SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	CONCRETE AND FORMWORK I		
CODE NO. :	CCT120	**SEMESTER:**	TWO
PROGRAM:	CIVIL ENGINEERING TECHNICIAN		
AUTHOR:	SAM SPADAFORA		
INSTRUCTOR:	TIM WETZEL		
DATE:	January 2017	**PREVIOUS OUTLINE DATED:**	January 2015
APPROVED:	*"Corey Meunier"* **CHAIR**		Dec '16
TOTAL CREDITS:	4		
PREREQUISITE(S):	NONE		
HOURS/WEEK:	4		

For additional information, please contact Corey Meunier, Chair
School of Technology & Skilled Trades
(705) 759-2554, Ext. 2610

I. COURSE DESCRIPTION:

This course focuses on the methods, testing and procedures used in the placement of concrete. Students will learn about equipment and tools used in concrete placement, and will learn to install concrete and as well as reinforcement components. Students will learn to interpret blueprints for form setting activities and the use of form setting tools.

II. LEARNING OUTCOMES:

1. Use surveying instruments to collect and provide data for engineering / construction projects.

2. Adhere to applicable health and safety legislation and practices.

3. Conduct material testing; analysis and inspection using accepted standards and practices.

III. REQUIRED RESOURCES/TEXTS/MATERIALS:

Personal Protective Equipment (PPE) will be required during classes to be conducted in a shop environment. PPE required:

a) CSA Certified Hard Hat
b) CSA Certified (Green Patch) work boots
c) CSA Certified Safety Glasses
d) Work gloves

IV. EVALUATION PROCESS/GRADING SYSTEM:

Theory Testing	35%
Application Exercises	50%
Attendance	15%
Total	100%

The following semester grades will be assigned to students:

Grade	Definition	*Grade Point Equivalent*
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W	Student has withdrawn from the course without academic penalty.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.

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

VII. TOPIC OUTLINE

Outcome	Topic and Content	Reading	Week
	1.Intro to concrete 1.1 Concrete Basics 1.2 Concrete Basic (Written Test) 1.3 Placing and Handling Concrete (Pgs. 7.1 –7.10) 1.3 Placing Concrete In Forms (Pgs. 7.11-7.14) 1.4 Finishing Concrete (Pgs. 7.15-7.23) 1.5 Written Test (Pgs. 7.1-7.23) 1.6 Curing Concrete (Pgs. 7.23-7.29) 1.7 Concrete Estimating 1.8 Concrete PPE and Safety (Dust Masks, Form Release Oil (MSDS))	Handout	1,2,3,4,
	2. Intro to Formwork 2.1. Formwork Definitions and Test 2.2. Concrete Footings and Design 2.3. Footing Details and 2.4. Foundation Wall 2.5. Test on 2.1. – 2.4. 2.6. Blueprint Reading Exercise 2.7. Plot Plan Print Reading Exercise 2.8. Full Basement Foundation Print Reading Exercise 2.9. Wall Form Methods and Materials 2.10. Alternative Wall Form Methods (Insulated) 2.11. Formwork Hardware (Snap-Tys, Tyscrus)	Handout	5,6,7,
	3. Projects 3.1. Building and Pouring a Concrete Patio Slab 3.2. Building forms for Light Concrete Formwork 3.3. Building Forms for Heavy Concrete Formwork 3.4. Assembling both types of Concrete Formwork 3.5. Concrete Mixer Safety 3.6. Mixing and Pouring Concrete in Forms 3.7. Stripping Concrete Forms 3.8. Damp-proofing and water-proofing the concrete wall. 3.9 Jack Hammer safety and PPE 3.10 Demolition of the concrete walls and clean-up		8,9,10, 11,12