



# COURSE OUTLINE

## RIG101

Prepared: Neal Moss    Approved:

<b>Course Code: Title</b>	RIG101: RIGGING AND HOISTING
<b>Program Number: Name</b>	4039: MECH. ENG. TN-MANUFA
<b>Department:</b>	MECHANICAL TECHNIQUES PS
<b>Semester/Term:</b>	17F
<b>Course Description:</b>	This course is designed to provide the student with the knowledge and understanding of correct lifting and hoisting procedures and the safe use of all equipment.
<b>Total Credits:</b>	2
<b>Hours/Week:</b>	2
<b>Total Hours:</b>	30
<b>Substitutes:</b>	CCT101, OEL1074
<b>Essential Employability Skills (EES):</b>	<p>#3. Execute mathematical operations accurately.                  #4. Apply a systematic approach to solve problems.                  #5. Use a variety of thinking skills to anticipate and solve problems.                  #6. Locate, select, organize, and document information using appropriate technology and information systems.                  #7. Analyze, evaluate, and apply relevant information from a variety of sources.</p>
<b>General Education Themes:</b>	Science and Technology
<b>Course Evaluation:</b>	Passing Grade: 50%, D
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>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.</p> <p>Grade                  Definition Grade Point Equivalent                  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</p>

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 W Student has withdrawn from the course without academic penalty.

**Evaluation Process and Grading System:**

Evaluation Type	Evaluation Weight
Attendance	15%
final exam	10%
labs	30%
Tests	45%

**Books and Required Resources:**

BC Millwright Manual (chapter 7)  
 Publisher: Queen's Printer Government Publication Services  
 ISBN: 0-7718-9473-2

**Course Outcomes and Learning Objectives:**

**Course Outcome 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.

**Learning Objectives 1.**

Potential Elements of the Performance:

- List five safety rules
- Describe the steps taken to complete one lifting procedure
- Demonstrate a good comprehension of lifting techniques

**Course Outcome 2.**

Select, Inspect and Maintain hoist and rigging equipment.

**Learning Objectives 2.**

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

**Course Outcome 3.**

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

### **Learning Objectives 3.**

Potential Elements of the Performance:

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

### **Course Outcome 4.**

Demonstrate signals to ensure that correct and safe hoisting operations are performed.

### **Learning Objectives 4.**

Potential Elements of the Performance:

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

### **Course Outcome 5.**

Demonstrate the ability to tie common knots used in rigging.

### **Learning Objectives 5.**

Potential Elements of the Performance:

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

### **Course Outcome 6.**

Demonstrate methods of rigging, hoisting and moving machinery and equipment safely into position.

### **Learning Objectives 6.**

Potential Elements of the Performance:

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

**Date:**

Monday, December 18, 2017

Please refer to the course outline addendum on the Learning Management System for further information.