



Technical Standards Air Conditioning, Heating, and Refrigeration Technology

These technical standards have been established to inform students of the skills and standards necessary for completion of the Air Conditioning, Heating, and Refrigeration Technology Degree and as a professional in the field of HVAC.

ABILITY	STANDARD	EXAMPLES of necessary activities (not all inclusive)
Physical Demands/Motor Skills	<ul style="list-style-type: none"> • Students must possess physical strength, flexibility, and dexterity to safely perform HVAC services. 	<ul style="list-style-type: none"> • Physical abilities sufficient to perform HVAC skills in a hot (90+ degree) and cold environment. • Physical ability sufficient to crawl under structures or confined spaces while carrying tools and equipment. • Physical ability to wear a tool pouch for up to 10 hours per day. • Be able to climb ladders up to 35' in height while carrying tools and equipment. • Sufficient motor function to execute hand movements required to install and service HVAC/R systems. • Physical ability to coordinate two or more limbs (two arms, two legs or one arm and one leg) while sitting, standing or lying down. • Weight bearing ability sufficient enough to lift and carry weight up to 75 pounds and install equipment overhead.
Critical Thinking/Observation/Sensory/Reasoning Skills	<ul style="list-style-type: none"> • Students must be able to use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. • Must be attentive in the classroom, observe demonstrations and participate in lab classes. • Must have visual perception • Must be able to use sensory cues to maintain standards of quality brazing. • Must be able to recognize when there is a problem or possible problem. • Must have an awareness of surrounding through use of senses. 	<ul style="list-style-type: none"> • Ability to determine the steps necessary to troubleshoot air conditioning, heating and refrigeration equipment. • Ability to assess causes of HVAC equipment malfunctions and solutions. • Ability to identify HVAC equipment preventive and maintenance needs and perform maintenance and preventive services. • Ability to determine appropriate tool needed to repair air conditioning, heating or refrigeration systems. • Sufficient motor skills to quickly and repeatedly adjust HVAC system controls to exact settings. • Visual skills sufficient to distinguish all primary colors. • Visual skills sufficient to see details at close range (within a few feet of the observer). • Have sufficient visual capacity to read prints, schematics, meters and testers. • Sufficient auditory skills to hear tones of various pitches emitted by testers and meters. • Sufficient auditory skills to hear equipment running/operating to determine efficiency of operation.
Behavioral/Social Skills and Professionalism	<ul style="list-style-type: none"> • Students must have sufficient personal skills for successful interactions with customers, 	<ul style="list-style-type: none"> • Must be able to work cooperatively with partners and groups. • Interpersonal abilities sufficient to interact with co-workers under physically and mentally demanding environmental conditions.

SPCC does not practice or condone discrimination, in any form, against students, employees, or applicants on the grounds of race, color, national origin, religion, gender, age, disability, or political affiliation. SPCC commits itself to positive action to secure equal opportunity regardless of those characteristics. Should an employee or student feel his/her rights under Title VI, VII, or IX have been violated, he/she may submit a harassment complaint, including sexual harassment, to the Human Resources Office by mail at PO Box 126, Polkton, NC 28135. Complaints may also be faxed to 704-272-5336 or emailed to lsellers@spcc.edu or eclodfelter@spcc.edu

Reference: These Technical Standards are adapted from Haywood Community College Technical Standards. Modifications have been made to meet SPCC specific program needs.

ABILITY	STANDARD	EXAMPLES of necessary activities (not all inclusive)
	colleagues, supervisors, and from a variety of social, emotional, cultural, and intellectual backgrounds. <ul style="list-style-type: none"> • Must possess the emotional wellbeing required for use of their intellectual abilities, the exercise of sound judgment, the prompt completion of all responsibilities in the classroom and for lab projects. • Student will be expected to learn and apply workplace responsibilities. 	<ul style="list-style-type: none"> • Be careful about detail and thoroughness in completing work tasks • Exercise good judgment. • Follow safety procedures. • Maintain composure, keep emotions in check, control anger, and avoid aggressive behavior, even in difficult situations. • Must not have a debilitating fear of heights, insects, spiders, snakes, or lizards.
Communication Skills	<ul style="list-style-type: none"> • Communication skills sufficient to communicate in class and on brazing floor using welding terms and safety practices pertaining to brazing. 	<ul style="list-style-type: none"> • Must be able to communicate effectively with co-workers at a moderate distance without line of sight. • Must be able to understand/interpret information from textbooks, handouts, diagrams, charts and tables. • Must use written and oral communication to demonstrate comprehension of HVAC concepts. • Must recognize HVAC terminology • Must be able to read and interpret wiring diagrams, meters, gauges, manifolds and electrical instruments.
Working Conditions	<ul style="list-style-type: none"> • Must be able to work in an industrial environment 	<ul style="list-style-type: none"> • Must be able to work effectively in confined spaces such as under structures • Must be able to tolerate extreme heat and cold • Must be able to tolerate exposure to noxious chemical compounds including but not limited to acids, acid-like chemicals, solvents, glues, cleaners, oils and refrigerants. • Must be able to wear hard hats, safety glasses, steel toe shoes and other safety related equipment as required by the industry.

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