COURSE OUTLINE: RIG101 - RIGGING AND HOISTING

Prepared: Neal Moss
Approved: Corey Meunier, Dean, Technology, Trades, and Apprenticeship

Course Code: Title	RIG101: RIGGING AND HOISTING
Program Number: Name	4039: MECH. ENG. TN-MANUFA 5082: MECH.TECH.IND.MAINT.
Department:	MECHANICAL TECHNIQUES PS
Academic Year:	2024-2025
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:	28
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: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4039 - MECH. ENG. TN-MANUFA** VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines. VLO 2 Apply quality control and quality assurance procedures to meet organizational standards and requirements. VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures. VLO 4 Apply sustainability best practices in workplaces. VLO 5 Use current and emerging technologies to support the implementation of mechanical engineering projects. VLO 6 Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering. VLO 8 Contribute to the design and the analysis of mechanical components, processes and systems applying fundamentals of mechanical engineering. VLO 10 Verify the specifications of materials, processes and operations to support the design and production of mechanical components. VLO 11 Contribute to the planning, implementation and evaluation of projects. VLO 12 Develop strategies for ongoing personal and professional development to enhance work performance. **5082 - MECH.TECH.IND.MAINT.** VLO 1 Complete all work in compliance with current legislation, standards, regulations and

		guidelines.
	VLO 2	Contribute to the application of quality control and quality assurance procedures to meet organizational standards and requirements.
	VLO 3	Comply with current health and safety legislation, as well as organizational practices and procedures.
	VLO 4	Support sustainability best practices in workplaces.
	VLO 9	Assist in manufacturing, assembling, maintaining and repairing mechanical components according to required specifications.
	VLO 10	Select, use and maintain machinery, tools and equipment for the installation, manufacturing and repair of basic mechanical components.
Essential Employability Skills (EES) addressed in this course:	EES 3	Execute mathematical operations accurately.
	EES 4	Apply a systematic approach to solve problems.
	EES 5	Use a variety of thinking skills to anticipate and solve problems.
	EES 6	Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7	Analyze, evaluate, and apply relevant information from a variety of sources.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.	
Other Course Evaluation & Assessment Requirements:	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. 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 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.	
Books and Required Resources:	Millwright Manual by Michener Publisher: Queen`s Printer Government Publication Services Edition: 2nd ISBN: 0-7718-9473-2 Basic Rigger 3rd edition Publisher: 978-0-13-518508-7 ISBN: 0-13-518508-4	

Millwright Manual Study Guide by Ronald A. Fournie
Publisher: Ministry of Finance
ISBN: 7960003066

Course Outcomes and Learning Objectives:

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**
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	Potential Elements of the Performance:

	rigging, hoisting and moving machinery and equipment safely into position.	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
final exam	10%
labs	30%
Participation	15%
Tests	45%

Date: August 19, 2024

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