

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



Sault College

**COURSE OUTLINE**

**COURSE TITLE:** CONSTRUCTION METHODS  
**CODE NO. :** CON204 **SEMESTER:** 4  
**PROGRAM:** ARCHITECTURAL TECHNICIAN/  
CONSTRUCTION TECHNICIAN  
**AUTHOR:** S. IENCO, J. FITTON  
**DATE:** Jan-06 **PREVIOUS OUTLINE DATED:** Dec-05

**APPROVED:**

		_____	_____
		<b>DEAN</b>	<b>DATE</b>
<b>TOTAL CREDITS:</b>	4		
<b>PREREQUISITE(S):</b>	ARC133		
<b>HOURS/WEEK:</b>	4		

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## **I. COURSE DESCRIPTION:**

This course will provide an opportunity for the participant to demonstrate various construction-related skills through completing a small construction project. The participant, as a member of a team, will design, draft, estimate, schedule, manage, and construct a small project. The project is based on a house design of 80 square metre (864 square feet) scaled down to 9 square metre (100 square feet).

Throughout the construction of this project, the participant will adhere to the Ontario Occupational Health and Safety Act and Regulations for Construction Projects.

### 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.

## **II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Communicate construction project-related information effectively and accurately by interpreting and producing data in graphic and written formats.

### Potential Elements of the Performance:

- Prepare and present information as graphics by using standard drafting conventions
- Modify graphics to meet criteria
- Prepare minutes of meetings correspondence, estimates and typical contract documents
- Record and report work activity

2. Interact with others in teams in ways that contribute to effective working relationships and achievement of goals.

### Potential Elements of the Performance:

- Identify the tasks to be completed
- Establish strategies to accomplish the tasks
- Identify roles for members of the team in a timely fashion

Potential Elements of the Performance Continued:

- Treat other members of the group equitably and fairly
  - Contribute one's own ideas, opinions, and information while demonstrating respect for those of others
  - Employ techniques intended to bring about the resolution of any conflicts
  - Regularly assess the group's progress and interactions and make adjustments when necessary
3. Work according to project specifications and drawings; and applicable law, standards, bylaws, and codes

Potential Elements of the Performance:

- Implement project specifications and drawings
  - Apply the Ontario Building Code for the design of the structure
  - Apply the Ontario Occupational Health and Safety Act and Regulations for Construction Projects
  - Follow manufacturer's recommended directions for equipment and materials used
  - Carry out prescribed safety checks
4. Coordinate time, cost, and quality performance for construction projects.

Potential Elements of the Performance:

- Record and report work activity
- Follow project schedules
- Participate in the inspection of the project
- Perform quality-assurance sampling and testing of concrete
- Monitor the project by comparing activities and results to data from a variety of sources including established criteria, schedule, projected cost estimate, and actual costs
- Apply collected and stored information accurately in decision making, reporting, and quality assurance
- Participate in the resolution of construction problems related to materials, scheduling, resources, and budgetary concerns
- Develop deficiency lists and take appropriate actions to resolve these deficiencies

5. Apply the principles of building science to interpret and solve technical problems related to the construction project.

Potential Elements of the Performance:

- Design the structure to conform to the Ontario Building Code
- Draft the project using AutoCAD
- Lay out the structure foundation plan using the necessary surveying equipment
- Design the concrete formwork for the foundation
- Construct the project by applying systematic approaches to problem solving and decision making

**III. TOPICS:**

1. Communication
2. Interaction with team members
3. Specifications, Drawings, Codes and Standards
4. Time and cost management
5. Building science principles

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

**Canadian Wood-Frame House Construction CD-ROM and Guide**  
**CMHC**

**Ontario Occupational Health and Safety Act and Regulations for**  
**Construction Projects**

**V. EVALUATION PROCESS/GRADING SYSTEM:**

You will be assigned a final grade based on the successful completion of assignments, quizzes, project and tests, weighted as follows:

Assignments/Quizzes	30%
Attendance	10%
Completion of Project within Budget and scheduled time	60%
<b>TOTAL</b>	<b>100%</b>

The following semester grades will be assigned to students:

<b>Grade</b>	<b><u>Definition</u></b>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	4.00
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:**

### Special Needs:

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

### 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.

## **VII ACADEMIC / CLASSROOM CONDUCT**

Introduction: Sault College students, faculty members, employees and Ray Lawson Hall Residents constitute an academic community committed to training and education that will enhance effectiveness in the workplace and quality of life. The College community expects all members to discipline themselves, individually and collectively, and it requires adherence to the standards of conduct appropriate for an academic community.

Sault College considers its students adults and as such obligated to make responsible decisions. The Student Code of Conduct exists to assist in the effort of providing the best possible learning and living environment for all students. It is the obligation of students to treat all other members of the academic community with dignity and respect – including other students, faculty members, employees, visitors and neighbours of the College. The enforcement of the Student Code of Conduct is critical to the existence of such an environment for all members of the academic community. Ignorance of the rules or of the law is not a defence against disciplinary action. The College reserves all rights to criminal action where it deems necessary. Lack of intention to violate College policy will not generally excuse an infraction.

