



COURSE OUTLINE: RIG101 - RIGGING AND HOISTING

Prepared: Neal Moss

Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	RIG101: RIGGING AND HOISTING
Program Number: Name	4039: MECH. ENG. TN-MANUFA 5082: MECH.TECH.IND.MAINT.
Department:	MECHANICAL TECHNIQUES PS
Semesters/Terms:	20W, 20S
Course Description:	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.
Total Credits:	2
Hours/Week:	2
Total Hours:	30
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Substitutes:	CCT101, OEL1074
Vocational Learning Outcomes (VLO's) addressed in this course:	<p>4039 - MECH. ENG. TN-MANUFA</p> <p>VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines.</p> <p>VLO 2 Apply quality control and quality assurance procedures to meet organizational standards and requirements.</p> <p>VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures.</p> <p>VLO 4 Apply sustainability best practices in workplaces.</p> <p>VLO 5 Use current and emerging technologies to support the implementation of mechanical engineering projects.</p> <p>VLO 6 Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering.</p> <p>VLO 8 Contribute to the design and the analysis of mechanical components, processes and systems applying fundamentals of mechanical engineering.</p> <p>VLO 10 Verify the specifications of materials, processes and operations to support the design and production of mechanical components.</p> <p>VLO 11 Contribute to the planning, implementation and evaluation of projects.</p> <p>VLO 12 Develop strategies for ongoing personal and professional development to enhance work performance.</p> <p>5082 - MECH.TECH.IND.MAINT.</p> <p>VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines.</p> <p>VLO 2 Contribute to the application of quality control and quality assurance procedures to</p>

Please refer to program web page for a complete listing of program outcomes where applicable.



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	<p>meet organizational standards and requirements.</p> <p>VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures.</p> <p>VLO 4 Support sustainability best practices in workplaces.</p> <p>VLO 9 Assist in manufacturing, assembling, maintaining and repairing mechanical components according to required specifications.</p> <p>VLO 10 Select, use and maintain machinery, tools and equipment for the installation, manufacturing and repair of basic mechanical components.</p>						
Essential Employability Skills (EES) addressed in this course:	<p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p>						
Course Evaluation:	Passing Grade: 50%, D						
Other Course Evaluation & Assessment Requirements:	<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> <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.</p>						
Books and Required Resources:	<p>BC Millwright Manual (chapter 7) Publisher: Queen's Printer Government Publication Services ISBN: 0-7718-9473-2</p>						
Course Outcomes and Learning Objectives:	<table border="1"> <thead> <tr> <th>Course Outcome 1</th> <th>Learning Objectives for Course Outcome 1</th> </tr> </thead> <tbody> <tr> <td>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.</td> <td> Potential Elements of the Performance: 1.1 List five safety rules 1.2 Describe the steps taken to complete one lifting procedure 1.3 Demonstrate a good comprehension of lifting techniques </td> </tr> <tr> <th>Course Outcome 2</th> <th>Learning Objectives for Course Outcome 2</th> </tr> </tbody> </table>	Course Outcome 1	Learning Objectives for Course Outcome 1	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: 1.1 List five safety rules 1.2 Describe the steps taken to complete one lifting procedure 1.3 Demonstrate a good comprehension of lifting techniques	Course Outcome 2	Learning Objectives for Course Outcome 2
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Course Outcome 2	Learning Objectives for Course Outcome 2						

	2. Select, Inspect and Maintain hoist and rigging equipment.	Potential Elements of the Performance: 2.1 Describe the construction of wire rope 2.2 Name three types of slings 2.3 List the key points for inspecting chains 2.4 Describe the difference between a Spreader bar and an Equalizer beam 2.5 Describe how to inspect and measure a hook 2.6 Explain the main reason to inspect eye bolts, shackles and turn buckles 2.7 Explain why you would select a block and winch. 2.8 Describe the difference between a chain fall and a come-along
	Course Outcome 3	Learning Objectives for Course Outcome 3
	3. Describe the principles and operation of hoists both overhead and mobile.	Potential Elements of the Performance: 3.1 Describe the major differences between overhead and mobile cranes 3.2 Explain the advantages and disadvantages of both styles of hoists
	Course Outcome 4	Learning Objectives for Course Outcome 4
	4. Demonstrate signals to ensure that correct and safe hoisting operations are performed.	Potential Elements of the Performance: 4.1 Identify each hand signal 4.2 Demonstrate each signal 4.3 Explain the procedure for signaling via radio
	Course Outcome 5	Learning Objectives for Course Outcome 5
5. Demonstrate the ability to tie common knots used in rigging.	Potential Elements of the Performance: 5.1 Square or reef knot 5.2 Clove hitch 5.3 Timber hitch 5.4 Bowline 5.5 Bowline on a bite 5.6 Double bowline	
Course Outcome 6	Learning Objectives for Course Outcome 6	
6. Demonstrate methods of rigging, hoisting and moving machinery and equipment safely into position.	Potential Elements of the Performance: 6.1 Explain the choice of rigging 6.2 Describe the hoist selection 6.3 Safely move a load	

Evaluation Process and Grading System:

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

Date:

August 27, 2019

Addendum:

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

