



**I. COURSE DESCRIPTION:**

Upon successful completion of this course, the student will be able to describe the methods and procedures for the safe use of hand and power tools, powder- actuated tools according to industry standards of practice. The student will also be able to demonstrate the basic skills required to safely operate the previously mentioned tools.

Students can expect an introduction to and information for new construction workers to know their rights and to work safely. Students can also expect to learn the importance of accessing the Occupational Health & Safety Act & the Regulations, and be able to identify and assess health & safety hazards associated with formwork, working at heights, manual material handling, electrical hazards, equipment hazards, traffic control, trenching hazards, hoisting rigging and crane hazards, and confined space hazards.

**II. LEARNING OUTCOMES:**

1. Adhere to applicable health and safety related legislation and practices.
2. Assist in preparing construction specifications, material and cost estimates.
3. Assist in planning, scheduling and monitoring construction and civil engineering projects.
4. Demonstrate relevant mathematical, computer and technical problem solving skills as it relates to civil engineering / construction projects.
5. Demonstrate an understanding of the working roles and inter-relationships required to adhere to the objectives of the project and work in accordance to labour-management principles and practices.
6. Apply sound environmental practices and policies in civil engineering / construction projects.

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

**2009 Pocket Ontario OH&S Act & Regulations – Construction Edition**  
(Available in the Sault College Book Store)

**Construction Health and Safety Manual (2008 Edition)**  
(Available in the Sault College Book Store)

**Personal Protective Equipment (PPE) and Tools** will be required during classes to be conducted in a shop environment. PPE and tools required are:

- CSA Certified Hard Hat
- CSA Certified (Green Patch) work boots
- CSA Certified Safety Glasses
- Work gloves e) Carpenters work pouch
- 25 foot measuring tape
- Carpenters Hammer
- Speed Square
- Carpenters pencil

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

**Application Exercises-** Based on the students' ability to safely and properly operate tools and construct projects to specifications. (Weekly) 50%

**Tests** 35%

**Attendance** 15%

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100%

The following semester grades will be assigned to students:

<b>Grade</b>	<b>Definition</b>	<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.	

## 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.

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
				<b>Rules and Personal Protective Equipment (PPE)</b>				
1	1	Lecture	2	Shop Safety Rules Shop Procedures				Handout
		Lab	2	Eye and Head Protection Foot and Hearing Protection	Construction Health & Safety Handbook	Assignment 1	Peer Evaluation	Construction Health & Safety Handbook
2	1	Lecture	2	Personal Protective Equipment				Handout
		Lab	2	Respiratory Protection Hand and Skin Protection High Visibility Clothing	Construction Health & Safety Handbook	Assignment 2	Peer Evaluation	Construction Health & Safety Handbook
3	1	Lecture	2	Equipment Setup and Handling			<b>PPE Test</b>	
		Lab	2	Equipment Handling		Assignment 3	Peer Evaluation	Handout
				<b>Hand Tools</b>				
4	1,2,3,4,6	Lecture	2	Introduction to Hand Tools / Demonstration				Handout
		Lab	2	Reading Tapes		Assignment 4	<b>Hand Tools Test</b>	

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
				<b>Hand Tools</b>				
5	1,2,3,4,6	Lecture	2	Use of Hand Tools				Handout
		Lab	2	Hand Tools Project		Hand Tool Project		
6	1,2,3,4,6	Lecture	2	Use of Hand Tools				Handout
		Lab	2	Hand Tools Project		Hand Tool Project	Submit for evaluation	
				<b>Power Tools</b>				
7	1,2,3,4,6	Lecture		Introduction to Power Tools, Types and Usage				Handout
		Lab	2	Power Tools Demonstration		Assignment 5		
8	1,2,3,4,6	Lecture	2	Using Power Cutting, Drilling and Shaping Tools				Handout
		Lab		<b>Using Power Tools</b>				
9	1,2,3,4,6	Lecture	2	Using Power Cutting, Drilling and Shaping Tools				Handout
		Lab	2	Passport Testing			<b>Test</b>	
				<b>Power Tools Project</b>				
10	1,2,3,4,6	Lecture	2	Power Tools Project Overview				Handout
		Lab	2	Power Tools Project (Workbench)		Assignment 6	Peer Evaluation	

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
11	1,2,3,4,6	Lecture	2	Using Power Cutting, Drilling and Shaping Tools				Handout
		Lab	2	Power Tools Project (Workbench)		Power Tools Project	Project Submission	
				<b>Health and Safety</b>				
12	1,5	Lecture	2	-Introduction to Construction Safety and -Applicable Legislation Common Health and Safety Hazards				Handout Construction Health & Safety Handbook
		Lab	2	Personal Protective Equipment		Assignment	Peer Evaluation	Occupational Health & Safety Act
13	1,5	Lecture	2	-Manual Material Handling and Back Care -Access Equipment				Handout
		Lab	2				Test	
14	1,5	Lecture	2	-Housekeeping and Site Hazard Management -Basic Electrical Safety		Assignment	Peer Evaluation	Handout
		Lab	2				Test	
15		Lecture	2	Review and Questions				
		<b>Test</b>	<b>2</b>	<b>Final Test</b>			<b>Test</b>	
16		Lecture	2	Course wrap-up				