

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: Blueprints, Specifications and Layout

CODE NO. : CCT103 **SEMESTER:** ONE

PROGRAM: Civil Engineering Technician
Construction Carpentry Techniques

AUTHOR: Barry Sparrow

DATE: May 2016 **PREVIOUS OUTLINE DATED:** May 2015

APPROVED:

"Corey Meunier"

CHAIR

DATE

TOTAL CREDITS: FOUR

PREREQUISITE(S): NIL

HOURS/WEEK: THREE

Copyright ©2016 The Sault College of Applied Arts & Technology
Reproduction of this document by any means, in whole or in part, without prior written permission of Sault College of Applied Arts & Technology is prohibited.
For additional information, please contact Corey Meunier, Chair
School of Technology & Skilled Trades
(705) 759-2554, Ext. 2610

I. COURSE DESCRIPTION:

This course will provide the student with an introduction to the preparation and interpretation of construction drawings (prints) and specifications. The student will learn how drawings and specifications are organized as well as a systematic approach for drawing review. The student will also be introduced to the concepts of construction work measurement and layout using a variety of techniques. The student will also be given an introduction to CAD (computer-aided drawing) with an emphasis on locating and collecting data from CAD drawings.

II. LEARNING OUTCOMES:

1. Use survey instruments to collect and provide data for engineering/construction projects.
2. Prepare and interpret detailed dimensional drawings using computer assisted drafting software.
3. Demonstrate relevant mathematical, computer and technical problem solving skills as it relates to civil engineering/construction projects.
4. 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.

III. REQUIRED RESOURCES/TEXTS/MATERIALS:

Understanding Construction Drawings for Housing and Small Buildings

3rd ed. (With prints)

Tom Stephenson

Nelson Education, Publishers

ISBN 0-17-653155-6

25 foot tape measure

IV. EVALUATION PROCESS/GRADING SYSTEM:

Chapter Quizzes (16)	50%
Assignments and Activities (4)	20%
Mid-term Test	15%
Final Test	15%
Total	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%	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.	

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.

V. 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. Once the classroom door has been closed, the learning process has begun. Late arrivers may not be granted admission to the room.

Assignments and Examination Policy:

If a student is unable to write a test or exam at the scheduled time the following procedure shall apply:

- The student shall provide the professor with advance notice (in writing) of the need to miss the test
- The student shall provide documentation as to the reason for the absence and the make-up will be at the discretion of the professor.
- Upon return the student is responsible to make arrangements for the writing of the test. This arrangement shall be made prior to the next schedule class.
- In the event of an emergency, the student shall telephone the professor as soon as possible at 759-2554, to notify of the absence. If the professor is not available, the college has a 24 hour voice mail system.
- In the event of an test missed due to emergency, the student shall provide documentation from a professional such as doctor or lawyer.
- Exams written after the scheduled date may receive a reduced grade
- Although a D grade is considered a course pass, a D average will not allow the student to graduate.

All late assignments (without documentation) will receive a maximum grade of C (60%).

VI. 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
				Print Reading Overview				
1	1,3,4	Lecture	1	-Introduction to Print Reading -Systems of measurement -Area and volume measurement -Using tapes and scales	Chapter 1 Chapter 2	Chapter 1 Assignment (p. 13) Chapter 1 Quiz Review (p 16) Math Review (p 433 Appendix B)	Quiz Chapter 1	LMS, text, drawing set
		Lab	2	-Collecting and presenting measurement information		Chapter 2 Assignments (p 23 and p 27) Field Measurement Exercise	Group assignment	LMS, text, drawing set, scales, tape measure
				Print Reading				
2	1,3,4	Lecture	2	-Interpreting plans and elevations -plan visualization	Chapter 3	Chapter 2 Quiz Review (p. 34)	Quiz Chapter2 Quiz Chapter 3	
		Lab	2	-Print reading activity -Sketching activities		Chapter 3 Assign (p. 48) Chapter 3 Quiz Review (p. 59)		Text, LMS
				Interpreting Symbols, Notes and Details				
3	1,3,4	Lecture	2	-Construction abbreviations -Material identification, notes and detail drawings	Chapter 4		Quiz Chapter 4	Text, LMS
		Lab	2	-Print reading activity		-Chapter 4 Assignment (p. 84)		

