

# REFRIGERATION, AIR CONDITIONING AND HEATING SERVICE TECHNICIAN

## Overview

Refrigeration, Air Conditioning and Heating Service Technician Technical Diploma

Program Code: 31-401-1

For more information: [wctc.edu/heating-cooling](http://www.wctc.edu/heating-cooling) (<http://www.wctc.edu/heating-cooling/>)

Heating, ventilation and air conditioning systems are critical in residential, commercial and industrial settings, and this field is one of the fastest-growing skilled trades. In this program, learn to safely install, maintain and service HVAC equipment.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C

General Studies Courses = C-

Program GPA = 2.0

## Learning Outcomes

### Program Outcomes

1. Install HVAC/R components.
2. Service HVAC/R systems.
3. Troubleshoot HVAC/R systems.
4. Select equipment to install for an R/ACHST system.
5. Interpret R/ACHST drawings.

## Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multicultural and collaborative**, we provide curricular and co-curricular opportunities to develop critical life skills. WCTC is committed to teaching all students the following skills:

- **Communication:** Demonstrate appropriate communication.
- **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.
- **Relationships:** Demonstrate effective interpersonal skills.
- **Self-management:** Demonstrate responsible and respectful behavior.

## Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

Click Here to see when each course will be offered (term and time of day).

Code	Title	Credits
<b>Core Courses</b>		
401-305	Air Cond Refr Fundamentals	2

Approved Substitute: 401-340		
401-306	Air Cond Refr Controls	1
Approved Substitute: 401-340		
401-307	Air Conditioning Installation	2
Approved Substitute: 401-335		
401-308	Air Conditioning Air Flow	1
Approved Substitute: 401-325		
401-316	Air Conditioning Application	2
Approved Substitute: 401-345		
401-317	Heat Pumps	1
Approved Substitute: 401-380		
401-318	Piping for HVAC	1
Approved Substitute: 401-330		
401-319	Air Cond Troubleshooting	2
Approved Substitute: 401-335		
401-321	Psychrometrics	1
Approved Substitute: 401-345		
401-322	Heating Systems Fundamentals	2
Approved Substitute: 401-350		
401-323	Heating Controls	1
Approved Substitute: 401-350		
401-324	Forced Air Htg System Install	2
Approved Substitute: 401-330		
401-326	Hydronic Htg System Install	1
Approved Substitute: 401-355		
401-327	Heating System Application	2
Approved Substitute: 401-355		
401-328	Advanced HVAC Controls	1
Approved Substitute: 401-320		
401-329	Heating Sys Troubleshooting	1
Approved Substitute: 401-320		
401-331	HVAC Design	2
Approved Substitute: 401-325		
401-332	Commercial HVAC	1
Approved Substitute: 401-320		
<b>General Studies</b>		
801-311	Communication in the Workplace	2
Approved Substitutes: 801-136 OR 801-223 OR 801-196		
<b>Total Credits</b>		<b>28</b>

## Full-time, Fall Start Plan

### First Year

Fall Term 1		Credits
801-311	Communication in the Workplace This course will run 16 weeks.	2
401-305	Air Cond Refr Fundamentals	2
401-306	Air Cond Refr Controls	1
401-307	Air Conditioning Installation	2
401-308	Air Conditioning Air Flow	1
401-318	Piping for HVAC	1
<b>Credits</b>		<b>9</b>

**Fall Term 2**

401-316	Air Conditioning Application	2
401-317	Heat Pumps	1
401-319	Air Cond Troubleshooting	2
401-321	Psychrometrics	1
<b>Credits</b>		<b>6</b>

**Spring Term 1**

401-332	Commercial HVAC <small>This course will run 16 weeks.</small>	1
401-322	Heating Systems Fundamentals	2
401-323	Heating Controls	1
401-326	Hydronic Htg System Install	1
401-331	HVAC Design	2
<b>Credits</b>		<b>7</b>

**Spring Term 2**

401-324	Forced Air Htg System Install	2
401-327	Heating System Application	2
401-328	Advanced HVAC Controls	1
401-329	Heating Sys Troubleshooting	1
<b>Credits</b>		<b>6</b>
<b>Total Credits</b>		<b>28</b>

**Fall Term 2**

401-324	Forced Air Htg System Install	2
401-332	Commercial HVAC	1
401-329	Heating Sys Troubleshooting	1
<b>Credits</b>		<b>4</b>
<b>Total Credits</b>		<b>28</b>

## Full-time, Spring Evening Start Plan

**First Year****Spring Term 1**

		<b>Credits</b>
401-319	Air Cond Troubleshooting <small>This course will run 16 weeks.</small>	2
401-305	Air Cond Refr Fundamentals	2
401-306	Air Cond Refr Controls	1
401-308	Air Conditioning Air Flow	1
801-311	Communication in the Workplace <small>Take this Term or Fall Term 1</small>	2
<b>Credits</b>		<b>8</b>

**Spring Term 2**

401-316	Air Conditioning Application	2
401-317	Heat Pumps	1
401-321	Psychrometrics	1
<b>Credits</b>		<b>4</b>

**Summer Interim**

401-331	HVAC Design	2
<b>Credits</b>		<b>2</b>

**Summer Term**

401-307	Air Conditioning Installation	2
401-318	Piping for HVAC	1
401-326	Hydronic Htg System Install	1
<b>Credits</b>		<b>4</b>

**Fall Term 1**

401-327	Heating System Application <small>This course will run 16 weeks.</small>	2
401-322	Heating Systems Fundamentals	2
401-323	Heating Controls	1
401-328	Advanced HVAC Controls	1
<b>Credits</b>		<b>6</b>