

HEAVY MECHANICAL TECHNOLOGY DIPLOMA (INTERNATIONAL COHORT)

Purpose

This program is designed for people who wish to obtain employment in the Mechanical Trades Industry as Heavy Duty Equipment Technicians, Truck and Transport Mechanics, Diesel Engine Mechanics, or Transport Trailer Technicians.

Heavy Duty Equipment Technicians typically work on industrial and construction vehicles, such as mining trucks and bulldozers, and on heavy equipment used in construction, forestry, materials handling, landscaping, and land clearing in a safe and environmentally sound manner. Truck and Transport Mechanics diagnose, repair, and service highway buses and trucks. They work for commercial transport vehicle dealers, garages, and service stations. Diesel Engine Mechanics install, repair, and maintain all internal combustion diesel engines and components used in transport, construction, and marine industries. Transport Trailer Technicians maintain, rebuild, overhaul, recondition, complete diagnostic troubleshooting for, and repair commercial truck trailers.

Upon successful completion of this program, students may be eligible to write SkilledTradesBC standardized examinations.

Through practical experience, successful students will be able to integrate the theoretical knowledge gained in the classroom with practical experience of the workplace.

Duration

This full-time program is two years in duration delivered over four terms, and must be completed within 5 years.

Learning Outcomes

Upon completion of this program, graduates will be able to:

1. Apply the skills and knowledge necessary to perform at first-year apprentice level of heavy duty equipment technician, truck and transport mechanics, diesel engine mechanic and transport trailer technician to provincial standards;
2. Evaluate completed repairs for consistency, accuracy, and quality according to industry specifications and standards;
3. Adhere to industry health and safety standards in the repair and reconditioning of heavy duty and commercial transport equipment;
4. Practice professional etiquette and personal hygiene;
5. Work effectively as a team member.
6. Communicate effectively and work in a culturally diverse environment.

Admission Requirements

- English 10 with a C or Academic IELTS 5.0 (no band less than 4.5) or TOEFL iBT 60 or equivalent

- Students must possess a high school graduation certificate or equivalent
- Workplace Math 10 or equivalent

Program Requirements

| Code | Title | Credits |
|-----------|--------------------------------|---------|
| HMTD 1101 | Workplace Safety & Prep Skills | 1 |
| HMTD 1102 | Oxy-Acetylene Welding & Cutt | 1 |
| HMTD 1103 | Electric Welding & Cutting | 1 |
| HMTD 1104 | HMT Tools & Equipment 1 | 1 |
| HMTD 1105 | HMT Tools & Equipment 2 | 1 |
| HMTD 1106 | Fittings & Fasteners | 1 |
| HMTD 1107 | Truck & Machine Operation 1 | 1 |
| HMTD 1108 | Truck & Machine Operation 2 | 1 |
| HMTD 1109 | Lubricants & Bearings | 1 |
| HMTD 1110 | Math, Physi & Worksafe Req HMT | 1 |
| HMTD 1111 | Final Drives & Undercarriage 1 | 1 |
| HMTD 1112 | Final Drives & Undercarriage 2 | 1 |
| HMTD 1113 | Frames & Suspension | 1 |
| HMTD 1114 | Tires, Wheels & Hubs | 1 |
| HMTD 1115 | Workplace Skills 1 | 1 |
| HMTD 1201 | Hydraulic Systems 1 | 1 |
| HMTD 1202 | Hydraulic Systems 2 | 1 |
| HMTD 1203 | Hydraulic Systems 3 | 1 |
| HMTD 1204 | Hydraulic Systems 4 | 1 |
| HMTD 1205 | Electrical Systems 1 | 1 |
| HMTD 1206 | Electrical Systems 2 | 1 |
| HMTD 1207 | Electrical Systems 3 | 1 |
| HMTD 1208 | Electrical Systems 4 | 1 |
| HMTD 1209 | Electrical Systems 5 | 1 |
| HMTD 1210 | Electrical Systems 6 | 1 |
| HMTD 1211 | Electrical Systems 7 | 1 |
| HMTD 1212 | Shop Simulation 1 | 1 |
| HMTD 1213 | Steering Systems 1 | 1 |
| HMTD 1214 | Steering Systems 2 | 1 |
| HMTD 1215 | Workplace Skills 2 | 1 |
| HMTD 2101 | Cab & Protective Structures | 1 |
| HMTD 2102 | Hydraulic Brake Systems 1 | 1 |
| HMTD 2103 | Hydraulic Brake Systems 2 | 1 |
| HMTD 2104 | Hydraulic Brake Systems 3 | 1 |
| HMTD 2105 | Air Brake Systems 1 | 1 |
| HMTD 2106 | Air Brake Systems 2 | 1 |
| HMTD 2107 | Air Brake Systems 3 | 1 |
| HMTD 2108 | Cab Heat, Vent & Air Cond Syst | 1 |
| HMTD 2109 | Ref Unit Heat Vent & Air Cond | 1 |
| HMTD 2110 | Trailers 1 | 1 |
| HMTD 2111 | Trailers 2 | 1 |
| HMTD 2112 | Powertrain 1 | 1 |
| HMTD 2113 | Powertrain 2 | 1 |
| HMTD 2114 | Powertrain 3 | 1 |
| HMTD 2115 | Powertrain 4 | 1 |
| HMTD 2201 | Powertrain 5 | 1 |

