



Pathway: Production

Plan of Study: Welders & Solderers

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 Admission Requirements * Default includes CDHE Higher Education	9 th	Core Academic Courses*:	English I, Algebra I, Physical Science, World History, Physical Education	Suggested Electives: Business Foundations, Data Processing, Computer Applications I
		Career Path Courses:	Welding I	
	10 th	Core Academic Courses*:	English II, Geometry, Colorado History/Civics, Spanish II, Biology	Suggested Electives: Accounting I
		Career Path Courses:	Welding II – two trimesters	
	11 th	Core Academic Courses*:	English III, Algebra II, United States History, Chemistry	Suggested Electives: Work Place Basics Independent Welding
		Career Path Courses:	Welding III – Two trimesters	
	12 th	Core Academic Courses*:	English IV, American Government, Pre Calculus A & B	Suggested Electives: Business Cooperative Advanced Welding
		Career Path Courses:	Welding IV – two Trimesters	

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: Postsecondary Education Options – Concurrent Agreement between Centauri High School and Trinidad State Junior college (Alamosa Campus)
	Industry Recognized Certificate(s) or License(s): American Welding Society (AWS)

Postsecondary Programs Available in Colorado

Colorado Institutions

Entrance Exams/ Requirements

Postsecondary Education Opportunities	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.

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>AWS – American Welding Society Americorp Volunteers in Service to America VICA</p>	<p>Extracurricular Experiences:</p> <p>FBLA SADD Math Club Chess Club FCCLA Spanish Club Drama Club EPYCS – El Pomar Youth Community Service</p>
<p>Work-Based Learning Experiences:</p> <p>Career Preparation – Paid and Unpaid, Job Shadowing, Internships</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>\$21,680 - \$39,010</p>
Associate Degree	<p>TIG Welders Precision Layout Worker</p>	<p>\$21,680 – 39,010</p>
Bachelor Degree	<p>Calibration Technician Electromechanical Technician</p>	<p>\$21,680 – 48,570</p>
Graduate Degree	<p>Production Managers Industrial and Manufacturing Engineers</p>	<p>\$29,830 - \$79,050</p>

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