

Technical Standards for Economic Workforce Development: Welding

Our program technical standards have been developed to help students understand nonacademic standards, skills, and performance requirements expected of a student in order 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 welding techniques.	Physical abilities sufficient to perform welding skills in a hot (90+ degree) and cold environment. Dexterity to perform welds in all positions (flat, horizontal, vertical and overhead) at floor level and heights over six feet. Ability to use hand tools such as grinders, oxy-act torch and hammer. Weight bearing ability sufficient enough to lift and carry weight up to 50 pounds (lifting steel plates, parts and fixtures).
VISION	Must be attentive in the classroom, observe demonstrations and participate in lab classes. Must have visual perception Must be able to use	Visual skills sufficient to see details at close range (within a few feet of the observer) with or without corrective lenses. Be able to take precise

SKILLS	DESCRIPTION	SPECIFIC EXAMPLES
	sensory cues to maintain standards of quality welding. Must be able to recognize when there is a problem or possible problem. Must have an awareness of surrounding through use of senses.	measurements to 1/16 of an inch. Survey and select appropriate materials, tools and equipment for welding work. Understand welding codes and qualifications and interpret blueprints and sketches. Distinguish shapes, forms and patterns; and visualize three-dimensional objects.
HEARING	Must be able to use sensory cues to maintain standards of quality welding. Must be able to recognize when there is a problem or possible problem. Must have an awareness of surrounding through use of senses.	Must be able to tolerate extreme and constant noise. Must be able to discern machinery and arc noise for malfunctions and proper operation. Must be able to tolerate a work environment that produces noise from industrial machinery, grinding, and drilling.
COMMUNICATION	Communication skills sufficient to communicate in class and on welding floor using welding terms and safety practices pertaining to welding.	Understand/interpret information from textbooks, handouts, diagrams, charts and tables. Use written and oral communication to demonstrate comprehension of welding concepts. Recognize welding terminology and symbols. Be able to interpret blueprints and sketches.
CRITICAL THINKING/	Students must be able to use logic and reasoning to identify the strengths and	Critical thinking sufficient enough to use logic and reasoning to identify strengths and weaknesses of

SKILLS	DESCRIPTION	SPECIFIC EXAMPLES
PROBLEM SOLVING	weaknesses of alternative solutions, conclusions or approaches to problems. Must be able to recognize when there is a problem or possible problem.	alternative solutions, conclusions or approaches to problems. Formulate fabrication plans and detect fabrication problems. Understand welding codes and qualifications and interpret blueprints and sketches. Calculate slopes, circumferences, and decimal equivalents; take accurate measurements and do conversions. Perform procedures according to proper specifications.
INTERPERSONAL SKILLS	Students must have sufficient personal skills for successful interactions with customers, colleagues, supervisors, and from a variety of social, emotional, cultural, and intellectual backgrounds. 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.	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.
ENVIRONMENTAL TOLERANCE	Must be able to work in an industrial environment	Must be able to work effectively in the welding lab. Must be able to work effectively in confined spaces such as welding booth. Must be able to tolerate

SKILLS	DESCRIPTION	SPECIFIC EXAMPLES
		<p>extreme noise and extreme heat. Must be able to tolerate chemicals, toxins, dust and fumes. Must be able to tolerate work environment that contains industrial hazards such as sharp tools and materials, slippery and uneven surfaces, and machinery with moving parts. Must be able to tolerate variations in lighting while wearing protective welding equipment. Must be able to use personal protective equipment (PPE).</p>

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.