

**Career Pathway**  
**Associate in Applied Science Degree in Welding**

**Program Purpose:** Graduates will demonstrate (1) basic knowledge in welding that will prepare them to obtain an entry-level position within the field and (2) competency in communication, critical thinking, quantitative analysis, and technological applications.

**Program Description:** In industrial manufacturing, the practice of joining and severing metals is a science and an art which requires combined knowledge and skills in a variety of industrial/technical fields. The Arizona Western College Institute of Welding Technology offers a selection of technology courses and programs that prepare the individual for entry level in a welding career. The curriculum offers a variety of ways in which students can realize their training and educational goals. Student needs are matched with the appropriate sequence of course work within one of the following: specialized single course, the certificate program, or the A.A.S. program. The content and instruction within welding centers on the "traditional" welding processes and practices of oxyacetylene welding and cutting, shielded metal arc (stick), gas tungsten arc (Tig-Heliarc), gas metal arc (MIG), as well as the "non-traditional" processes of plasma arc, resistance welding, fluxed core arc, submerged arc, and electron beam.

Participation in, and completion of, the different sequences of instruction within the welding department prepares the individual for a rewarding career in metal fabrication, maintenance, education, supervision, sales and service, as well as many other opportunities associated with welding technology. To receive an A.A.S. in welding, the student must complete the requirements for the American Welding Society SENSE certification Entry Welder Level 1.

# What's **your** career path?



**Certified Welder?**  
**Welding Inspector?**  
**College Degree?**

Related Degree Programs
<p><b>Arizona State University:</b>                      Bachelor of Science (B.S.) Mechanical Engineering Technology, Bachelor of Applied Science (B.A.S.) in Material Joining</p> <p><b>University of Arizona</b>                      Bachelor of Science (B.S.) Materials Science &amp; Engineering</p>

Related Occupations Based on Level of Education	
Community College or Technical School	Machine Operator, Welder & Cutter, Soldered, Brazier, Sheet Metal Worker
4-yr College or University	Metallurgical Engineer
Salary Range	\$20,000 - \$75,000 a year



Yuma/La Paz Tech Prep Consortium  
 P.O. Box 929 • Yuma, Arizona 85366  
 (928) 344-7754 • Fax: (928) 317-6108



# Career Pathway


## Associate in Applied Science Degree in Welding

High School Plan

Student Name: \_\_\_\_\_

School: \_\_\_\_\_

Counselor/Advisor: \_\_\_\_\_

GRADE	English/ Language Arts	Math	Phys Ed, Health, Social Studies	Science	Program Elective	Total Credits	Related CTSO Programs	Notes		
<b>8th grade parent / student night - Take Career Interest Survey</b>										
Freshman	English I	Algebra I	Physical Education I ↔ Health	Biology	Exploring Technology ↔ Metals Technology	6				
Sophomore	English II	Algebra II	World History/Civil OR Geography	Chemistry	Computer Application I ↔ Physical Education II	6				
<b>In 10th grade, assess for college readiness by taking the AWC Accuplacer (college placement test)</b>										
Junior	English III	Geometry	US History	Engineering Science Technology Lab	Vocational Welding <i>(2 Period Block)</i> • WLD 105/106 (6 cr)	6				
<b>In 11th grade, assess for college readiness by taking the AWC Accuplacer (college placement test)</b>										
Senior	English IV	Math Analysis	Government ↔ Economics	Industrial Cooperative Education	↔ On-the-Job Training ↔ On-the-Job Training	6	<b>24 Total Credits</b>			

### Courses needed to complete A.A.S. in Welding at Arizona Western College

GRADE	Freshman Composition	Math	Social & Behavioral Sciences	Arts & Humanities	Physical & Biological Sciences	Major Requirements			Total Credits	Notes
1st Semester <i>(Fall)</i>	ENG 100: Intro. to Composition (3 cr)	■ MAT 105 (completed during high school)		Arts/Humanities (3 cr)		WLD 108: Tech. in Gas Arc Welding (3 cr)	TEC 165: Employee & Occup. Safety (3 cr)	MFG 185: Quality Control & Insp (3cr)	<b>18</b> <i>(3 completed during High School)</i>	
2nd Semester <i>(Spring)</i>	ENG 101: Freshman Composition I (3 cr)				▼ WLD 123: Man./Welding Tech. Survey (3 cr)	♦ MFG 195: Material Science & Metallurgy (3 cr)	• WLD 105 / 106 (Completed during HS)	ECT 105: Basic Electricity (3 cr)	<b>18</b> <i>(6 completed during High School)</i>	
3rd Semester <i>(Fall)</i>	ENG 110: Technical Writing (3 cr)				SCI 100: Applied Chemistry (2 cr)	♦ WLD 109: Tech in. Gas Metal Welding (3 cr)	▼ WLD 124: Arc Welding Process & Power Sources (3 cr)	WLD 125: Welding Design, Layout & Fabrication (3 cr)	<b>14</b>	
4th Semester <i>(Spring)</i>	Options (2 cr)		Social and Behavioral Sciences (3 cr)		SCI 105: Applied Physics (2 cr)	▼ WLD 224: Tech. Specialized Welding (3 cr)	MFG 191: Machine Tool Operations (4 cr)	DFT 181: Industrial Graphics (3 cr)	<b>17</b>	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 20%;"> <ul style="list-style-type: none"> <li>● Dual Enrollment Course</li> <li>■ Concurrent Enrollment Course</li> <li>▼ Pre-Requisite / Co-Requisite Required</li> <li>♦ Pre - Requisite / Co-Requisite Course</li> </ul> </div> <div style="width: 60%;"> <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="text-align: center;">█ Electives</div> <div style="text-align: center;">█ Required</div> <div style="text-align: center;">█ A.A.S. General Requirement</div> <div style="text-align: center;">█ Recommended Elective</div> <div style="text-align: center;">█ Required Elective</div> </div> </div> <div style="width: 20%; text-align: center;"> <p><b>67 Total Credits</b> <i>(9 completed during High School)</i></p> </div> </div>										