIPTION:

Upon successful completion of this course the student will be able to describe the legal responsibilities of employees and employers relating to safe work practices, protection of the environment, and operation of lifting rigging, and blocking equipment according to government safety and environmental legislation, be able to use precision measuring tools, be able to perform fastening device installation and removal procedures, be able to describe the repair procedures for bearings, seals, and sealants, be able to identify and perform proper cleaning methods, be able to select and use proper hand tools including electric and pneumatic tools for the required task to be completed.

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 in the workplace.
2. Define the responsibilities of employers and employees relating to safe work practices and protection of the environment.
3. Perform the inspection, testing, and operating procedures for lifting, raising, and blocking equipment.
4. Define the purpose and fundamentals of precision and non-precision measuring tools and demonstrate the proper use and ability to read various types of precision and non-precision tools.
5. Outline the application and maintenance procedures of precision measuring tools and perform measuring activities.
6. Define the purpose and fundamentals of fastening and torqueing procedures.
7. Describe the construction and operation and grading system for the types of fastening devices used for commercial vehicles and equipment.
8. Demonstrate a working knowledge of drill bits, tap and die sets, proper drilling and threading procedures used for repair of threaded fasteners.

9. Define the purpose and fundamentals of bearings, seals, and sealants.
10. Describe construction features of bearings, seals, sealants, and perform proper removal and installation procedures according to manufacturer specifications
11. Describe Proper setup and shut down of oxyacetylene equipment and Demonstrate proper flame adjustment and method of heating and cutting with oxyacetylene equipment
12. Outline the proper procedure for cleaning methods on various components.
13. Identify and select the proper types of hand tools including electric and pneumatic tools to perform given tasks.

III. TOPICS:

1. Occupational Health and Safety
2. Precision Measuring Tools
3. Fastening Devices and Torqueing Procedures
4. Installation and Inspection of Bearings, Seals
5. Cleaning Methods
6. Hand Tools and Power Tools
7. Proper use of Drills, taps and dies
8. Types of Gaskets and Sealants
9. Oxyacetylene Welding, Heating and Cutting Procedures
10. Heavy Equipment Lifting and Blocking Devices

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

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

Text Book: Heavy Duty Truck Systems
4th ed., 12959# or 5th Edition
Author: Bennett
Publisher: Thomson Nelson Learning Canada

Pens, Pencils, Calculator and 3 Ring Binder

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.	

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 only be granted admission at the Instructors discretion.

Failure to show up for a Test either theory or practical will result in an “F” grade unless prior arrangements have been made with the Instructor.

Re-writes of theory tests are only allowed at the Instructors discretion and any student that re-writes a test will be given a maximum of 60%.

VII. COURSE OUTLINE ADDENDUM:

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