

Technical Standards

Construction, HVAC/R, and Utility Construction Technician Programs

In this program grouping, students should be able to meet specific technical standards, which are the essential skills and abilities needed to be successful in a program, with or without reasonable accommodation. It is important to review and understand these standards before applying to the program. All Technical Standards documents are available for review on the Northwood Tech website at: <https://www.northwoodtech.edu/technical-standards>

This document should be reviewed prior to applying to the program.

Reasonable accommodations for persons with disabilities will be made to ensure access to academic programs, activities, services, and employment in accordance with Section 504 and 508 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990, as amended. If accommodations are needed, contact the campus Accommodations Specialist or the Northwood Tech Affirmative Action/Equal Opportunity Officer, at [715-645-7042](tel:715-645-7042), TTY 711, 30 days in advance of needed assistance. Services available are documented on the Northwood Tech Accommodations webpage: [Accommodation Services | Northwood Technical College](#).

For more information, please see Administrative Procedure J-111A Reasonable Accommodation for Student.

AREA	STANDARD	EXAMPLES (NOT INCLUSIVE)
Physical Skills	<p>Students must have sufficient gross and fine motor skills to construct and perform maintenance and repairs in a timely, safe and effective manner.</p> <p>Students must have sufficient endurance, strength, mobility, balance, flexibility and coordination to perform maintenance and repair.</p> <p>Students should demonstrate the ability to tolerate working in confined areas.</p> <p>Students should possess the physical capability to safely ascend and descend ladders, as well as to work and maintain balance on roofs* and uneven surfaces.</p> <p>* Excludes roofs for Utility Construction Technician students as does not apply</p>	<ul style="list-style-type: none">• Examples include the ability to grasp, twist, squeeze, pinch, and manipulate equipment• Examples include the ability to move in confined spaces; maintain balance in standing position; move body from one side to the other; reach below the waist and to the front or the side of the body to the level of the top of head (i.e., adjust equipment at or near top of vehicles, etc. and ability to push, pull, stabilize, and freely move arms to allow movement of a part, tool, object from one place to another, and use tools overhead• Manipulate, assemble, and move equipment• Climb stairs, maintain balance on roofs* and uneven surfaces*. <p>* Excludes roofs for Utility Construction Technician students as does not apply</p>
Sensory Skills	<p>Students must have sufficient auditory ability, visual ability, sense of smell and tactile ability to observe, diagnose, maintain, and repair equipment in a variety of work settings.</p>	<ul style="list-style-type: none">• Detect audible sounds for function and warning of equipment• Ability to visually detect equipment displays• Ability to visually detect environmental hazards• Detect objects, symbols and numbers both near and far• Detect and identify different colors• Able to work in varied lighting environments.• Able to detect or differentiate sounds that vary over a broad range of pitch and loudness.

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Communication Skills	Students must effectively communicate and interact appropriately using verbal, nonverbal, and written communication with customers, peers, and all members of the workplace.	<ul style="list-style-type: none">• Construction Drawing Interpretation: Ability to read and interpret construction drawings, blueprints, and specifications accurately to understand project requirements and contribute effectively to construction activities.• Professional Communication: Effective communication skills for interacting with peers, clients, subcontractors, and other stakeholders in construction projects, both orally and in writing.
Safety Skills	Students must be able to apply knowledge, skills and experience to maintain a safe work environment.	<ul style="list-style-type: none">• Students are expected to be capable of performing tasks in various weather conditions, encompassing heat, humidity, and below-zero temperatures, as required for participation in building a house and/or repairing equipment.• Personal Protective Equipment (PPE): Compliance with requirements to wear appropriate PPE, such as hard hats, safety glasses, gloves, and steel-toe boots, while on construction sites to minimize the risk of injury.• Adherence to safety regulations and protocols established by occupational safety organizations such as OSHA (Occupational Safety and Health Administration) to ensure the well-being of oneself and others on construction sites.
Critical Thinking Skills	Students must have the ability to identify and resolve construction-related problems and challenges efficiently, demonstrating resourcefulness and critical thinking in finding solutions.	<ul style="list-style-type: none">• Apply knowledge and skills learned in the classroom to a work setting• Comprehend and follow instructions• Follow a process from start to finish; sequence information• Adapt decisions based on new information• Maintain focus in an environment with distractions• Follow emergency procedures as needed• Ability to problem solve complex situations
Professionalism	Students must demonstrate professional behavior, including respect for the authority of supervisors, communication with fellow workers, and adherence to rules and regulations.	<ul style="list-style-type: none">• Establish a professional working relationship with the coworkers, peers, instructors, and clients• Respond to challenging situations while maintaining composure and professionalism• Display integrity, honesty, respect, reliability and accountability• Demonstrate ability to accept constructive feedback• Demonstrate ability to accept responsibility for own actions

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Northwood Technical College does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. The following person has been designated to manage inquiries regarding the non-discrimination policies: Amanda Gohde, Associate Vice President, Talent & Culture, 1900 College Drive, Rice Lake WI 54868; Amanda.Gohde@NorthwoodTech.edu, phone: [715-645-7042](tel:715-645-7042).

This document was adapted from Waukesha County Technical College.

Specific programs included as part of this grouping are listed below:

- Advanced Construction Essentials
- Architectural Woodworking & Cabinetmaking
- Carpentry Apprentice (ABC)
- Construction and Cabinetmaking
- Construction Essentials
- Construction Foundations
- Electrical Construction Apprentice
- Heating, Ventilation & Air Conditioning / Refrigeration (HVAC/R)
- HVAC Installation Technician
- Plumbing Apprentice
- Refrigeration Essentials
- Utility Construction Technician