

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.*

*****Pipe Welding (WELD 15103) is not required for a credential. This course is offered in Summer I on an as-needed basis.***

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
COMM12053	Technical Communication OR	
ENGL 10103	**Composition I	3
CPSI 11083	Technical Computer Fundamentals OR	
CPSI 10003	**Microcomputer Applications	3
<u>Semester 3</u>		
SPCH 11002	Employability Skills/Ethics OR	2
WELD 14001	Welding Lab I AND	1
WELD 15001	Welding Lab II	1
Exit: Welding Technology		34

Technical Certificate

****Required for Associate of Applied Science in General Technology**

***Required for Welding Certificate of Proficiency**