



Pathway: Welding Technology, EHS

Plan of Study: Welding Technology

Career Goal (O*Net Code): Examples:

Precision Metal Production (51-4041), Welder (51-4121), Machine Operator (51-4081), Inspector (51-9061).

Suggested High School Courses

High School * Default includes CDHE Higher Education Admission Requirements	9 th	Core Academic Courses*:	English I, Algebra I, Earth or Environmental Science, State History/Civics	Suggested Electives: Construction Trades
		Career Path Courses:	Introduction to Manufacturing Occupations	
	10 th	Core Academic Courses*:	English II, Geometry, Biology, US History, Foreign Language I	Suggested Electives: Construction Trades, Business I
		Career Path Courses:	Information Technology Applications	
	11 th	Core Academic Courses*:	English III, Algebra II/ or other, Chemistry	Suggested Electives: Construction Trades, Business II
		Career Path Courses:	Employment in Manufacturing Occupations	
	12 th	Core Academic Courses*:	English IV, Trigonometry or other Math, Botany or other lab based science	Suggested Electives: Construction Trades, Business I and II, Business Math
		Career Path Courses:	Applications in Manufacturing Technology	

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: Dual Credit, Articulated Credit
	Industry Recognized Certificate(s) or License(s): American Welding Society (AWS) American Society of Mechanical Engineers

Postsecondary Education Opportunities	Postsecondary Programs Available in Colorado		Colorado Institutions	Entrance Exams/ Requirements
	Certificate	Welding, Apprenticeship Sheetmetal Worker , Machining Technology, Industrial Mechanics, Industrial Technologies, Manufacturing Technology	AVS: Emily Griffith Opportunity School, T.H. Pickens Technical College, San Juan Basin Technical College Community Colleges: Aims CC, CC of Aurora, CC of Denver, Front Range CC, Pikes Peak CC, Pueblo CC, Red Rocks CC, Western Colorado CC	High School diploma/GED
	Associate Degree	Welding Technology, Machining Technology, Industrial Technologies	Community Colleges: Aims, CC of Aurora, CC of Denver, Front Range CC, Pikes Peak CC, Pueblo CC, Red Rocks CC	High School diploma/GED
	Bachelor Degree	Civil, Electrical, Environmental & Mechanical Engineering, Industrial Engineering, Mechanical Engineering	For more information about colleges that have these programs go to www.CollegeinColorado.org	See each school's Admissions website.
	Graduate Degree	Engineering Management, MS; Industrial & Systems Engineering, MS; Mechanical Engineering, MS & PhD	For more information about colleges that have these programs go to www.CollegeinColorado.org	See each school's Admissions website.

Career & Technical Education is delivered through the Colorado Community College System

www.cccs.edu



Cluster Overview: The **Manufacturing Career Cluster** prepares students in planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

Extended Learning Experiences

<p>Curricular Experiences:</p> <p>Examples: SkillsUSA Technology Student Association AWS – American Welding Society</p>	<p>Extracurricular Experiences:</p> <p>Examples: Odyssey of the Mind</p>
<p>Work-Based Learning Experiences:</p> <p>CO-OP Education</p>	<p>Program Accreditation and/or Professional Association(s):</p> <p>Examples: American Iron & Steel Institute American Machine Tool Distributors Association American Society for Nondestructive Testing American Society for Testing and Materials American Welding Society Composites Fabricators Association National Association of Manufacturers National Tooling & Machining Association Precision Metalforming Association</p>
<p>Service Learning Experiences:</p> <p>Examples: Boy Scouts of America, Girl Scouts of the USA, Habitat for Humanity, Community Service Volunteer</p>	

Career Options:		Salary Range:
Certificate	<p>Assemblers MIG Welders Machine Operator Solders and Braziers</p>	<p>\$\$</p>
Associate Degree	<p>TIG Welders Precision Layout Worker</p>	<p>\$\$ - \$\$\$</p>
Bachelor Degree	<p>Calibration Technician Electromechanical Technician</p>	<p>\$\$ - \$\$\$</p>
Graduate Degree	<p>Production Managers Industrial and Manufacturing Engineers</p>	<p>\$\$ - \$\$\$\$</p>

* \$ = \$15-25,000; \$\$ = \$25-55,000; \$\$\$ = \$55-90,000; \$\$\$\$ = Above \$90,000

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