

WELDING TECHNOLOGY

Program Description:

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 want to attend the concurrent credit program, 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.

The program length for a full-time student is two (2) semesters and one (1) summer term. 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 10 credit hours indicated with an asterisk (*) in the suggested schedule below.

Student Learning Outcomes

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.

GRADUATION REQUIREMENTS (Suggested Schedule)

		<u>Semester 1</u>	<u>Credit Hours</u>
WELD	11003	Blueprint Reading	3
WELD	11105	*Basic Welding	5
WELD	12105	*SMAW (Shielded Metal Arc Welding)	5
MATH	12073	Technical Mathematics OR	
MATH	22163	**Advanced Industrial Math	3
 <u>Semester 2</u>			
WELD	13105	GTAW (Gas Tungsten Arc Welding)	5
WELD	14105	GMAW (Gas Metal Arc Welding)	5
COMM	12053	Technical Communications OR	
ENGL	10103	**Composition I	3
CPSI	11083	Technical Computer Fundamentals OR	
ISYS	10133	**Introduction to Computer-based Systems	3
 <u>Semester 3</u>			
WELD	15103	Pipe Welding	3
COMM	11052	Employability Skills/Ethics OR	2
WELD	14001	Welding Lab I AND	1
WELD	15001	Welding Lab II	1
Exit: Welding Technology Technical Certificate			37

**Required for Associate of Applied Science in General Technology

*Required for Welding Certificate of Proficiency