

Technical Standards for Economic Workforce Development: Heating, Ventilation and Air Conditioning (HVAC)

Our program technical standards have been developed to help students understand nonacademic standards, skills, and performance requirements expected of a student to complete this particular curriculum.

If an accommodation is necessary to participate in the program, it is imperative to identify a reasonable accommodation to those students who qualify under the Americans with Disabilities Act (ADA). Reasonableness is determined by Accessibility Resources and the program on a case-by-case basis utilizing the program technical standards. The accommodation needs to be in place prior to the start of the program, or it may delay your ability to start the program. It is the student's responsibility to contact Accessibility Resources and request accommodations.

SKILLS	DESCRIPTION	SPECIFIC EXAMPLES
MOTOR SKILLS	Students must possess physical strength, flexibility, and dexterity to safely perform HVAC services.	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 use various hand tools. Be able to climb ladders up to 10' 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

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		sitting, standing or lying down. Weight bearing ability sufficient enough to lift and carry weight up to 50 pounds and install equipment overhead.
VISION	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.	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. Visual skills sufficient to distinguish all primary colors. Visual skills sufficient to see details at close range. Have sufficient visual capacity to read prints, schematics, meters and testers.
HEARING	Must be able to recognize when there is a problem or possible problem. Must have an awareness of surrounding through use of senses.	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.
TECHNOLOGICAL	Must have technical ability to use electronic meters and testing equipment. Basic knowledge of the computer.	Must be able to read and interpret wiring diagrams, meters, gauges, manifolds and electrical instruments. Must be able to read prints,

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		schematics, meters and testing equipment. Must be able to check email and create/edit basic documents.
COMMUNICATION	The ability to convey information effectively and efficiently in class or lab settings.	Must be able to communicate effectively with the instructor and other students. 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 and be able to use HVAC terminology.
CRITICAL THINKING/ PROBLEM SOLVING	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 be able to recognize when there is a problem or possible problem.	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. Must be able to

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		read and interpret wiring diagrams, meters, gauges, manifolds and electrical instruments.
INTERPERSONAL SKILLS	Students must have sufficient personal skills for successful interactions with customers, colleagues, supervisors, and students from a variety of social, emotional, cultural, and intellectual backgrounds. Must possess emotional wellbeing and intellectual abilities to complete all projects and responsibilities in the classroom. Student will be expected to learn and apply workplace responsibilities.	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. 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.
ENVIRONMENTAL TOLERANCE	Must be able to work in an industrial or construction environment	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

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		glasses, steel toe shoes and other safety related equipment as required by the industry.

This document is intended to serve as a guide regarding the physical, emotional, intellectual and psychosocial expectations placed on a student. This document cannot include every conceivable action, task, ability or behavior that may be expected of a student. Meeting these technical standards does not guarantee employment in this field upon graduation. Ability to meet the program's technical standards does not guarantee a student's eligibility for any licensure, certification exam, or successful completion of the degree program.

Reference: These Technical Standards are adapted from Southern Piedmont Community College Technical Standards. Modifications have been made to meet Forsyth Tech specific program needs.