



HDT4 – Heavy Duty Equipment Technician Apprenticeship Level 4

Trades

Effective Term & Year: Spring 2024
Program Outline Review Date: 2029-09-01

Program Area: Trades Apprenticeship Training

Description:

This 5-week program delivers the technical training required for Level 4 of the four-level Heavy Duty Equipment Technician Apprenticeship program. Apprentices will develop the knowledge and practical skills related to diagnosing and repairing advanced hydraulic systems, servicing, diagnosing and repairing wheeled equipment steering, track machine steering, undercarriages, working attachments, pneumatic systems, air conditioning systems, structural components and accessories and hybrid and electric vehicles. 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 4-week Level 4 Heavy Duty Equipment Technician Apprenticeship program, students receive:

- Level 4 Technical Training credit of the four-level Heavy Duty Equipment Technician Apprenticeship program from SkilledTradesBC.

Delivery Methods: Face-to-Face, Online

Program Duration: 5 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 | 150 Hours |

Content Weighting:

| Activity | Percentage |
|---|-------------------|
| Classroom, Directed Studies or Online Instruction | 50% |
| Seminar/Tutorials | 50% |

Admission Requirements:

Sponsored Heavy Duty Equipment Technician apprentice who has successfully completed Level 3 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 4: COTR Custom Package 2017. King's Printer.

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*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 401 Service, Diagnose, and Repair Hydraulics

- Diagnose and repair advanced hydraulic systems

HDAP 402 Service, Diagnose, and Repair Frames, Steering, and Suspensions

- Diagnose and repair wheeled equipment steering
- Diagnose and repair track machine steering
- Diagnose and repair undercarriage

HDAP 403 Service, Diagnose, and Repair Heating, Ventilation, and Air Conditioning

- Service, diagnose, and repair heating and air conditioning systems

HDAP 404 Service, Diagnose, and Repair Structural Components and Accessories

- Service, diagnose, and repair sound suppression systems
- Diagnose, and repair attachments and accessories
- Diagnose and repair pneumatic systems

HDAP 405 Service, Diagnose, and Repair Hybrid and Electric Vehicles (EV)

- Service, diagnose, and repair hybrid vehicles and hybrid equipment
- Service, diagnose, and repair electric vehicles (EV)

HDAP 406 Use Communication and Mentoring Techniques

- Use mentoring techniques

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 4

| COTR COURSE | SUBJECT COMPETENCIES | THEORY WEIGHTING | PRACTICAL WEIGHTING |
|--------------------|--|-------------------------|----------------------------|
| HDAP 401 | Service, Diagnose, and Repair Hydraulics | 50% | 51% |
| HDAP 402 | Service, Diagnose, and Repair Frames, Steering, and Suspension | 26% | 28% |
| HDAP 403 | Service, Diagnose, and Repair Heating, Ventilation, and Air Conditioning | 10% | 11% |
| HDAP 404 | Service, Diagnose, and Repair Structural Components and Accessories | 5% | 10% |
| HDAP 405 | Service, Diagnose, and Repair Hybrid and Electric Vehicles (EV) | 7% | 0% |
| HDAP 406 | Use Communication and Mentoring Techniques | 2% | 0% |
| | Total | 100% | 100% |

| | | |
|--|--------------------|-----|
| In-school theory/practical subject competency weighting | 50% | 50% |
| Final in-school percentage score Apprentices must achieve a minimum 70% as the final in-school percentage score to be eligible to write the Interprovincial Red Seal exam. | IN-SCHOOL % | |

Pass Requirements:

All apprentices who complete Level 4 of the Heavy Duty Equipment Technician program with a FINAL level percentage score of 70% or greater will write the Interprovincial Red Seal examination as their final assessment.

SkilledTradesBC will enter the apprentice’s Heavy Duty Equipment Technician Interprovincial Red Seal examination percentage score in SkilledTradesBC Direct Access. A minimum percentage score of 70% on the Examination is required for a pass.

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:

- safety glasses
- coveralls – hi-vis
- leather steel-toed boots
- pens, pencils, coloured pencils, paper
- calculator
- Reference Manuals (as listed on front page)

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 2.5.8 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.

Course Descriptions: Refer to Course Outlines – <https://outlines.cotr.bc.ca/course/>