

WELDING TECHNOLOGY

Welding Technology is the application of the art and science of joining metals. Welding technologists have important roles in the fabrication and construction of nuclear and fossil fuel power plants, heavy equipment, agricultural machinery, petro-chemical plants, bridges, buildings, floating and underwater vessels, automobiles, appliances, and projects for national security. Specifically anything involving metals, from miniature electronic devices to sophisticated space projects, will require the skills of the expert welding technologist. These highly skilled members of the technological team apply practical working knowledge of welding processes, welding metallurgy and welding code standards in solving problems of welding design and production. The field is open to men and women. The OCC Welding Department is licensed to qualify (certify) welders to code standards.

Program Outcome

Students successfully completing the Orange Coast College welding program will have the necessary skills training for proficiency in taking a welding qualification test for certification which may be required for employment. Working craftsmen will be able to improve or develop additional proficiencies required for professional growth or advancement in their current employment. All qualification training and tests are prescribed and follow the guide of the American National Standard Institute (ANSI) codes requirements.

WELDING TECHNOLOGY

The Certificate of Achievement program in Welding Technology is for those who desire advanced knowledge of welding for employment as welding technicians, welding inspectors, welding engineers, welding supervisors, and advanced welders. Students also completing the required general education requirements and electives may earn the Associate in Science degree. In addition, many OCC welding courses are transferable and can be used by those students who are interested in the welding engineering degree program at Ohio State University. Whatever the case, a person's chances for the job of their choice are much higher when they have the technical background as evidenced by earning our Certificate of Achievement in welding.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
	Fall	Spring	
Technical Report Writing (Or)	ENGL A105		(3)
Freshman Composition	ENGL A100		
Arc & Oxy Welding (3) (Or)	WELD A100		(3-4)
Arc & Oxy Welding (4)	WELD A101		
Math & Fabrication Layout For Welders	WELD A120		(3)
Advanced Welding (3) (Or)	WELD A200		(3-4)
Advanced Welding (4)	WELD A201		
Welding Metallurgy	WELD A230		(3)
	Fall		
Basic Drafting Practices	DRAF A110		(4)
Welding Inspec & Test	WELD A210		(4)

Spring

Blueprint Reading	WELD	A180	(3)
Welding Specs and Codes	WELD	A220	(2)
Total:			(28-30)

Suggested electives:

Arc-Oxy Weld (Open Lab)	WELD	A115	(1-2)
GTAW (Gas Tungsten Arc Weld)	WELD	A130	(1.5)
Arc & Oxy Weld Lab	WELD	A215	(1-2)
Pipe Welding	WELD	A250	(3)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

WELD TESTING

The Weld Testing Certificates of Specialization will be awarded upon successful completion of a proficiency test for each identified level (e.g., Level I, II, etc.) within a category of welding (i.e., SMAW, FCAW, GTAW, GMAW or Pipe). The indicated Weld Testing class must be repeated for each type of certificate received. Higher levels of certification will potentially lead to better paying jobs within the industry.

Basic Welding (SMAW)

SKILL CERTIFICATE

Required Courses

Course			Units
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing Basic	WELD	A105	(.5)
Total:			(3.5)

This Certificate of Specialization certifies mastery of basic Shielded Metal Arc Welding (SMAW) Levels I, II, III, or IV.

Intermediate Welding (SMAW)

SKILL CERTIFICATE

Required Courses

Course			Units
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing Intermediate	WELD	A106	(.5)
Arc & Oxy Weld Practice (1-2)	WELD	A115	(1) minimum
Total:			(4.5)

This Certificate of Specialization certifies mastery of intermediate Shielded Metal Arc Welding (SMAW) Levels V or VI.

Advanced Welding (SMAW)

CERTIFICATE OF SPECIALIZATION

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing Advanced	WELD	A107	(.5)
Arc & Oxy Welding Pract (1-2)	WELD	A115	
(Or)			(3) minimum
Arc & Oxy Weld Lab (1-2)	WELD	A215	
Advanced Welding	WELD	A200	(3)
Total:			(9.5)

This Certificate of Specialization certifies mastery of first level advanced welding in Shielded Metal Arc Welding (SMAW) Levels VII, VIII and IX.

Advanced I Welding (FCAW)

CERTIFICATE OF SPECIALIZATION

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing Advanced	WELD	A108	(.5)
Arc & Oxy Welding Pract (1-2)	WELD	A115	
(Or)			(3) minimum
Arc & Oxy Weld Lab (1-2)	WELD	A215	
Advanced Welding	WELD	A200	(3)
Total:			(9.5)

This Certificate of Specialization certifies mastery of first level advanced welding in Flux-Cored Arc Welding (FCAW) Levels I, II, & or IV.

Advanced II Welding (FCAW)

CERTIFICATE OF SPECIALIZATION

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing FCAW (.5)	WELD	A109	(.5)
(Or)			(.5)
Weld Testing FCAW	WELD	A110	
Arc & Oxy Welding Pract (1-2)	WELD	A115	
(Or)			(5) minimum
Arc & Oxy Weld Lab (1-2)	WELD	A215	
Advanced Welding	WELD	A200	(3)
Total:			(11.5)

This Certificate of Specialization certifies mastery of second level advanced welding in Flux-Cored Arc Welding (FCAW) Levels V, VI, VII, VIII, or IX.

Gas Tungsten Arc Welding (GTAW)

SKILL CERTIFICATE

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing GTAW	WELD	A104	(.5)
Gas Tungsten Arc Welding	WELD	A130	(1.5)
Total:			(5)

This Certificate of Specialization certifies mastery of skills necessary for Gas Tungsten Arc Welding (GTAW) Level I.

Gas Metal Arc Welding (GMAW)

CERTIFICATE OF SPECIALIZATION

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing GMAW (.5)	WELD	A102	(.5)
(Or)			(.5)
Weld Testing GMAW (.5)	WELD	A103	
Adv Arc & Oxy Welding	WELD	A200	(3)
Total:			(6.5)

This Certificate of Specialization certifies mastery of skills necessary for Gas Metal Arc Welding (GMAW) Levels I, II, III, IV or V.

Pipe

CERTIFICATE OF SPECIALIZATION

Required Courses			Units
Course			
Arc & Oxy Welding	WELD	A100	(3)
Weld Testing Pipe	WELD	A111	(.5)
Adv Arc & Oxy Welding	WELD	A200	(3)
Pipe Welding and Adv GTAW	WELD	A250	(3)
Total:			(9.5)

This Certificate of Specialization certifies mastery of skills necessary or Pipe Levels I and/or II.

