

## Trades & Applied Technology Programs

# Heating, Ventilation, & Air-Conditioning/Refrigeration

offered at the Cowichan campus

**Certificate Program -- 9 months; 27 credits**

**Fee Category: VII**

## The Program

This program, offered in partnership with School District #79 and Cowichan Senior Secondary School in Duncan, prepares individuals for entry into the heating (gas and oil), air-conditioning, and refrigeration industry service sector. The program provides a solid foundation in the fundamentals of installing, servicing, and troubleshooting all aspects of heating, ventilating and air-conditioning/refrigeration (HVAC/R) equipment, as well as customer relations.

Classroom instruction is combined with hands-on practical assignments and sophisticated computer-based instruction. The minimum pass mark for the program is 70 percent. On successful completion, students will receive a Vancouver Island University certificate, CFC handling certification from Environment Canada and the Province of B.C. Students may receive a Gas Appliance Certificate of Qualification.

Maturity, good hand/eye coordination and problem solving skills with attention to detail are desirable qualities for individuals pursuing careers in HVAC/R.

This program is delivered in a modular format; individuals may wish to select certain modules for upgrading. An opportunity for work experience is included in the program. *Check with the Advising Centre for more details 250-746-3509 (Cowichan Campus).*

## Career Opportunities

Graduates may find employment and apprenticeship opportunities with air-conditioning companies, heating contractors. They may also seek employment in building systems maintenance, gas fitting service sector, wholesale and retail sales, equipment manufacturers, and installation and service of equipment.

## Apprenticeship Information

Graduates of this program may receive credit towards the technical portion of the first year of the Refrigeration Mechanic Apprenticeship program. In order to complete the apprenticeship and become a journeyman, in addition to on-the-job training, graduates would return to school for 6 weeks in Level 2, and 8 weeks in Levels 3 and 4.

The Refrigeration Mechanic Apprenticeship program consists of 5 years of on-the-job experience combined with 4 levels of in-school technical training in order to be eligible to write the

Interprovincial (Red Seal) Examination for journey person certification.

For more information on apprenticeship training, please visit the website at [www.itabc.ca](http://www.itabc.ca), contact the Industry Training Centre at 1-866-660-6011, or call VIU's Apprenticeship Coordinator at 250-740-6255.

## Admission Requirements

- Grade 12, or equivalent, or mature student status.
- Physically fit and good hand-eye coordination.
- Successful completion of assessment testing.
- Personal profile.
- An interview.
- A criminal record check is required.
- See also Trades general admission requirements.

**Apply for Admission Online or Print Application Form**

## Start Date and Application Deadline

The program starts in September, and applications are accepted on an ongoing basis.

## Special Expenses

In addition to textbooks (approximately \$525), students are required to purchase coveralls and hard-toed shoes (approximately \$150).

*All fees and costs are subject to change without prior notice.*

## Program Outline

- HVAC 100T (Effective Learning Techniques)
  - HVAC 101T (Shop and Personal Safety)
  - HVAC 102T (Shop Tools and Equipment)
  - HVAC 103T (Fundamentals of Electricity and Magnetism)
  - HVAC 104T (The Canadian Electrical Code C22.1-98)
  - HVAC 105T (Automatic Controls)
  - HVAC 106T (Electric Motors)
  - HVAC 107T (Principles of Heat)
  - HVAC 108T (Commercial Refrigeration)
  - HVAC 109T (Dynamics of Air Conditioning, Heating and Humidification)
  - HVAC 110T (Liquefied Petroleum Gas and Natural Gas Heat)
  - HVAC 111T (Alternate Heating Systems)
  - HVAC 112T (Air Filtration and Humidification)
  - HVAC 113T (Dynamics of Air Conditioning--Cooling)
  - HVAC 114T (All Weather Heating Systems)
  - HVAC 115T (Chilled Water Air Conditioning Systems)
  - HVAC 116T (Work Experience)
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- ESFH 100T (Personal Management Skills)
  - ESFH 105T (Heating, Ventilation, and Air-Conditioning/Refrigeration Math)
  - ESFH 110T (Business Operations)
  - ESFH 115T (The Emerging Workplace)

- ESFH 120T (Employment Strategies)

*All program courses must be successfully completed before certificates will be issued.*

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