

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 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:

Blueprint Reading for Construction Second Edition

James A.S. Fatzinger
Pearson/Prentice Hall
ISBN 0-13-110811-5

Architectural and Metric Scales

IV. EVALUATION PROCESS/GRADING SYSTEM:

Assignments and Activities (8-10)	50%
Mid-term Test	25%
Final Test	25%
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%	
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W	Student has withdrawn from the course without academic penalty.	

V. SPECIAL NOTES:Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Communication:

The College considers WebCT/LMS as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the Learning Management System communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in Student Code of Conduct. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade “C”, (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Student Portal:

The Sault College portal allows you to view all your student information in one place. mysaultcollege gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to <https://my.saultcollege.ca>.

Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

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. 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.

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

VI. TOPIC OUTLINE

Outcome	Topic and Content	Reading	Week
3,4	1. Print Reading Overview 1.1. Purpose of Construction Drawings and Specifications 1.2. Organization of Drawings 1.3. Orthographic Views 1.4. Plans, Sections, Elevations 1.5. Details and Schedules 1.6. Chapter Questions/Activities	LMS Chapter 1 Chapter 2	1,2
3	2. Construction Math Review and Measurement 2.1. Fractions and Units of Measure 2.2. Area and Volume 2.3. Measuring Tapes and Scales 2.4. Chapter Questions/Activities	LMS Appendix 1 Chapter 1 Handout	2
3,4	3. Survey and Site Work 3.1. Site Plans/Civil Plans 3.2. Contours and Grade Elevations 3.3. Interpreting Foundation Plans 3.4. Chapter Questions/Activities	Chapter 2 Chapter 3 Chapter 4 Chapter 11 LMS Handout	3,4
1,3,4	4. Residential Construction Drawings 4.1. Contours and Grade Elevations 4.2. Interpreting Foundation Plans 4.3. Wood Frame Construction 4.4. HVAC 4.5. Foundation Layout 4.6. Chapter Questions/Activities 4.7. Foundation Layout Activity	Chapter 4 Chapter 5 Chapter 6 Chapter 7 LMS Handout	4,5,6
3,4	5. Commercial Construction Drawings 5.1. Commercial Construction Drawings 5.2. Specifications 5.3. Types of Commercial Construction 5.4. Chapter Questions/Activities	Appendix 4 Chapter 9 Chapter 10 Chapter 11 LMS	6,7
	6. Mid-term Exam		7

Outcome	Topic and Content	Reading	Week
2	7. Introduction to CAD 7.1. Use of CAD in Construction Drawings 7.2. Starting AutoCAD 7.3. Opening Drawings/File Management 7.4. Basic Drawing and Editing 7.5. CAD Activities/Assignment	LMS Handout	8,9
2	8. Gathering Information Using CAD 8.1. Measure Distance and Area 8.2. Measure Perimeter/Total Length 8.3. Determine Volume 8.4. Determine Item Counts	LMS Handout	10,11
2	9. Printing and Plotting CAD Drawings 9.1. Use of Layout Space 9.2. Viewports/Plot Scale 9.3. Assigning Line Weights	LMS Handout	12
2	10. Elementary Drawing and Editing with CAD 10.1. Drawing and Erasing Entities 10.2. Saving and Managing Files 10.3. Basic Editing Commands	LMS Handout	13
3,4	11. Interpreting Commercial Drawings 11.1. Review Architectural/Structural Drawings 11.2. Review Site/Civil Drawings 11.3. HVAC Drawings 11.4. Specifications 11.5. Advanced Print Reading Activity	Chapter 10 Chapter 11 Chapter 12 Chapter 13 LMS Handout	14
3,4	12. Contract Documents 12.1. Purpose of Construction Specifications 12.2. Locating and Interpreting Specifications 12.3. Print Reading and Specifications Activity	Chapter 9 Appendix 4	14
	13. Final Exam		15