

Welding 4 (II965)Curriculum Guide

9-12 Grades

Prerequisite Course(s): Welding 3

High School Credit = ½ credit per semester (Postsecondary credit = 0)

This course will be offered: X every year OR ____ every other year

Pathway (Optional): Production

Career Cluster Area: Manufacturing

Source of Occupational Skills Standards: American Welding Society (AWS)

Eligibility for Nationally Recognized Skill Certificate(s)/State License: ____ No OR X Yes, and identify Certificate: (AWS Certification), (OSHA), (NCCER)

Tech Prep: ____ No OR X Yes - If Yes, list postsecondary institution and number of postsecondary credits (University of Alaska Anchorage - 4 Credits)

Is this course brokered through another institution or agency: X No OR ____ Yes, and list institution/agency:

Course Master Number: II965

Course Description: Welding 4 will give the student an advanced level of exposure to steel and aluminum welding operations through project fabrication. Students will learn to mentor and supervise the demonstration of inexperienced/beginning welding students. Safe equipment use and processes will be covered.

Content Headings/Topics:

1. Safety and health
2. Tools and equipment
3. Blueprint reading
4. Layout
5. Metallurgy
6. Oxy-Acetylene process
7. SMA processes
8. GMAW processes
9. GTAW processes
10. Fabrication, repair, and rigging/manufacturing
11. Advanced welding
12. Processes and techniques
13. Welding careers

Welding 4 (II965) Curriculum Guide

9-12 Grades

Standard	Objective	Sequence and Duration	Sample Teaching Strategy/ Possible Integration	Resources and Text:	Dist/ State Assessment	Formative Assessment
AWS-EX 1.2.1	1. Mentor and supervise the demonstration of the basic principles for safe shop practices for self and others. (A6)		R4.2			Pre / Post Test
AWS-AD 1.5.3E	2. Mentor and supervise the demonstration of the basic principles for proper use of welding tools and equipment for each welding process. (A6)		M2.4.1-4 R4.2, 4.4			Lab Assignments
AWS 1.3.2	3. Mentor and supervise the demonstration of the basic principles for gas metal and flux core arc welding (GMAW & FCAW). (A6)		M2.4.1-4 R4.2, 4.4			Lab Assignments
AWS 1.3.4	4. Mentor and supervise the demonstration of the basic principles for gas tungsten arc welding procedures (GTAW). (A6)		M2.4.1-4 R4.2, 4.4			Lab Assignments
AWS-EX 1.5.1c	5. Mentor and supervise the demonstration of the basic principles for project fabrication or repair utilizing the various welding techniques and layout procedures. (A6)		M2.4.1-4 R4.2, 4.4			Lab Assignments
AWS-AD 1.12.2j	6. Mentor and supervise the demonstration of the basic principles for special advanced welding processes (plasma cutting and pipe welding). (A6)		M2.4.1-4 R4.2,4.4			Lab Assignments
	7. Explore and identify various welding careers. (B2)		M10.4.2 R4.2			Lab Assignments