

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Construction Tools and Safety

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

PROGRAM:

1. Civil Engineering Technician
2. Construction Carpentry Techniques
3. Residential Construction Technician – Home Inspection

AUTHOR: Sam Spadafora

DATE: September 2014 **PREVIOUS OUTLINE DATED:** September 2013

APPROVED:

“Corey Meunier”

CHAIR

DATE

TOTAL CREDITS: FOUR

PREREQUISITE(S): NIL

HOURS/WEEK: FOUR

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For additional information, please contact Corey Meunier, Chair
Technology & Skilled Trades
(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:

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%

100%

The following semester grades will be assigned to students:

| Grade | Definition | <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. | |

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 |
|------|-----------|---------|-------|--|---------------------------------------|--------------|------------------------|---------------------------------------|
| | | | | 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 | | | | |