

DISTRICT NAME:

## CTE Course Description and Standards Crosswalk

Course Information	
Course Name	Welding 2
Course Number	II780
Number of High School Credits	.5
Sequence or CTEPS (You must first have the Sequence or CTEPS entered into the EED-CTE system.)	A & C, Manufacturing and Transportation
Date of district Course Revision	November 2013
Career & Technical Student Organization (CTSO)	
CTSO embedded in this sequence	Skills USA
Occupational Standards	
Source of Occupational Standards	American Welding Society (AWS)
Names/Numbers of Occupational Standards	Certified Welder – AWS
Registration Information	
Course Description (brief paragraph – as shown in your student handbook or course list)	Welding 2 is designed to give students an in depth study in advanced arc welding processes. Metallurgy properties and gas shielded welding techniques will be taught. At the end of this course students will be able to perform 1G, 2G, 3G, 4G, 1F, 2F, 3F and 4F operations using deep-penetration and low-hydrogen based rod. Safe equipment use and processes will be covered.
Instructional Topic Headings (please separate each heading by a semi-colon)	Safety and health, Tools and equipment, Blueprint reading, Layout, Metallurgy, GMAW processes, GTAW processes, Fabrication, repair, and rigging/manufacturing, Advanced welding, Processes and techniques, Welding careers.
Summative Assessments and Standards	
Technical Skills Assessment (TSA)	NCCER Basic Safety module 00101-04 or OSHA 10
Course addresses:	
New Alaska ELA and Math Standards	Y
Alaska Cultural Standards	Y

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All Aspects of Industry (AAI)	Y
Core Technical Standards	Y
Employability Standards	Y
<b>Employability Standards</b>	
Source of Employability Standards	State of Alaska
<b>Tech Prep</b>	
Current Tech Prep Articulation Agreement? (Y/N)	Yes
Date of Current Agreement	April 2012
Postsecondary Institution Name	Kenai Peninsula College
Postsecondary Course Name	Gas and Arc Welding
Postsecondary Course Number	Weld A101
# of Postsecondary Credits	4

**Additional CTE Course Information**

<b>Author</b>	
Course developed by	KPBSD
Course adapted from	Previous Version
Date of previous course revision	Nov. 2013
<b>Course Delivery Model</b>	
Is the course brokered through another institution or agency? (Y/N)	No

**Standards Alignment**

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<b>Student Performance Standards (Learner Outcomes or Knowledge &amp; Skill Statements)</b>	<b>Specific Occupational Skills Standard</b>	<b>Common Technical Core Standards</b>	<b>New Alaska ENG/LA Standards</b>	<b>New Alaska Math Standards</b>	<b>Alaska Cultural Standards</b>	<b>Employability/ Career Readiness Standards</b>	<b>All Aspects of Industry/ Systems</b>	<b>Assessment</b>
1. Demonstrate safe shop procedures in all welding techniques.	AWS-EX 1.2.1	MN-3 MN-HSE-1-3 MN-PRO-2	R.1.9-12 R.2.9-12 R.3.9-12 R.4.9-12		C3, B2 , B3, D6	A6, A1	HSE	Pre / Post Test
2. Identify and properly use welding tools and equipment for each welding process.	AWS-AD 1.5.3E	MN-6 MN-1	R.1.9-12 R.2.9-12 R.3.9-12 R.4.9-12	M2.4.1-4	B4, D6	A2, A1, A6	HSE TP	Lab Assignments
3. Demonstrate gas metal and flux core arc welding (GMAW & FCAW).	AWS 1.3.2	MN-6 MN-PPD-1	R.3.9-12 R.4.9-12		D6	A2, B2	PT	Lab Assignments
4. Demonstrate project fabrication or repair utilizing the various welding techniques and layout procedures.	AWS-EX 1.5.1c	MN-6 MN-1	R.1.9-12 R.3.9-12 R.4.9-12	M2.4.1-4	B2, C4, D6	A2, A5, A6, B1, B2	TP	Lab Assignments
5. Identify and apply special advanced welding processes (plasma cutting and pipe welding).	AWS-AD 1.12.2j	MN-6 MN-1	R.3.9-12 R.4.9-12	M2.4.1-4	D6	B1, B2	TP PT	Lab Assignments
6. Explore and identify various welding careers.		MN-4 MN-1 MN-MIR-1	W.8.9-12 W.9.9-12 R.1.9-12 R.2.9-12	M10.4.1	B2, D6	A4 B5 A3 B2 B3 B4	P, M, F, TP, PT, L, C, HSE & PWH	Lab Assignments

### Instructional Resources

**List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)**

**DISTRICT NAME:**

**Welding Technology Fundamentals 4<sup>th</sup> edition, author Bowditch, copyright 2010 (text book)**

**NCCER:** <http://www.nccer.org>

<http://www.youtube.com>

**American Welding Society:** <http://www.aws.org/certification/CW/>