



COURSE OUTLINE: CTT0140 - CONSTRUCTION BASICS

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Approved: Martha Irwin, Chair, Community Services and Interdisciplinary Studies

Course Code: Title	CTT0140: CONSTRUCTION BASICS
Program Number: Name	1120: COMMUNITY INTEGRATN 4005: PRE-TRADES TECHNOLOGY
Department:	PRE-TRADES & TECHNOLOGY
Semesters/Terms:	20W
Course Description:	This course is intended to introduce the student to various activities commonly undertaken in construction and related engineering disciplines. The student will gain understanding in the use of materials, procedures, techniques, tools and equipment commonly encountered in construction engineering projects. Construction is one of the leading industries in Ontario. It takes teamwork to be successful in this profession. This course introduces you to some of the key skills for success in this field. These skills include AutoCAD, scheduling, scaffolding, concrete testing, surveying, estimating and woodworking.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course:	4005 - PRE-TRADES TECHNOLOGY
Please refer to program web page for a complete listing of program outcomes where applicable.	VLO 1 Function at a level of mathematics suited to the student's post-secondary program aspirations.
	VLO 3 Enhance reading and writing skills to college entry standards.
	VLO 4 Develop effective learning and study skills.
	VLO 5 Develop effective career planning skills.
	VLO 6 Become familiar with the college study requirements.
	VLO 9 Work with others
Essential Employability Skills (EES) addressed in this course:	EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.
	EES 4 Apply a systematic approach to solve problems.
	EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.
	EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10 Manage the use of time and other resources to complete projects.
	EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D



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Other Course Evaluation & Assessment Requirements:

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.

Books and Required Resources:

Construction Health & Safety Manual by Infrastructure Health & Safety
 Edition: 2013
 ISBN: 9780919665541

Course Outcomes and Learning Objectives:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Use CAD to create and plot a basic drawing	1.1 Recognize the hardware and software required for CAD 1.2 Understand the use and value of precision in CAD for engineering and construction 1.3 Use CAD to extract information from a drawing
Course Outcome 2	Learning Objectives for Course Outcome 2
2. Use basic mathematics to solve problems found in the construction industry.	2.1 Review of basic algebra and geometry 2.2 Review of imperial measurement 2.3 Define perimeter, area and volume related to various geometric shapes 2.4 Review of the Pythagorean Theorem and its practical application 2.5 Apply basic mathematics to solve construction related problems
Course Outcome 3	Learning Objectives for Course Outcome 3
3. Describe methods and procedures required for scaffold erection and dismantling.	3.1 List required personal protective equipment 3.2 Interpret related occupational health and safety legislation 3.3 Interpret material list requirements 3.4 Identify scaffolding system and components 3.5 Describe pre-installation inspection procedures for scaffolding system and components 3.6 Describe area layout procedures for scaffold base 3.7 Describe the procedures to check alignment during installation 3.8 Demonstrate basic installation procedures for scaffolding systems
Course Outcome 4	Learning Objectives for Course Outcome 4



4. Describe the methods and procedures required for selecting and mixing concrete ingredients and testing for slump and strength.	4.1 Identify various types of cement and describe their use 4.2 Identify types of concrete admixtures and describe their uses 4.3 Identify concrete curing methods and materials 4.4 Identify concrete testing methods 4.5 Perform slump testing of concrete
Course Outcome 5	Learning Objectives for Course Outcome 5
5. Describe the use of survey measurement devices for construction.	5.1 Identify surveying equipment, including: tripod, level, transit, laser level 5.2 Interpret the use of a tripod, level and rod 5.3 Define the term bench mark, back sight, foresight and height of instrument 5.4 Illustrate the set up of a level on a tripod 5.5 Illustrate the use of the instrument in calculating levels and heights 5.6 Describe the use of grade through the use of a bench mark
Course Outcome 6	Learning Objectives for Course Outcome 6
6. Understand the use of Estimating in construction.	6.1 Identify different types of estimates 6.2 Recognize the different construction divisions
Course Outcome 7	Learning Objectives for Course Outcome 7
7. Construct a woodworking project according to specifications provided.	7.1 Sizing material as per specifications on drawings provided 7.2 Training of the safe use of tools required to complete the project

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Attendance	15%
Projects and Labs	50%
Tests and Assignments	35%

CICE Modifications:

Preparation and Participation

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

B. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.



3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

C. Tests will be written in CICE office with assistance from a Learning Specialist.

The Learning Specialist may:

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

D. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

E. Evaluation:

Is reflective of modified learning outcomes.

NOTE: Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

Date: January 30, 2020

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.

