

WELDING

This program prepares students to enter welding-related occupations, offers retraining for those seeking a new career, and provides an opportunity for those employed in welding occupations to learn new skills and upgrade themselves in their positions.

The department is a member of the American Welding Society's Educational Institution Program for entry level welders and is entitled to all the privileges. This entry level welder program is part of the National Skills Standards Program, which is being enacted across a wide range of industries in the United States.

The program prepares students to pass welding performance tests based on the AWS D1.1 Structural Steel Code as well as preparation for the LA city welding license test under the Los Angeles Department of Building and Safety. The program offers a certificate of achievement in welding, and an associate degree may be obtained upon completion of 21 units of welding course work in addition to general education.

Career Opportunities

Boilermakers, Iron Workers, Maintenance Worker, Millwrights, Sheet Metal Workers, Welder, Welder-Fitter, Welding Estimator, Welding Inspector, Welding Instructor, Welding Operator, Welding Sales Representative, Welding Service Representative, Welding Supervisor, Welding Technician

Faculty

Kuhns, Troy

Welding, AS

State Control Number: 04947

Program Code: WELD.AS

Approved for Federal Financial Aid: Yes

To earn this degree, complete the major coursework with "C" grades or better and all of the following graduation requirements: 60 minimum degree-applicable units (including a maximum 4 units of activity); 2.0 minimum overall GPA; 12 degree-applicable units through VVC; Information Competency; Global Citizenship; Kinesiology, and the VVC General Education pattern (<https://catalog.vvc.edu/degrees-certificates/vvcge/#vvcge>). Courses may count in one area only, either in the major or in a general education category. Courses counted in one AA/AS major may not be used in another AA/AS major.

Code	Title	Units
Required Courses		
WELD 51	Oxyacetylene Welding, Cutting & Brazing	4.0
WELD 52	Shielded Metal Arc Welding Basic	4.0
WELD 53	Shielded Metal Arc Welding Advanced	4.0
WELD 57A	Gas Tungsten Arc Welding Basic	2.0
WELD 57B	Gas Tungsten Arc Welding Advanced	2.0
WELD 58A	Gas Metal Arc Welding Basic	2.0
WELD 58B	Gas Metal Arc Welding Advanced	2.0
WELD 59	Welding Symbols and Blueprint Reading	1.0
Total Units		21

Welding Certificate of Achievement

State Control Number: 20542

Program Code: WELD.CERT

Approved for Federal Financial Aid: Yes

The Welding Technology courses included in the certificate program will give the students the skills necessary to become an entry-level combination welder.

Code	Title	Units
Required Courses		
WELD 51	Oxyacetylene Welding, Cutting & Brazing	4.0
WELD 52	Shielded Metal Arc Welding Basic	4.0
WELD 53	Shielded Metal Arc Welding Advanced	4.0
WELD 57A	Gas Tungsten Arc Welding Basic	2.0
WELD 57B	Gas Tungsten Arc Welding Advanced	2.0
WELD 58A	Gas Metal Arc Welding Basic	2.0
WELD 58B	Gas Metal Arc Welding Advanced	2.0
WELD 59	Welding Symbols and Blueprint Reading	1.0
Total Units		21

Welding Courses

WELD 50 Introduction to Welding (4.0 Units)

Survey course in all welding processes offered at VVC which covers safety practices, use of equipment, including: Oxy-Acetylene Welding, Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, and Flux-Cored Arc Welding. 32-36 hours lecture and 96-108 hours lab. Offered Fall and Spring Semesters.

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 51 Oxyacetylene Welding, Cutting & Brazing (4.0 Units)

Develops entry-level skills for the welder in gas welding, braze welding and oxy-fuel cutting. Offered Fall/Spring semesters. Two hours lecture, four hours laboratory per week.

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 52 Shielded Metal Arc Welding Basic (4.0 Units)

Develops entry-level shielded metal arc welding (SMAW) skills for the welder.

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 53 Shielded Metal Arc Welding Advanced (4.0 Units)

Develops skills to produce high quality multi-pass all position groove welds with and without backing.

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 57A Gas Tungsten Arc Welding Basic (2.0 Units)

Develops entry level gas tungsten arc welding skills; setting up and adjusting equipment, and in position welding on mild steel, stainless steel and aluminum.

Lecture Hours: 18.0; Lab Hours: 54.0

Transfer: Not transferable

WELD 57B Gas Tungsten Arc Welding Advanced (2.0 Units)

Develops advanced gas tungsten arc welding skills in out-of-position welding on mild steel, stainless steel and aluminum.

Lecture Hours: 18.0; Lab Hours: 54.0

Transfer: Not transferable

WELD 58A Gas Metal Arc Welding Basic (2.0 Units)

Develops entry-level skills in gas metal arc welding. Specifically develops skills on all position groove and fillet welds, set-up, adjustment and equipment maintenance.

Lecture Hours: 18.0; Lab Hours: 54.0

Transfer: Not transferable

WELD 58B Gas Metal Arc Welding Advanced (2.0 Units)

Develops advanced skills in gas metal arc welding. Specifically develops skills on single-vee groove butt joints in all positions and weld qualification practice.