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
						-Chapter 4 Quiz Review (p. 87)		
				Site plans, By-laws and Building Code, Foundations, Wood Frame Construction				
4	1,3,4	Lecture	2	-Site plans and survey drawings -Contours and elevations - Residential footings and foundations -Dampproofing and waterproofing	Chapter 5 Chapter 6		Quiz Chapter 5 Quiz Chapter 6	Text, LMS
		Lab	2	-Print reading activity		Chapter 5 Assignment (p. 95) Chapter 5 Quiz Review (p. 108) Chapter 6 Assignment 1&2 (p. 134) Chapter 6 Quiz Review (p. 138)		
5	1,3,4	Lecture	2	-Wood frame construction -Floor framing and wall framing -Identify code compliant framing	Chapter 7 and Chapter 8		Quiz Chapter 7 Quiz Chapter 8	Text, LMS
		Lab	2	-Print reading activity		Chapter 7 Assignment (p 147)		

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
						Chapter 7 Assignment 1(p 147) Assignment 2 (p 167) Chapter 7 Quiz Review (p. 169) Chapter 8 Assignment 1&2 (p. 189) Chapter 8 Quiz Review (p. 193)		
6	1,3,4	Lecture	2	-Roof framing -Stick framing and truss roofs	Chapter 9		Quiz Chapter 9	Text, LMS
		Lab	2	-Print Reading Activity		Chapter 9 Assignment 1&2 (p 224) Chapter 9 Quiz Review (p. 228)		
7	1,3,4	Lecture	2	-Exterior finishes -Concrete slabs	Chapter 10	Chapter 10 Assignment 1&2 (p 254) Chapter 10 Quiz review (p. 258)	Quiz Chapter 10	
		Lab	2	Mid-term test (Chapters 1-9)				
				Exterior and Interior Finishes, Thermal and Moisture Protection, HVAC				

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
8	1,3,4	Lecture	2	-Mechanical and electrical systems -HVAC	Chapter 11		Quiz Chapter 11	Text, LMS
		Lab	2	-Print reading activity		Chapter 11 Assignment 1 (p. 284) Chapter 11 Assignment 2 (p. 296) Chapter 11 Quiz Review (p. 298)		
9	1,3,4	Lecture	2	-Understanding the building envelope -Thermal and moisture protection -Air and moisture flow	Chapter 12		Quiz Chapter 12	Text, LMS
		Lab	2	-Print reading activity		Chapter 12 Assignment 1&2 (p. 317) Chapter 12 Quiz Review (p. 321)		
10	1,3,4	Lecture	2	-Interior finishes -Specifications and contracts -Contract documents	Chapter 13 Chapter 14		Quiz Chapter 13 Quiz Chapter 14	Text, LMS
		Lab	2	-Print reading activity		Chapter 13 Assignments 1&2 (p. 337 and p. 354) Chapter 13 Review Quiz (p. 356)		

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
						Chapter 14 Assignment (p. 382) Chapter 14 Quiz Review (p. 385)		
11	1,3,4	Lecture	2	-Renovation work -Multiple unit buildings -Fire separations -Small commercial buildings	Chapter 15 Chapter 16		Quiz Chapter 15 Quiz Chapter 16	Text, LMS
		Lab	2	-Print reading activity		Chapter 15 Assignment (p 399) Chapter 15 Quiz Review (p 409) Chapter 16 Assignment (p 421) Chapter 16 Quiz Review (p 423)		
				Computer Aided Drafting (CAD)				
12	2	Lecture	2	-CAD in construction drawings -Introduction to CAD -AutoCAD screen layout -Using input device and commands				
		Lab	2			CAD Activity 1	Participation	LMS
13	2	Lecture	2	-Getting started with CAD				

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
				-Opening and saving files -Basic drawing and editing commands -Using inquiry tools in AutoCAD -Find distance, area, volume perimeter and object properties				
		Lab	2			CAD Activity 2	Participation	LMS
14	2	Lecture	2	-Printing CAD drawings -Use layout space, viewports -layer control and visibility				
		Lab	2			CAD Activity 3	Submit Assignment	
15	2	Lecture		Final Review				
		Lab	2	Final Test Chapters 1-16, CAD				
16		Lecture		Course wrap-up				