



Atlantic Technical College

Heating, Ventilation, Air-Conditioning/Refrigeration

Program Syllabus 2025-2026



Instructor Name: Mr. Youngblood
Department Name: Architecture & Construction
Office/Classroom Location: Building #8, Room 186
Phone Number: 754-321-5100
Email Address: brian.youngblood@browardschools.com

Instructor Office Hours (M-F):
2:50pm-3:30pm
(By appointment only)

Student Hours:
Monday- Friday
7:05AM- 2:50PM

Lunch: 10: 10am to 10:40pm

NOTE: All students are expected to be present during their entire scheduled class time(s). All classroom breaks will occur on an "as needed" basis. The wall clock in the classroom will serve as the official time.

Program Name: Heating, Ventilation, Air-Conditioning/Refrigeration (HVAC/R 1)
Career Cluster: Architecture and Construction

OCPs	Course Number / Title	Course Length
A	ACR0000/Introduction to HVAC/R	250 Hours
B	ACR0001/HVAC/R Fundamentals	250 Hours
C	ACR0012/HVAC/R Service Practices	250 Hours
		750 Total hours (including summer)

Technical College Policy/Adult Student Attendance:

- A student must be withdrawn after being absent for six (6) consecutive days.
- Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.
- Please refer to the Broward Technical College Student Handbook for postsecondary students.
<http://www.atlantictechnicalcollege.edu/atc-student-handbook/>

Magnet High School/Attendance Policy:

A student who has had at least five unexcused absences, or absences for which the reasons are unknown, within a calendar month, or 10 unexcused absences, or absences for which the reasons are unknown, within a 90-calendar-day period, may be exhibiting a pattern of non-attendance (F.S.1003.26 (1) (b)) and the School Board of Broward County, Policy 5.5.

<p>Required Book(s) and/or Online Access Available for purchase at the ATC Bookstore: Modern Refrigeration and Air Conditioning; 22nd Edition ISBN# <u>979888817489</u></p>	<p>Required Materials/Supplies Purchased from ATC Bookstore:</p> <ul style="list-style-type: none"> • Safety glasses & Computer Headset (optional) <p>Not Purchased from ATC Bookstore:</p> <ul style="list-style-type: none"> • Items to be covered throughout course 																						
<p><i>All required books & most materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing & purchasing information.</i></p>																							
<p>ADULT STUDENTS: <i>All required books & some materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing & purchasing information. All other required materials/ retail supplies not available at the bookstore need to be purchased elsewhere. All required books and required materials/retail supplies need to be obtained prior to the start of the program.</i></p>																							
<p>HIGH SCHOOL & VA STUDENTS: <i>Are not eligible to take this course</i></p>																							
<p>Grading Scale:</p> <table> <tr><td>A</td><td>90-100%</td></tr> <tr><td>B</td><td>80-89%</td></tr> <tr><td>C</td><td>70-79%</td></tr> <tr><td>D</td><td>60-69%</td></tr> <tr><td>F</td><td>0-59%</td></tr> <tr><td>I</td><td>Incomplete</td></tr> </table>	A	90-100%	B	80-89%	C	70-79%	D	60-69%	F	0-59%	I	Incomplete	<p>Additional Program Specific Grading Information:</p> <table> <tr><td>• Projects</td><td>25%</td></tr> <tr><td>• Tests/Quizzes</td><td>25%</td></tr> <tr><td>• Employability</td><td>25%</td></tr> <tr><td>• Class Participation</td><td>15%</td></tr> <tr><td>• Homework</td><td>10%</td></tr> </table> <p>See Class Management Plan for specific details</p>	• Projects	25%	• Tests/Quizzes	25%	• Employability	25%	• Class Participation	15%	• Homework	10%
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<p>Online Course Grading Policy: Not Applicable</p>																							
<p>View your grades: grades can be viewed online by following the directions below.</p> <ol style="list-style-type: none"> 1. Go to https://Browardfocus.com (access FOCUS using Chrome, Firefox or Safari) 2. student ID which is on your student schedule. 3. Password- student's date of birth formatted as PMM/DD/YYYY. Capital P- 2 digits for the month- 2 digits for the day- 4 digits for the year. 																							
<p>Industry Certification & State Credential Exam Costs:</p> <ul style="list-style-type: none"> • EPA Section 608 (Type I, Type II, Type III, and/or Universal) - \$25 • EPA R-410a - \$25 • HVAC Excellence; Employment Ready (<i>for adults</i>): Air Conditioning; Commercial Air Conditioning; Commercial Refrigeration; Electrical; Electric Heat; Gas Heat; Heat Pump - \$15 each • Occupational Safety and Health Administration (OSHA) 10-hour Construction Safety Outreach Course - \$40 <p><i>You may qualify for certification reimbursement of</i></p>	<p>Outstanding Student Recognition Information: A gold seal will be applied to a Program Completion Certificate or an Applied Technology Diploma if the student has earned a 3.5 GPA or higher in their Career and Technical Education (CTE) classes. Occupational Safety and Health Administration (OSHA) 10 Hour Construction Safety Outreach Course - \$40</p>																						

