

I. COURSE DESCRIPTION:

This course will provide the student with basic knowledge of modern, effective rigging, hoisting and material handling practices. The student will learn technical principles and concepts of load handling, as well as industry specific health & safety regulations that apply in the Province of Ontario.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Describe the use of material handling tools, equipment and personal protective equipment according to the manufacturer and Occupational Health and Safety Standards.
2. Describe the methods and procedures required for material handling and equipment load and unload operations according to the manufacturer and Occupational Health and Safety Standards.
3. Describe the methods and procedures required for the reconditioning of job site materials according to the manufacturer and Occupational Health & Safety Standards.
4. Describe the methods and procedures required for material inventory and distribution according to the manufacturer and Occupational Health & Safety Standards.
5. Describe the methods and procedures required for moving material around the job site according to the manufacturer and Occupational Health & Safety Standards.
6. Describe the basics of centre of gravity and load distribution as they apply to loading, moving & hoisting of all materials on the job site according to industry standards, regulations and Occupational Health & Safety Standards.

III. TOPICS:

1. Introduction to construction related PPE (Personal Protective Equipment), it's proper use & application.
2. Examine The Ontario Occupational Health & Safety Act & Regulations for Construction Projects, and understand how they

apply to workers on construction projects.

3.
 - a)** Identify, describe & understand material handling equipment and it's safe use, according to manufacturers specifications & the Occupational Health & Safety Act. This will include equipment such as slings (synthetic & wire rope), cables, chains, load binders, lifting clamps & tensioners.
 - b)** Describe the selection and use of rigging & hoisting equipment for the work application.
 - c)** Describe load/unload procedure signals required for co-workers communication.
 - d)** Illustrate the documentation related to a load/unload procedure (i.e. the lift plan).
 - e)** Illustrate the preparation of a load for shipping to a new site.
4. Describe the methods and procedures required for the reconditioning of job site materials.
 - a)** Identify material source which can be cleaned & stored.
 - b)** Identify appropriate hand/power tools for reconditioning applications.
 - c)** Describe the material application procedures for the use of form oil.
 - d)** Describe material cleaning/storage procedures.
5. Describe the methods & procedures required for material inventory & distribution.
 - a)** Illustrate the counting of received inventory items.
 - b)** Illustrate the checking of received items in relation to a shipping bill.
 - c)** Describe a procedure to verify the receipt of materials.
 - d)** Illustrate the documentation of items ordered & not received.
 - e)** Define & discuss Material Storage Areas and associated practices & procedures.

6. Describe methods & procedures for moving material around the job site.
 - a) Identify the rigging & hoisting equipment for movement of material, including slings, cables, chains, binders, clamps & tensioners.
 - b) Recommend rigging & hoisting equipment for movement of material.
 - c) Apply the use of knots.
 - d) Illustrate signaling methods to co-workers regarding movement of material.
 - e) Interpret material location from a job site plan.
7. Define & apply the principles of centre of gravity and load management and apply them when selecting the appropriate material handling equipment for moving materials on a job site.
8. Describe daily inspection practices for equipment used in the movement of materials.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Construction Safety Association of Ontario – **RIGGING MANUAL** (Available in the Sault College Book Store)
2. **2007 Pocket Ontario OH&S Act & Regulations – Consolidated Edition** (Available in the Sault College Book Store)
3. Construction Safety Association of Ontario – **HAND SIGNALS FOR HOISTING OPERATIONS CARD** (Available in the Sault College Book Store)
4. **Personal Protective Equipment (PPE)** will be required during classes to be conducted in a shop environment. PPE required to be:
 - a) CSA Certified Hard Hat
 - b) CSA Certified (Green Patch) work boots
 - c) CSA Certified Safety Glasses
 - d) Work gloves

V. EVALUATION PROCESS/GRADING SYSTEM:

Quizzes & Assignments (8)	30%
Mid Term Exam	20%
Practical Tests	20%
<u>Final Exam</u>	<u>30%</u>
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%	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.

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*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. 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.

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.

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

COURSE NOTES

Marks will not be assigned for attendance, although attending every class during the semester is highly recommended. In the event of an absence, the student is responsible for obtaining the lecture notes that were missed. Handouts can be obtained from the instructor.

If a quiz or exam should be missed, a student will be allowed to write it at an alternate time, provided that the instructor was made aware of the absence before the date of the test.

There will be a combination of 8 quizzes/assignments throughout the semester, administered approximately every 2 weeks. As one quiz is completed, or assignment submitted, the due date for the next assignment will be discussed. Marks will be deducted for assignments turned in late (1 mark will be deducted for every day late). No assignments will be accepted after 3 days from the original due date.

Personal Protective Equipment (PPE) as documented in the course outline will be required to enter the shop environment. The shop component of the course will not occur until the latter part of the semester. Students are encouraged to speak with their other instructors to determine if other course will have more specific requirements for Personal Protective Equipment.

VII. 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.

VIII. 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.