



South Central College
Program Design

CERT 3770/2461 Advanced Welding

Program Information

Instructional Level Certificate

Career Cluster Engineering, Manufacturing & Technology

Description

Advanced welding is a continuation of the Intro to Welding Certificate. Course being offered in Advanced welding include Safety, GMAW, GTAW, SMAW, Blue Print Reading, and Fabrication. Students will learn more about safety as they will earn their OSHA 10 card. In the GMAW process students will concentrate more on pulse welding of carbon steel, stainless steel, and aluminum. Students will also be introduced into the Flux Core Process (FCAW). Students will have the opportunity earn a qualifications in AWS D1.1 in those processes. In the GTAW process students will learn and practice welding in out of position welds as well as pulse GTAW welding. The course is also going to introduce students in the fabrication processes.

Program Student Learning Outcomes

- 1 Identify the proper program to be used on the particular brand of welding equipment.
- 2 Assemble from a print the proper weldment using the correct weld settings.
- 3 Practice welding using different process and materials designed for each class.
- 4 Critique the AWS D1.1 bend test and ASME pipe test to see if it is acceptable or rejectable.

Program Configurations

Semester Two

Credits

Technical Course 16

Total Credits 16

One

Course #	Course Title	Credits	Function
WELD 1010	OSHA 10 Hour and Welding Safety	1	Technical Course
WELD 1065	Metallurgy	1	Technical Course
WELD 1108	Advanced Blueprint Reading	2	Technical Course

WELD 1126	Advanced Shielded Metal Arc Welding	1	Technical Course
WELD 1136	Advanced Gas Metal Arc Welding	2	Technical Course
WELD 1146	Advanced Gas Tungsten Arc Welding	3	Technical Course
WELD 1160	Fabrication I	2	Technical Course
WELD 1175	Advanced Welding Lab II	4	Technical Course

Program Course List

Number	Title	Credits	Pre/Corequisites
WELD 1010	OSHA 10 Hour and Welding Safety	1	Weld 1011 Weld safety or equivalent from another technical college or instructor approval.
WELD 1065	Metallurgy	1	Welding Certificate or equivalent from another college or instructor approval
WELD 1108	Advanced Blueprint Reading	2	WELD 1007 Blueprint Reading or equivalent from another technical college or instructor approval.
WELD 1126	Advanced Shielded Metal Arc Welding	1	WELD 1025 - Introduction to Shielded Metal Arc Welding or equivalent from another school or instructor approval
WELD 1136	Advanced Gas Metal Arc Welding	2	WELD 1035 - Introduction to GMAW or equivalent from another technical college or instructor approval.
WELD 1146	Advanced Gas Tungsten Arc Welding	3	WELD 1045 - Introduction to GTAW or equivalent from another technical college or instructor approval.
WELD 1160	Fabrication I	2	WELD 1011 - Safety OSHA 10 or instructor approval.
WELD 1175	Advanced Welding Lab II	4	WELD 1011 - Safety OSHA 10, WELD 1126 - Advanced SMAW, WELD 1136 - Advanced GMAW, WELD 1108 - Blueprint, WELD 1146 - Advanced GTAW, WELD 1160 - Fabrication I or instructor approval.