

Welding

Career Cluster Description: The manufacturing career cluster prepares learners to enter an industry which includes planning, managing, and performing the processing of materials into intermediate or final products. Additional related professional and technical support activities such as production planning and control, maintenance, and manufacturing process engineering are also included in this cluster.

Major Options

- Welder/Fabricator
- Career & Technology Teacher
- Sheet Metal Worker
- Process Control Technician
- Boilermaker
- Pipe Fitters
- Machinist
- Industrial Maintenance Worker
- Heavy Equipment Mechanic
- Manufacturing Engineer
- Industrial Engineer
- Structural Steel Worker

Grade 9		Grade 10		Grade 11		Grade 12	
S1	S2	S1	S2	S1	S2	S1	S2
English 1	English 1	English 2	English 2	English Elective	English Elective	English Elective	English Elective
Physical Science	Physical Science	Biology	Biology	Science Elective	Science Elective	Science Elective	Science Elective
Civics	Health	World History	World History	U.S. History	U.S. History	U.S. Govern.	AK History
Algebra I	Algebra I	Geometry	Geometry	Algebra 2	Algebra 2	Advanced Math	Advanced Math
P.E.	P.E.	Elective	Elective	Personal Finance*	Elective	Co-op Work Experience	Co-op Work Experience
Intro to Career Pathways	Customer Service	Small Engines 1	Small Engines 2	Welding 1*	Welding 1*	Welding 2*	Welding 2*
Technology Applications 1*	Elective	Technical Drafting 1	Technical Drafting 2	Welding 1*	Welding 1*	Welding 2*	Welding 2*
Work-Based Learning Opportunities				Career-Technical Student Organizations (CTSO)		Certifications	
<ul style="list-style-type: none"> • Apprenticeship • Cooperative Education • Job Shadowing 		<ul style="list-style-type: none"> • Paid/Unpaid Internship • School-Based Enterprise • Service Learning 		<ul style="list-style-type: none"> • Skills USA 		<ul style="list-style-type: none"> • AWS Level 1 Certified Welder 	

POSTSECONDARY OPTIONS

Two-Year College or Proprietary Programs	Adult Registered Apprenticeships	Four-Year College and University Programs	Certifications	Licenses, On The Job Training, Training Certificates, etc.
<ul style="list-style-type: none"> • Welder/Fabricator • Pattern And Model Maker • Electrical Engineering Tech 	Department of Labor and Workforce Development, Office of Apprenticeship, email apprenticeship@alaska.gov or your local Alaska Job Center staff who will help you identify apprenticeable occupations and help you prepare for your future. You may also call (877) 724-2539	<ul style="list-style-type: none"> • Civil, Mechanical, or Electrical Engineers • Manufacturing Engineer • Teacher • Industrial Production Manager 	<ul style="list-style-type: none"> • American Welding Society Level 1 Certified Welder • American Welding Society Level 2 Certified Welder 	<ul style="list-style-type: none"> • Entrepreneurs • Process Control Technician • Machine Tool Operators • Inspectors

*College Credits may be available. [Click here for details.](#)