### Academic Dishonesty:

Students shall submit written or other work in a course that shall be the product of their own efforts. “Academic Dishonesty” includes, but is not limited to, the following:

- a. Copying from another student’s paper.
- b. Using material not authorized by the person administering the test or assignment.
- c. Collaborating with another student during a test without permission.
- d. Plagiarism (i.e. representing the work of another, as one’s own, inclusive of purchases of a commercial nature).
- e. Collusion (i.e. obtaining from or giving to another student unauthorized assistance in course work).
- f. Falsification (i.e. modification, without authorization, of any examination paper, record, assignment, or report).

Academic Dishonesty Continued:

- g. Knowingly using, buying, selling, stealing, or soliciting contents of a test, examination paper, record, assignment, or report.
- h. Representing oneself as another student for the purpose of taking a test or examination or allowing oneself to be represented by another for the same.
- i. Attempting to bribe or otherwise coerce a professor/instructor to obtain favours.
- j. Cheating (i.e. any misrepresentation by a student of their performance in a College subject for the purpose of obtaining credit to which they are not entitled).
- k. Any act designated by the President or his/her designate.

(Student Code of Conduct – Article 2, Section 2)

Attendance:

Students are expected to attend 100% of their classes. Attendance will be recorded within the first 15 minutes of each class.

Leaving or Entering During Class:

Students should exercise respect for faculty and students when leaving or entering a class that is already in session. Leaving or entering should be done with a minimal amount of interruption.

Disruption:

Students shall not obstruct or disrupt, or attempt to obstruct or disrupt, teaching, administration, disciplinary procedures, or other College activities.

**(Student Code of Conduct – Article 2, Section 9)**

Use of Electronic Devices:

*General:* Taking photos or making audio/video recordings on Sault College property without permission in ANY context in which the person being photographed or recorded has a reasonable expectation of privacy is prohibited. Examples include but are not limited to:

*Classrooms:* The use of cell phones, photographically capable cell phones, pagers and other communication/electronic devices during classes, clinical or field placement is prohibited unless authorized by faculty.

Use of Electronic Devices Continued:

*Examinations:* The use of cell phones, photographically capable cell phones, pagers and other communication/electronic devices during exams and midterms is prohibited unless authorized by faculty in charge.

(Student Code of Conduct – Article 2, Section 31)

**SANCTIONS**

College staff may impose sanctions in accordance with their responsibilities. Sanctions, which are imposed, may become part of the student's official record and are removed one year and one term after the student's last academic activity at Sault College.

The College shall make sanctions concerning students' actions and offences occurring within or affecting people on Sault College owned or controlled property, including but not limited to Ray Lawson Hall Residence, Sault College Aviation Hangar, off-campus at a College-sponsored event, or when such actions or offences at a non-College event off-campus have a direct impact on students' on-campus. The College reserves the right to assess any sanction it may deem appropriate. A serious breach or continuation or a repetition of behaviour in violation of the Student Code of Conduct will be cause for further sanctions up to and including expulsion.

**Sanctions for Academic Dishonesty may include the following:**

1. A professor/instructor may assign a sanction as defined below, or make recommendations to the Dean for disposition of the matter. The professor/instructor may:
  - issue a verbal reprimand
  - make an assignment of a lower grade with explanation
  - require additional Academic assignments and issue a lower grade upon completion, to the maximum grade "C"
  - make an automatic assignment of a failing grade
  - recommend to the Dean, dismissal from the course with the assignment of a failing grade
  - recommend to the Dean, dismissal from the College for a definite or indefinite period of time with a failing grade.



**Sanctions for Academic Dishonesty may include the following Continued:**

2. If the student denies the allegation of academic dishonesty the student should discuss the matter with the Director of Student Services immediately. If the matter cannot be resolved the student should file an Academic Appeal within three (3) working days. The appeal would automatically move to Step Two – Academic Appeal.

(Student Code of Conduct – Article 4)

**Testing Absence**

If a student is unable to write a test for medical reasons on the date assigned, the following procedure is required:

- In the event of an emergency on the day of the test, the student may require documentation to support the absence and must telephone the College to identify the absence. The college has a 24 hour electronic voice mail system (759-2554) Ext. 2600.
- The student shall provide the Professor with advance notice preferably in writing or e-mail of his/her need to miss the test.
- The student may be required to document the absence at the discretion of the Professor.
- All decisions regarding whether tests shall be re-scheduled will be at the discretion of the Professor.
- The student is responsible to make arrangements, immediately upon their return to the College with their course Professor in order to make-up the missed test prior to the next scheduled class for the course in question.

**VIII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**IX. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.