



**Introduction to Heavy Equipment Technician/Mechanics
Centre for Northern Innovation in Mining**

COURSE OUTLINE

Introduction to Heavy Equipment Technician/ Mechanics

140 HOURS

0 CREDITS

PREPARED BY: _____

DATE: _____

APPROVED BY: _____

DATE: _____

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Yukon University
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Yukon University
P.O. Box 2799
Whitehorse, YT
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Introduction to Heavy Equipment Technician/Mechanics

PROGRAM DESCRIPTION:

This 140-hour hands-on program provides the theory and skills necessary for graduates to safely begin introductory heavy equipment mechanics.

ADMISSION REQUIREMENTS:

No pre-requisites

REQUIRED TEXTS AND SUPPLIES:

Students are expected to supply appropriate clothing and steel toe boots.

EVALUATION:

Students will receive a pass or fail based on participation, practical and written assessment in this course.

ATTENDANCE:

Participants are expected to attend each class on time, and ready to participate in class. If it is necessary to miss class, the instructor is to be contacted in advance.

ACADEMIC AND STUDENT CONDUCT:

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

ELECTRONIC DEVICES:

To minimize distractions for others, cell phones, iPods and other electronic devices must be turned off while students are in class. In an emergency situation, or at the discretion of the instructor, a student may be given permission to use a cell phone.

APPROPRIATE LANGUAGE:

In all areas of the university environment students are responsible to show respect for others; swearing, or language that is discriminatory or derogatory in relation to race, sex, ethnic background, religious beliefs, age and physical condition is not appropriate.

LEARNING OUTCOMES & OBJECTIVES:

Students will be able to:

- Identify hazards involved in heavy equipment service & repair while demonstrating safe mechanical practices and tool use
- Demonstrate an understanding of fuel handling and storage, and fuel system service
- Demonstrate a basic understanding of heavy equipment power systems (diesel, electromotive, alternative fuels)
- Demonstrate a basic understanding of final drive systems (tires, wheel end, tracks)
- Demonstrate a basic understanding, of electrical system repair and electronic system safety (wiring repair, 12/24V, lighting)
- Demonstrate a basic understanding of hydraulic brake systems and service
- Demonstrate a basic understanding of hydraulic systems and service (fluids, leak detection, hose repair & replacement)
- Enhanced air brake endorsement
- Demonstrate a basic understanding of safe equipment operation (start/energize, operate, stop/de-energize/park, autonomous vehicles)
- Demonstrate an ability to safely test and service heavy equipment batteries, charging systems and cranking systems
- Complete shop projects under supervision of instructor

INSTRUCTOR(S) CREDENTIALS & EXPERIENCE:

- Journeyperson(s) with relevant, current experience in heavy equipment mechanics.
- Training and experience in instruction and adult education.

UPON COMPLETION:

Successful students will receive a Yukon University certificate of completion.