

Technical Standards

MANUFACTURING 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 perform machine maintenance and repair in a timely, safe and effective manner.</p> <p>Students should demonstrate stamina sufficient to maintain physical activity for a period of a typical workday.</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 overhead lights, plug electrical appliance into wall outlet); and ability to push, pull, stabilize, and freely move arms to allow movement of a part, tool, object from one place to another• Bend, stretch, twist, reach with your body above shoulders, below waist, and in front• Move in confined spaces including walking, squatting, and lifting while maintaining balance
Sensory Skills	<p>Students must have sufficient auditory ability, visual ability, sense of smell and tactile ability.</p>	<ul style="list-style-type: none">• Detect audible sounds for equipment function and warning• 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
Communication Skills	<p>Students must effectively communicate and interact appropriately using verbal, nonverbal, and written communication with instructors, peers, and all members of the team.</p>	<ul style="list-style-type: none">• Collaborate with others• Ability to convey information in a clear, professional and timely manner• Listen and respond to others in an accepting and respectful manner

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Safety Skills	Students must be able to apply knowledge, skills and experience to provide a safe work environment.	<ul style="list-style-type: none">• Wear personal protective equipment for safe practices (gloves, masks, eyewear)• Tolerate heat and humidity• Adhere to safety/emergency protocols• Recognize and respond to hazardous conditions
Critical Thinking Skills	Students must measure, calculate, reason, analyze and synthesize data in a timely manner. They must demonstrate critical thinking, problem-solving and the decision-making ability needed to during maintenance and repair procedures.	<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
Professionalism	Students should demonstrate appropriate behavior to establish effective relationships with clients, families, and staff, with varied socioeconomic, emotional, cultural and intellectual backgrounds.	<ul style="list-style-type: none">• Establish a professional working relationship with coworkers, peers, instructors, and clients• Demonstrate impulse control and professional level of maturity• Follow emergency procedures as needed• Ability to problem-solve complex situations• Ability to accept constructive feedback• Prepared to work on time

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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.

This document was adapted from Waukesha County Technical College.

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

- Automated Packaging Systems Technician
- Automation for Industrial Systems
- CNC Technician
- Entry Level Machining
- Flux Cored Arc Welding (FCAW)
- Gas Metal Arc Welding (GMAW)
- Gas Tungsten Arc Welding (GTAW)
- Industrial Maintenance Technician
- Industrial Systems Specialist
- Industry 4.0 Smart Automation
- Injection Mold Set-Up (Plastic) Apprentice
- Injection Mold (Plastic) Certified Pre-Apprenticeship (CPA)
- Machine Tool Basics
- Machine Tool Basics - Operator
- Machine Tool Operation
- Machine Tool Operation-CNC
- Machine Tool Technician
- Machine Tooling Technics
- Maintenance Mechanic/Millwright Apprentice
- Maintenance Mechanic / Millwright Certified Pre-Apprenticeship (CPA)
- Mechatronics Basics
- Multi-Axis CNC Milling
- Shielded Metal Arc (SMAW)
- Welding
- Welding/Maintenance and Fabrication