

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: Construction Tools and Safety

CODE NO. : CCT100 **SEMESTER:** ONE

PROGRAM: 1. Civil Engineering Technician
2. Construction Carpentry Techniques

AUTHOR: Sam Spadafora / Barry Sparrow

DATE: June 2016 **PREVIOUS OUTLINE DATED:** September 2015

APPROVED: *"Corey Meunier"* June/16
CHAIR

TOTAL CREDITS: FOUR

PREREQUISITE(S): NIL

HOURS/WEEK: FOUR

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*For additional information, please contact Corey Meunier, Chair
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(705) 759-2554, Ext. 2610*

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:

Ontario OH&S Act & Regulations – Consolidated Version (Available in the Sault College Book Store)

Construction Health and Safety Manual
(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 50%
the students' ability to safely and
properly operate tools and construct
projects to specifications. (Weekly)

Tests	35%
Attendance	15%
	100%

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%	
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.	

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.

VI. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
				Rules and Personal Protective Equipment (PPE)				
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			PPE Test	
		Lab	2	Equipment Handling		Assignment 3	Peer Evaluation	Handout
				Hand Tools				
4	1,2,3,4,6	Lecture	2	Introduction to Hand Tools / Demonstration				Handout
		Lab	2	Reading Tapes		Assignment 4	Hand Tools Test	

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
				Hand Tools				
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	
				Power Tools				
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		Using Power Tools				
9	1,2,3,4,6	Lecture	2	Using Power Cutting, Drilling and Shaping Tools				Handout
		Lab	2	Passport Testing			Test	
				Power Tools Project				
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	
				Health and Safety				
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				
		Test	2	Final Test			Test	
16		Lecture	2	Course wrap-up				