



Technical Standards Welding Technology

These technical standards have been established to inform students of the skills and standards necessary for completion of the Welding Technology program.

ABILITY	STANDARD	EXAMPLES of necessary Activities (not all inclusive)
Physical Demands/Motor Skills	<ul style="list-style-type: none"> Students must possess physical strength, flexibility, and dexterity to safely perform welding techniques. 	<ul style="list-style-type: none"> 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).
Critical Thinking/Observation/Sensory/Reasoning Skills	<ul style="list-style-type: none"> 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 have visual perception 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. 	<ul style="list-style-type: none"> Critical thinking sufficient enough to use logic and reasoning to identify strengths and weaknesses of alternative solutions, conclusions or approaches to problems. 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 measurements to 1/16 of an inch. Formulate fabrication plans and detect fabrication problems. 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. Calculate slopes, circumferences, and decimal equivalents; take accurate measurements and do conversions. Perform procedures according to proper specifications.
Behavioral/Social Skills and Professionalism	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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, eve in difficult situations.

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Reference: These Technical Standards are adapted from Haywood Community College Technical Standards. Modifications have been made to meet SPCC specific program needs.

ABILITY	STANDARD	EXAMPLES of necessary Activities (not all inclusive)
	completion of all responsibilities in the classroom and for lab projects. <ul style="list-style-type: none"> • Student will be expected to learn and apply workplace responsibilities. 	
Communication Skills	<ul style="list-style-type: none"> • Communication skills sufficient to communicate in class and on welding floor using welding terms and safety practices pertaining to welding. 	<ul style="list-style-type: none"> • 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.
Working Conditions	<ul style="list-style-type: none"> • Must be able to work in an industrial environment 	<ul style="list-style-type: none"> • Must be able to work effectively in the welding department. • Must be able to work effectively in confined spaces such as welding booth. • Must be able to tolerate 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).

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