

I. COURSE DESCRIPTION:

This course is designed to provide the CICE student with the knowledge and understanding of correct lifting and hoisting procedures and the safe use of related equipment.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. **List, describe, and comply with all safety rules and procedures pertaining to lifting, hoisting and moving machinery as outlined in the OH&S ACT.**

Potential Elements of the Performance:

- List five safety rules
- Describe the steps taken to complete one lifting procedure
- Demonstrate with assistance/guidance if needed of good comprehension of lifting techniques, or explain the action.

2. **Plan a lift** with assistance/guidance if needed, or explain the action.

Potential Elements of the Performance:

- Using load charts select the correct size of slings.
- State the SWL limits
- Using weight charts, calculate the weight of the load

3. **Select, Inspect and Maintain hoist and rigging equipment.**

Potential Elements of the Performance:

- Describe the construction of wire rope
- Name three types of slings
- List the key points for inspecting chains
- Describe the difference between a Spreader bar and an Equalizer beam
- Describe how to inspect and measure a hook
- Explain the main reason to inspect eye bolts, shackles and turn buckles
- Explain why you would select a block and winch.
- Describe the difference between a chain fall and a come-along

4. **Describe the principles and operation of hoists both overhead and mobile.**

Potential Elements of the Performance:

- Describe the major differences between overhead and mobile cranes
- Explain the advantages and disadvantages of both styles of hoists

5. ***Demonstrate signals to ensure that correct and safe hoisting operations are performed*** with assistance/guidance if needed, or explain the action.

Potential Elements of the Performance:

- Identify each hand signal
- Demonstrate each signal
- Explain the procedure for signaling via radio

6. ***Demonstrate the ability to tie common knots used in rigging*** with assistance/guidance if needed, or explain the action.

Potential Elements of the Performance:

- Square or reef knot
- Clove hitch
- Timber hitch
- Bowline
- Bowline on a bite
- Double bowline

7. ***Demonstrate methods of rigging, hoisting and moving machinery and equipment safely into position.*** with assistance/guidance if needed, or explain the action.

Potential Elements of the Performance:

- Explain the choice of rigging
- Describe the hoist selection
- Safely move a load

III. TOPICS:

1. SAFE LIFTING PROCEDURES
2. PLANNING A LIFT
3. SELECTING, INSPECTING AND MAINTAINING EQUIPMENT
4. OVERHEAD AND MOBILE CRANES
5. HOISTING SIGNALS
6. COMMON KNOTS USED IN RIGGING
7. PRACTICAL RIGGING

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

BC Millwright Manual
 Rigging Fundamentals (level one) available in book store
 Handouts

V. EVALUATION PROCESS/GRADING SYSTEM:

Quizzes, Tests (modified)	45%
Lab work/Practical Participation	30%
Final Exam (modified)	10%
Attendance (min.80% req.) (see Special Notes section)	15%

The tests and final exam will be completed in the CICE Office with the Learning Specialist present.

The following semester grades will be assigned to students:

Grade	Definition	<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.	

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.

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.

Due to the Safety concerns of this course, students who **do not** attend a minimum of 80% (12 classes) of the scheduled classes will be given an "F" grade for this course.

Addendum:

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.

VII. COURSE OUTLINE ADDENDUM:

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

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. 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.

B. 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.

C. 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

D. Evaluation:

Is reflective of modified learning outcomes.