Davidson County Community College
Air Conditioning, Heating, and Refrigeration Technical Standard

Criteria	Standard	Example
Critical thinking/problem solving	Ability to raise important questions, analyze problems and develop solutions, demonstrate the ability to reason and understand the consequences of ones actions.	Apply information, evaluate the meaning of observed system operation and engage in critical thinking in the classroom and lab setting. Apply broad class concepts to unique customer situations. Perform system tests and analyze results to make decisions in the often rushed field environment where other calls await your arrival. Recognize when assistance is needed and make the call for back up when necessary. Respond appropriately to constructive feedback. Make decisions based on industry supported training materials to ensure long equipment life and system efficiency – during service and installation procedures.
Communication	Appropriate interpersonal interaction with other students, faculty, staff, customers, facility owners, dispatchers and other technicians. Communicate and comprehend oral and written information pertaining to heating, ventilation, air conditioning, and refrigeration.	Establish and maintain a professional relationship with customers and coworkers Explain services and system needs, document technicians' actions. Convey information in a clear, professional and timely manner. Listen and respond to others in an accepting and respectful manner. Interpret and use written information in common job formats, such as tables, charts, and reference materials and manuals.
Motor Skills	Sufficient motor function to execute movements required to install and service HVACR systems. Sufficient physical endurance to work in extreme thermal environments (hot/cold), in tight spaces and on elevated structures.	Participate during HVACR system installation and service; for example, carry a refrigeration compressor to a rooftop system by climbing an extension ladder. Participate fully during live project and lab setting including extended periods of standing, lifting heavy equipment and crawling as is reflective of the general day to day activities of a HVACR service/installation technician. (As found in crawl spaces, attics, utility rooms, basements, equipment rooms) Operate necessary tools, equipment, and machinery. Remove and replace failed components.

		Position and maneuver in confined spaces to do repairs.
Professional Conduct	Function effectively and efficiently during demanding seasonal workload periods. Assess implications of cultural and religious diversity for classroom and workplace relationships. Demonstrate attitudes conducive to workplace success. Incorporate professional standards of practice into all activities. Demonstrate integrity and accountability during field work and academic setting. Present self in a professional manner during field projects and academic settings. Utilize computers correctly, effectively and professionally to acquire information and to communicate with others.	Maintain an understanding and effective relationships with customers, colleagues, faculty, staff and other industry professionals. Work effectively with a team in an academic or live project setting. Refrain from using improper grammar, profane or inappropriate communications. Devises solutions to problems arising from gender, cultural, racial, and religious diversity. Complete all assignments in a timely manner. Respond appropriately to constructive feedback provided by fellow students, faculty, staff, and customers. Assesses the potential impact of an individual's work ethic on an organizational system. Wear appropriate clothing that is not distracting or offensive when in the learning environment. Modifies behavior to increase productivity in the classroom, laboratory and workplace. Utilize the internet to collect current information from appropriate resources to use during installation, service, and repair of HVACR systems.
Sensory	Hearing sufficient to assess equipment needs. Vision sufficient for assessment necessary to service, install and maintain HVACR equipment. Smell offensive odors and identify source	Hear unusual equipment noise; recognize dangerous situations of falling equipment/tools when working on overhead systems. Accurately read diagrams in low-light situations; small print – color coded wiring. Accurately interpret non-verbal communications when working at a distance from others such as during equipment placement by crane. Recognize smells resulting from improper HVACR operation such as – damp ducting/insulation, wiring burning, motor overheating, IAQ issues, improper furnace operations/venting, natural and LP gas leakage, fuel oil smells from oil equipment.