

Advanced Welding Technology

Program

Welding

Degree Type

Certificate

The Advanced Welding certificate provides students with the skills and knowledge necessary to achieve American Welding Society (AWS) industry-recognized certifications in multiple processes. Through a combination of classroom-based theory and hands-on laboratory training, students learn the applications of Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), Submerged Arc Welding (SAW), and Gas Tungsten Arc Welding (GTAW). In addition, they learn the skills necessary for employment in today's welding industry, including those associated with safety, blueprint reading, and practical application. This certificate devotes additional time to preparing students for the D1.5 and D1.1 Structural Steel Unlimited Certifications in all positions for the FCAW and SMAW processes. The certificate allows students to transfer credits into the Associate in Science degree in Trades Management and fulfills all prerequisites for the Pipe Welding certificate.

Students majoring in programs of study other than welding may take Introduction to Wire-Fed Welding and Cutting Processes (WELD 213W) or Introduction to Arc Welding and Cutting Processes (WELD 214W) as exploratory welding courses on a space-available basis.

HEALTH/SAFETY CONSIDERATIONS FOR ALL WELDING PROGRAMS:

Welding students must not place in jeopardy fellow students, faculty, and equipment. In the welding laboratory, students must demonstrate sufficient emotional stability to withstand the stresses and changing circumstances that are inherent in a laboratory of this size, or they will be removed from the program. Applicants should be aware of the basic health and fitness requirements to pursue various careers in the welding industry. Prospective students with special needs or limitations that may affect their eligibility for employment should discuss their career goals with the Program Coordinator prior to admission.

Furthermore, students are expected to exercise sound judgment, accept direction and guidance from faculty members, and work for reasonable periods of time with potentially dangerous equipment and processes without direct supervision. These expectations include an ability to identify and avoid potential safety risks to themselves and to avoid creating potential safety risks to others.

Fall Semester

Course Number	Title	Lecture	Lab	Credits
WELD106W	Blueprint Reading I	2	0	2
WELD110W	Math for Welders	2	0	2
WELD115W	Fundamental Welding Skills and Principles	2	22	12
WELD125W	Introduction to Metallurgy	1	0	1
WELD203W	Tools and Tool Safety	0	2	1
	Sub-Total Credits	7	24	18

Spring Semester

Course Number	Title	Lecture	Lab	Credits
CAR101W	Career Readiness	2	0	2
WELD206W	Blueprint Reading II	2	0	2
WELD216W	Plasma Cutting Technology	0	2	1
WELD221W	Advanced Welding Skills and Principles	1	21	11
WELD226W	Welding Hazard Identification and Assessment	1	0	1
WELD228W	Survey in Nondestructive Examination	1	0	1
Sub-Total Credits		7	23	18
Total Credits			36	