



Pathway: Production

Plan of Study: Welding Technology and EPIC Welding

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	9 th	Core Academic Courses*:	English I, Algebra I, Earth or Environmental Science, State History/Civics	Suggested Electives: Blueprint Reading, Career Mathematics
		Career Path Courses:	Introduction to Manufacturing Occupations	
* Default includes CDHE Higher Education Admission Requirements	10 th	Core Academic Courses*:	English II, Geometry, Biology, US History, Foreign Language I	Suggested Electives: Mechanical Drawing
		Career Path Courses:	Information Technology Applications	
	11 th	Core Academic Courses*:	English III, Algebra II/ or other, Chemistry	Suggested Electives: Computer Applications, as in robotics
		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: Metallurgy Physics
		Career Path Courses:	Applications in Manufacturing Technology	

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: Insert Options Here: Dual Credit, PSEO, Articulated Credit
	Industry Recognized Certificate(s) or License(s): American Welding Society (AWS)

Postsecondary Education Opportunities	Postsecondary Programs Available in Colorado		Colorado Institutions	Entrance Exams/ Requirements
	Certificate	EPIC Welding, Welding Technology, Precision Machining, EPIC Diesel, EPIC Heavy Equipment, Heavy Equipment Diesel Maintenance		Trinidad State Junior College
Associate Degree	EPIC Welding, EPIC Diesel, EPIC Heavy Equipment, Heavy Equipment Diesel Maintenance, Manufacturing Technology		Trinidad State Junior College	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		
Curricular Experiences:		Extracurricular Experiences:
Special Topics Classes Seminars/Workshops Lab Experience Team Building		Science Fair Competitions Math Competitions Engineering Design Competitions Career Fairs Career Interest Assessments
Work-Based Learning Experiences:		Program Accreditation and/or Professional Association(s):
Job Shadowing Internship Independent Study		American Welding Society (AWS)
Service Learning Experiences:		
Community Service Involvement with Community Organizations		
Career Options:		Salary Range:
Certificate	Assemblers MIG Welders Machine Operator Solders and Braziers	\$\$
Associate Degree	TIG Welders Precision Layout Worker	\$\$ - \$\$\$
Bachelor Degree	Calibration Technician Electromechanical Technician	\$\$ - \$\$\$
Graduate Degree	Production Managers Industrial and Manufacturing Engineers	\$\$ - \$\$\$\$

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

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