

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Rigging, Hoisting and Material Handling I
CODE NO. : CTT101 **SEMESTER:** 1
PROGRAM: Construction Carpentry Techniques
AUTHOR: Dan Moody
DATE: Sept/09 **PREVIOUS OUTLINE DATED:**
APPROVED:
“Corey Meunier”
CHAIR _____
DATE
TOTAL CREDITS:
PREREQUISITE(S): None
HOURS/WEEK: 3

Copyright ©2009 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 The Natural Environment, Technology & Skilled Trades
(705) 759-2554, Ext. 2610

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, concepts & practices 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 and demonstrate 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 moving material around the job site according to the manufacturer and Occupational Health & Safety Standards.
4. 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) - 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, shackles, load

binders, lifting clamps and hoists.

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 methods & procedures for moving material around the job site.

a) Identify the rigging & hoisting equipment for movement of material, including slings, cables, chains, shackles load binders, lifting clamps & hoists.

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.

5. 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.

6. Describe daily inspection practices for equipment used in the movement of materials.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. **Rigging Fundamentals Trainee Guide** – Prentice Hall (Available in the Sault College Book Store)
2. **Ontario Occupational Health & Safety Act & Regulations for Construction Projects** (Available in the Sault College Book Store)
3. **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 & Tests	40%
Practical Tests	30%
Final Exam (written & practical)	20%
<u>Attendance</u>	<u>10%</u>
Total	100%

The following semester grades will be assigned to students:

Grade	Definition	<i>Grade Point Equivalent</i>
A+	90 – 100%	
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:

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. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. 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.

Additional Course Notes:

Every student shall attend class on time. Attendance will be taken at the beginning of each class; those showing up after attendance has been taken will have a late recorded for that day. Repetitive late arrivals or absences will be reflected in the final mark.

Every student shall attend class, and come prepared with:

- a) all assigned texts
- b) notebook or paper
- c) pen, pencil, calculator, ruler
- d) all assigned safety gear (to each class). No exceptions will be made (i.e. if all the required PPE is not present, the student will not be allowed in the shop and an absent mark will be recorded).

All assignments are due at the beginning of the class. Assignments handed in more than 10 minutes after the beginning of class will be automatically have 50% deducted from the assignment grade, and a late mark will be assigned for that day. Students who are sick, or absent on the day an assignment is due shall be responsible for getting the assignment to class. Assignments may be handed in at the Dean's office, provided they are signed and time stamped by the Deans' Administrative Assistant.

Missed quizzes and tests may be re-written at the next class, provided that notification of the absence has been given (in person or by phone) prior to the beginning of class.