HDT3 – Heavy Duty Equipment Technician Apprenticeship Level 3

Trades

Effective Term & Year: Fall 2022
Program Outline Review Date: 2024-09-01

Program Area: Trades Apprenticeship Training

Description:

This 6-week program delivers the technical training required for Level 3 of the four-level Heavy Duty Equipment Technician Apprenticeship program. Apprentices will develop knowledge and practical skills related to describing power transfer systems and diagnosing and repairing clutches, manual transmissions, automated systems, automatic transmissions and torque converters, power shift transmissions, drivelines and drive axles, final drives, driveline retarders, winches and power take-offs and transfer cases. 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 6-week Level 3 Heavy Duty Equipment Technician (Heavy Duty Equipment Mechanic) program, students receive:

- Level 3 Technical Training credit of the Heavy Duty Equipment Technician Apprenticeship program from SkilledTradesBC

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

Program Duration: 6 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	180 Hours

Content Weighting:

Activity	Percentage
Theory	50%
Practical Skills	50%

Admission Requirements:

Sponsored Heavy Duty Equipment Technician apprentice who has successfully completed Level 2 Heavy Duty Equipment Technician technical training.

Flexible Assessment:

Credit cannot be awarded for this program through Flexible Assessment.

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 Tech-Level 3: COTR Custom Package 2016 (+BC Module). Queen’s Printer.

Program Competencies and Technical Training Content:

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

Powertrains

- HDET 301 · Describe Power Transfer Systems
- HDET 302 · Diagnose and Repair Clutches
- HDET 303 · Diagnose and Repair Manual Transmissions
- HDET 304 · Diagnose and Repair Automated Systems
- HDET 305 · Diagnose and Repair Automatic Transmissions and Torque Converters
- HDET 306 · Diagnose and Repair Power Shift Transmissions
- HDET 307 · Diagnose and Repair Drivelines
- HDET 308 · Diagnose and Repair Drive Axles
- HDET 309 · Diagnose and Repair Final Drives
- HDET 310 · Diagnose and Repair Driveline Retarders
- HDET 311 · Diagnose and Repair Winches
- HDET 312 · Diagnose and Repair Power Take-offs and Transfer Cases

---

Evaluation and Assessment:

HEAVY DUTY EQUIPMENT TECHNICIAN APPRENTICESHIP LEVEL 3

COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
	Powertrains		
HDET 301	- Describe Power Transfer Systems	6%	0%
HDET 302	- Diagnose and Repair Clutches	9%	10%
HDET 303	- Diagnose and Repair Manual Transmissions	11%	10%
HDET 304	- Diagnose and Repair Automated Systems	8%	5%
HDET 305	- Diagnose and Repair Automatic Transmissions and Torque Converters	12%	15%
HDET 306	- Diagnose and Repair Power Shift Transmissions	12%	15%
HDET 307	- Diagnose and Repair Drivelines	8%	5%
HDET 308	- Diagnose and Repair Drive Axles	12%	10%
HDET 309	- Diagnose and Repair Final Drives	8%	15%
HDET 310	- Diagnose and Repair Driveline Retarders	5%	5%
HDET 311	- Diagnose and Repair Winches	5%	5%

HDET 312	- Diagnose and Repair Power Take-offs and Transfer Cases	4%	5%
	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:

1. Successful completion of the in-school training is defined as a final overall minumum of 70% to meet SkilledTradesBC standards.

    - Students must maintain an acceptable level of attendance, complete all assigned projects and pass all exams to successfully complete the program.

Students must provide their own:

- safety glasses
- coveralls (high-vis preferred)
- 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 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.4.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

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.