Lecture Hours: 18.0; Lab Hours: 54.0

Transfer: Not transferable

WELD 59 Welding Symbols and Blueprint Reading (1.0 Units)

Develops a technical understanding of engineering drawings and use of information to communicate instructions from the design to the welder and fitter to achieve design objectives.

Lecture Hours: 18.0

Transfer: Not transferable

WELD 60A Welding Laboratory Shield Metal Arc Welding (1-2 Units)

A laboratory class to develop skills in arc. Offered Fall, Spring, and Summer sessions. Forty-eight hours of laboratory experience qualifies for 1 unit of credit.

Lab Hours: 54.0

Transfer: Not transferable

WELD 60B Welding Laboratory Gas Tungsten Arc Welding (1-2 Units)

A laboratory class to develop skills in gas tungsten arc welding and welder performance qualification. Offered Fall/Winter/Spring/Summer sessions. Forty-eight hours of laboratory experience qualifies for 1 unit of credit.

Lab Hours: 54.0

Transfer: Not transferable

WELD 60C Welding Laboratory Gas Metal Arc Welding (1-2 Units)

A laboratory class to develop skills in gas metal arc welding, and welder performance qualification. Offered Fall/Winter/Spring/Summer sessions. Forty-eight hours of laboratory experience qualifies for 1 unit of credit.

Lab Hours: 108.0

Transfer: Not transferable

WELD 60D Welding Laboratory F.C.A.W. (1-2 Units)

A laboratory class to develop skills in flux cored arc welding or welder performance qualification. Offered Fall/Winter/Spring/Summer sessions. Forty-eight hours of laboratory experience qualifies for 1 unit of credit.

Lab Hours: 54.0

Transfer: Not transferable

WELD 71 Flux Cored Arc Welding (4.0 Units)

Develops skills to produce high quality multi-pass all position groove welds with backing on varying thicknesses of base material utilizing Gas-Shielded and Self-Shielded Flux Core Wires.

Recommended Preparation: WELD 58A

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 72 Gas Arc Welding (4.0 Units)

Develops introductory skills for pipe welding in the 1G and 2G positions without backing using the Shielded Metal Arc and Gas Tungsten Arc welding processes. 32-36 hours lecture and 96-108 hours laboratory.

Prerequisite(s): WELD 53, Minimum grade C

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 73 Intermediate Pipe Welding (4.0 Units)

Develops intermediate skills for pipe welding in the 5G uphill and downhill positions without backing using the Shielded Metal Arc and Gas Tungsten Arc welding processes. 32-36 hours lecture and 96-108 hours laboratory.

Prerequisite(s): WELD 72; Minimum grade C

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 74 Flux Cored Arc Weld (4.0 Units)

Develops advanced skills for pipe welding in the 6G position without backing using the Shielded Metal Arc and Gas Tungsten Arc welding processes. 32-36 hours lecture and 96-108 hours laboratory.

Prerequisite(s): WELD 73, Minimum grade C

Lecture Hours: 36.0; Lab Hours: 108.0

Transfer: Not transferable

WELD 99 Independent Study (0.5-4 Units)

Transfer: Not transferable

WELD 138 Work Experience Education Welding (1-8 Units)

Work Experience Education is a key element of Victor Valley College's comprehensive approach to career development. Work Experience Education is a 16-, 12-, or 8-week course that enables students to receive college credit for paid or unpaid work opportunities. This course helps students gain valuable on-the-job work experience while providing practical education, best practices in professional development, and academic guidance through the course of their work opportunity. The combination of practical experience and curricular development empowers students to be more competitive, efficient and valuable employees upon completion of this program and/or their academic program trajectory. The course is ideal for students who are cross-training at their current worksite for upward mobility or seeking career changes, as well as those looking for entry-level occupational training through work-based learning experiences such as through an internship. Work Experience Education transforms community businesses, industries, and public agencies into expanded educational training laboratories. Credit is awarded on the basis of learning objectives completed and the number of hours the student trains. Students must create/complete new learning objectives each semester they enroll. Students may utilize their present work sites. More details are available in the Work Experience Education Office, (760) 245-4271, ext. 2281. The office, located in the Academic Commons, is open Monday-Thursday, 8:00 a.m.-1:00 p.m., 2:00-6:00 p.m., and by appointment. Please refer to the Work Experience Education section in this catalog for more information.

CSU

Transfer: Transfers to CSU only

Program Learning Outcomes

Program Learning Outcomes (PLOs) are statements of the kind of learning a program hopes a student will achieve. The PLOs describe the knowledge, skills, problem-solving, communication and values that apply to all certificates and/or degrees within that program.

A student receiving a degree or certificate in this field will be able to:

1. Demonstrate acceptable safety practices daily in order to prevent injuries of any type.
2. Practice and perform welder qualification testing at the appropriate level for the course.
3. Interpret drawings and welding symbols in order to weld the correct weld type and size per the detailed joint design.

4. Practice and demonstrate welding and cutting job practices in multiple processes appropriate for being a combination welder.