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|----------------------|--------------------------------|-----------|
| HMTD 2202 | Powertrain 6 | 1 |
| HMTD 2203 | Powertrain 7 | 1 |
| HMTD 2204 | Powertrain 8 | 1 |
| HMTD 2205 | Electrical Systems 8 | 1 |
| HMTD 2206 | Electrical Systems 9 | 1 |
| HMTD 2207 | Electrical Systems 10 | 1 |
| HMTD 2208 | Electronic Systems 1 | 1 |
| HMTD 2209 | Electronic Systems 2 | 1 |
| HMTD 2210 | Electronic Systems 3 | 1 |
| HMTD 2211 | Gas Fuel (Auto) Eng Mgmt Sys 1 | 1 |
| HMTD 2212 | Gas Fuel (Auto) Eng Mgmt Sys 2 | 1 |
| HMTD 2213 | Shop Simulation 2 | 1 |
| HMTD 2214 | Shop Simulation 3 | 1 |
| HMTD 2215 | Employment Skills | 1 |
| Total Credits | | 60 |

| | | |
|----|------------------------|-----|
| R | Audit. No Credit | N/A |
| EX | Exempt. Credit granted | N/A |
| TC | Transfer Credit | N/A |

Grade Point Average (GPA)

1. The course grade points shall be calculated as the product of the course credit value and the grade value.
2. The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.
3. Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA.

Evaluation of Student Learning

Evaluation involves a combination of assessments: practical assignments, projects, theory exam, and/or practical exam.

Students must complete all courses with a minimum grade of 70%, consistent with ITA standards.

Students will be given the program's Attendance procedures on the first day of the program. Each week is a new course, and attendance has a major role in student success.

Prior Learning Assessment and Recognition (PLAR)

PLAR is not available in this program.

Transcript of Achievement

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.

The transcript typically shows a letter grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

| Grade | Percentage | Description | Grade Point Equivalency |
|-------|------------|---|-------------------------|
| | 96-100 | | 4.33 |
| | 91-95 | | 4.00 |
| | 86-90 | | 3.67 |
| | 81-85 | | 3.33 |
| | 76-80 | | 3.00 |
| | 70-75 | Minimum Pass | 2.67 |
| | 0-69 | Failing Grade - unable to proceed to next Term | 0.00 |
| I | | Incomplete | N/A |
| IP | | Course In Progress | N/A |
| W | | Withdrawal | N/A |

Course Standings