



# COURSE OUTLINE

**Course Name:** Heavy Duty Equipment Tech. 4

**Course Number:** HDEP 4002

**Number of Credits:** 7.0

**Effective Date:** September 2017

**Course Description:**

This course introduces students to the safe servicing of a variety of heavy mechanical systems, including: advanced hydraulic systems, electric drive systems, wheeled equipment steering, undercarriage, working attachments, pneumatic systems. In the classroom and shop, students develop their ability to apply theoretical knowledge and occupational skills to all heavy mechanical work situations.

**School or Centre:**

School of Transportation Trades

**Year of Study:**

1st Year Post-secondary

**Course History:**

New Course

**Name of Replacing Course (if applicable):**

**Course Pre-requisites (if applicable):**

Registered ITA Apprentice in one of the following trades: Heavy Duty Equipment Technician

**Course Co-requisites (if applicable):**

None

**PLAR (Prior Learning Assessment & Recognition)**

No  Yes (details below):

**Instructional Strategies:**

Instructional strategies include classroom lectures, demonstrations, group discussions, and hands-on practice.

**Course Learning Outcomes:**

Upon successful completion of this course, the student will be able to:

1. Diagnose and repair advanced hydraulic systems
2. Service, diagnose and repair electric drive systems
3. Diagnose and repair wheeled equipment steering
4. Diagnose and repair undercarriage
5. Diagnose and repair working attachments
6. Diagnose and repair pneumatic systems

**Program Learning Outcomes:**

If this course is taken as a requirement in any of the Heavy Mechanical Trade programs- HMT-4, the program learning outcomes are located in the relevant program content guide available from the Advising Services office.

## Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Percentages		70%

## Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Quizzes/Tests	50	Students are given multiple choice quizzes and tests throughout the course to assess their theoretical knowl.
Lab Work	50	Practical knowledge and skills are evaluated in the shop while students are working on training aids
-		Note:Evaluation plan is based upon ITA Program Outline
-		
-		The final grade calculation is per the ITA program outline.
	<b>Total</b>	<b>100</b>

## Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	80	Learning labs
K - Shop/Teaching Kitchen	80	shop and external compound
	<b>Total</b>	<b>160</b>

## Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

**Course Topics:**

1. Diagnose and repair advanced hydraulic systems
2. Service, diagnose and repair electric drive systems
3. Diagnose and repair wheeled equipment steering
4. Diagnose and repair undercarriage
5. Diagnose and repair working attachments
6. Diagnose and repair pneumatic systems

## **VCC Education and Education Support Policies**

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at [www.bctransferguide.ca](http://www.bctransferguide.ca).

### **FOR COMMITTEE USE ONLY**

Approved by Curriculum Committee:		Approved by Education Council:	May 9, 2017
-----------------------------------	--	--------------------------------	-------------