

### HVAC Technician Certificate 703 N

Requirements Effective Fall, 2014

Program Planning Guide

**Program Description:** Graduates with this certificate in Heating, Ventilation, and Air Conditioning (HVAC) are prepared to work as installation or service technicians in residential and light commercial settings. This certificate is designed to provide all the skills needed to successfully compete for HVAC installer or entry-level service technician positions.

**Prerequisites:** Many classes have prerequisites. Prerequisites are those classes that prove eligibility for entry-level classes by testing or by having satisfied prior course work. Course work earned at other institutions must be unofficially evaluated or approved by a program advisor before registering. Courses in this degree with pre-requisites are marked with an asterisk (\*). See catalog for more information.

**Program Prerequisites:** Placement into English 097/098 or higher or equivalent. Have taken or test into Math 085 or higher, or have taken an equivalent or higher level class.

**Note:** Advanced placement testing, work experience, and transfer of credits may result in course waivers, credit transfer, and advanced placement.

<b>Program Requirements</b>		
<b>Course Number</b>	<b>General Education/Related Instruction Requirements (15 credits)</b>	<b>Credit Hours</b>
BUS 236	Interpersonal Communications for the Workplace	5
EET 160	Introduction to Electricity and Electronics	5
BUS 140	Customer Service	5
<b>Course Number</b>	<b>Certificate Requirements (38 credits)</b>	
Bus 169	Using Computers in Business	5
HVC 101	Essentials of HVAC	5
HVC 210*	Cooling Systems Installation	5
HVC 211*	Heating Systems Installation	5
HVC 212*	Cooling and Heating Systems Service	5
HVC 220	Green HVAC	3
HVC 226*	HVAC Electronics and Control Systems	5
HVC 228*	Energy Performance for the Field Technician	5
		Total Credits: 53 (excluding pre-requisites)

**Program Outcomes:**

- The students will have a good understanding, knowledge, and comprehension, of the theory and principles of HVAC equipment and their use.
- The student will demonstrate a solid foundation of required technical skills for HVAC Technicians.
- Students will be able to identify and apply the principles and strategies necessary for installation and service of HVAC systems.
- Students will prepare for the EPA Section 608 exam, satisfactorily pass weekly quizzes and/or tests, and sit for the exams.

## What Skills do I need to be successful in this field?

- **Installation** — Installing equipment, machines, wiring, or programs to meet specifications.
- **Troubleshooting**- Determining causes of operating errors and deciding what to do about it.
- **Repairing**- Repairing machines or systems using the needed tools.
- **Equipment Maintenance** — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Operation Monitoring** -Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Quality Control Analysis** - Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- **Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Critical Thinking**- Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- **Operation and Control** — Controlling operations of equipment or systems.
- **Judgment and Decision Making** — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

## What are some potential job titles?

- Heating and Air Conditioning Installer
- Heating and Air Conditioning Servicer
- Furnace Installer and Repairer

## Wages, employment trends and pathways

- <http://www.onetonline.org/link/summary/49-9021.01>

**Suggested Course Sequence:** This program of study is outlined by quarter, and courses should be taken in the indicated sequence. However, it should not be concluded that students will always proceed through their program of study exactly as prescribed here. The number of quarters listed here is minimal. Not all courses are offered every quarter. Individual student experiences, educational and training background, and personal schedules and demands all may affect the time it takes to finish this program.

1st quarter: Bus 169, Bus 236

2nd quarter: HVC 101, EET 160, Bus 140

3rd quarter: HVC 210, HVC 211, HVC 226

4th quarter: HVC 212, HVC 220, HVC 228

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**North Seattle College Advising:** 206-934-3658, <https://northseattlecollege.edu/advising>

**Program Website:** <https://northseattle.edu/certificates/hvac-technician-certificate>