your exam cost(s) upon passing. Credential fees are subject to change.

Course Number: ACR0000

Course Name: Introduction to HVAC/R

Occupational Completion Point: A

Intended Outcomes:

- 01.0 Demonstrate the importance of health, safety and environmental management systems in organizations and their importance to organizational performance and regulatory compliance.
- 02.0 Explain the importance of employability, soft skills, entrepreneurship skills and making career plans.
- 03.0 Identify, use and maintain the tools and tool accessories used in the heating, air-conditioning and refrigeration industry.
- 04.0 Demonstrate mathematics knowledge and skills.
- 05.0 Explain the properties of matter and heat behavior.
- 06.0 Describe the history and concepts of heating, air-conditioning and refrigeration.
- 07.0 Analyze fluids, pressures, refrigerants and related codes.
- 08.0 Evaluate heating, air-conditioning and refrigeration system components and accessories.
- 09.0 Fabricate and service the piping, tubing and fittings used in the heating, air-conditioning & refrigeration industry.
- 10.0 Utilize and operate mechanical refrigeration servicing and testing equipment.

Course Number: ACR0001

Course Name: HVAC/R Fundamentals

Occupational Completion Point: B

Intended Outcomes:

- 11.0 Demonstrate a practical knowledge of basic electricity and of the electrical components of heating, air-conditioning and refrigeration equipment.
- 12.0 Demonstrate knowledge of electrical wiring in air-conditioning and refrigeration.
- 13.0 Troubleshoot heating, air-conditioning and refrigeration electrical control systems and their components.
- 14.0 Select and test electrical generation and distribution components for commercial heating and air conditioning systems.
- 15.0 Maintain, test and troubleshoot electrical motors and their components for commercial heating and air-conditioning systems.

Course Number: ACR0012

Course Name: Services Practices

Occupational Completion Point: C

Intended Outcomes:

- 16.0 Utilize mechanical components of heating air-conditioning and refrigeration systems.
- 17.0 Operate solid-state electronics as used in heating, air-conditioning and refrigeration systems.
- 18.0 Read construction documents.
- 19.0 Assist in the installation of a residential heating and air-conditioning system and determine start-up procedures.

- 20.0 Conduct start-up and check-out procedures for mechanical heating and air-conditioning systems.
- 21.0 Use combustion-type heating servicing and testing equipment.
- 22.0 Troubleshoot combustion gas valves and regulators as used in heating, air-conditioning, refrigeration and ventilation systems.
- 23.0 Understand the design of heating and cooling systems.
- 24.0 Explain the importance of employability, soft skills, entrepreneurship skills and making career plans.

The School Board of Broward County, Florida, prohibits any policy or procedure which results in discrimination on the basis of age, color, disability, gender identity, gender expression, national origin, marital status, race, religion, sex, or sexual orientation. Individuals who wish to file a discrimination and/or harassment complaint may call the Director, Equal Education Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158. Individuals with disabilities requesting accommodations under the Americans with Disabilities Act Amendments Act of 2008, (ADAAA) may call Equal Educational Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158.