



HDT2 – Heavy Duty Equipment Technician Apprenticeship Level 2

Trades

Effective Term & Year: Spring 2024

Program Outline Review Date: 2029-09-01

Program Area: Trades Apprenticeship Training

Description:

This 8-week program delivers the technical training required for Level 2 of the four-level Heavy Duty Equipment Technician Apprenticeship program. Apprentices will develop knowledge and practical skills related to describing engine fundamentals, alternate fuel systems, and diesel fuel injection fundamentals, diagnosing and repairing electrical systems, engines support systems, diesel supply systems, mechanical fuel injection systems, electronic diesel fuel systems, and diesel emissions systems and engine brakes, as well as diagnosing and removing engines and components. This program includes classroom theory, demonstrations and practical hands-on training in a heavy-duty mechanic shop setting. Safe work practices related to the heavy-duty equipment trade are reinforced throughout the program.

Credentials Granted:

Upon successful completion of the 8-week Level 2 Heavy Duty Equipment Technician program, students receive:

- Level 2 Technical Training credit of the Heavy Duty Equipment Technician Apprenticeship program from SkilledTradesBC

Delivery Methods: On-Campus (Face-to-Face), Hybrid (Face-to-Face and Online)

Program Duration: 8 weeks

Instructional Activity and Hours:

Activity	Hours
Instructional Hours (hrs/wk)	28 hrs/wk
Directed Studies (hrs/wk)	2 hrs/wk
Total (hrs/wk)	30 hrs/wk
Total Program Hours	240 Hours

Content Weighting:

Activity	Percentage
Theory	50%
Practical Skills	50%

Admission Requirements:

Sponsored Heavy Duty Equipment Technician apprentice who has successfully completed Level 1 Heavy Duty Equipment Technician technical training or Heavy Mechanical Foundation program.

Prior Learning and Recognition:

Credit cannot be awarded for this program through Prior Learning Assessment and Recognition.

Program Transfer Credit:

For information about block transfer agreements between programs in British Columbia, Alberta, and elsewhere, please visit <http://www.cotr.bc.ca/transfer>.

To minimize transfer issues, check with an academic advisor at the institution that will receive the transfer credits.

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Program Outline Effective Date the following textbooks were in use (most current edition):

HD – Level 2: COTR Custom Package 2016. King's Printer.

*Please see the instructor's syllabus or check COTR's online text calculator
<https://textbook.cotr.bc.ca/>
for a complete list of the currently required textbooks.*

Program Competencies and Technical Training Content:

Upon the successful completion of this program, students will be able to:

HDAP 210 Service, Diagnose, and Repair Electrical and Electronic Systems

- Diagnose and repair charging systems
- Diagnose and repair starting systems
- Diagnose and repair electrical and electronic components and systems
- Diagnose and repair vehicle and equipment management systems
- Service, diagnose, and repair electronic ignition systems

HDAP 211 Service, Diagnose, and Repair Engines and Supporting Systems

- Describe engine fundamentals
- Service engine support systems
- Diagnose and repair engine support systems
- Service diesel fuel supply systems
- Diagnose and repair diesel supply systems
- Describe alternative fuel systems
- Service, diagnose and repair engines and components
- Diagnose and repair mechanical fuel injection systems
- Service, diagnose, and repair electronic diesel fuel systems
- Service, diagnose, and repair diesel emissions systems
- Service, diagnose, and repair engine retarder systems

The program competencies and technical training content delivered in this program follow the SkilledTradesBC Program Outline for this trade.

See instructor's syllabus for the detailed outline of weekly readings, activities, and assignments.

Evaluation and Assessment:

HEAVY DUTY EQUIPMENT TECHNICIAN APPRENTICESHIP LEVEL 2

COTR COURSE SUBJECT COMPETENCIES		THEORY WEIGHTING	PRACTICAL WEIGHTING
HDAP 210	Service, Diagnose, and Repair Electrical and Electronic Systems	25%	25%

HDAP 211	Service, Diagnose, and Repair Engines and Supporting Systems	75%	75%
	Total	100%	100%
In-school theory/practical subject competency weighting		50%	50%
Final In-school percentage score		IN-SCHOOL%	
In-school Percentage Score			
Combined theory and practical subject competency multiplied by		80%	
Standard Level Exam Percentage Score			
The exam score is multiplied by		20%	
Final Percentage Score		FINAL%	

Pass Requirements:

In order to pass this program, students are required to:

- achieve a minimum overall 70% final percentage score.

Students must attend all required scheduled tests and exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled test or exam without approval will be given a grade of "0" for the exam.

Students must provide their own:

- hi-vis coveralls
- digital multimeter
- safety glasses
- coveralls
- leather steel-toed boots
- pens, pencils, coloured pencils, paper
- calculator
- Reference Manuals

Academic Policies:

College of the Rockies policies related to courses can be found at

<https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Program Grade

COM	NCG
Completed to the defined standard – 70% or greater	No Credit Granted – less than 70%

Program Changes:

Information contained in program outlines is correct at the time of publication. Content of the program is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add material to programs.

Industry Training:

The program competencies and technical training content delivered in this program follow the SkilledTradesBC Program Outline for this trade.

Safety Catalog:

WorkSafeBC regulations apply to all trades programs. Students are expected to follow all safe work practices and have high regard for the safety of others as well as of themselves. Students are responsible to wear personal protective equipment (PPE) as directed. At a minimum, students must provide and wear approved safety footwear and eyewear at all times in the shop. Additional PPE may be required for specific tasks. Students are expected to wear clothing suitable for working safely in the shop.