

WELDING TECHNOLOGY

Program Description and Student Learning Outcomes

The increased demand for certified welders has generated a need to offer in-depth training and lab experiences necessary for the development of combination and advanced welding skills required for certification in multiple areas. The Welding Technology program is designed to meet those objectives. Students will be trained in Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW), and Pipe Welding.

The Welding Technology program is designed to provide hands-on training in the lab. Students who successfully accomplish welding skills in accordance with established proficiency standards will be eligible to earn various American Welding Society certifications. Classes are scheduled to accommodate area high school students who would like to attend the program for concurrent credit which awards both high school and college credit. The one-year technical certificate program may be continued to an Associate of Applied Science in General Technology degree.

Successful completers of this program will be able to:

- demonstrate proper oxy-fuel cutting process (OFC), and torch adjustments, with emphasis on safety.
- demonstrate the ability to produce sound and discontinuity-free welds, with the Shielded Metal Arc process (SMAW) in the 1G, 2G, 3G, and 4G positions.
- demonstrate the ability to produce quality welds in all positions using the Gas Metal Arc process (GMAW).
- demonstrate the ability to produce quality welds in all positions using the Gas Tungsten Arc process (GTAW).
- demonstrate the ability to produce sound and discontinuity-free welds on pipe using both the SMAW and STAW process in the 2G, 5G, and 6G positions.

The program length for a full-time student is two (2) semesters and one (1) summer term. The program costs are approximately \$3,212 for tuition and fees and approximately \$745 for books and supplies. *Tests for welding certifications are in addition to the tuition and fees and are based on the type of test being taken.*

Individuals who desire only a Certificate of Proficiency in welding may complete the 11 credit hours indicated with an asterisk (*) in the suggested schedule below.

GRADUATION REQUIREMENTS

(Suggested Schedule)

		<u>Fall Semester</u>	Credit Hours
WELD	1103	Blueprint Reading	3
WELD	1115	*Basic Welding	*5
WELD	1215	*SMAW (Shielded Metal Arc Welding)	*5
WELD	1401	*Welding Lab I	*1
MAT	1203	Technical Mathematics or higher-level math course	3
		*Exit: Welding Certificate of Proficiency OR continue to Welding Technical Certificate.	*11
		(NOTE: If student plans to continue he/she should also complete WELD 1103 and MAT 1203 as outlined above.)	17
		<u>Spring Semester</u>	
WELD	1315	GTAW (Gas Tungsten Arc Welding)	5
WELD	1415	GMAW (Gas Metal Arc Welding)	5
WELD	1501	Welding Lab II	1
COM	1203	Technical Communications (or higher-level composition course)	3
CFA	1103	Tech Computer Fundamentals (or higher-level computer course)	
		<u>Summer I Term</u>	
WELD	1513	Pipe Welding	3
		Exit: Welding Technology Technical Certificate	37