

WELDING TECHNOLOGY

DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree (A.S.)

Certificate of Achievement

DESCRIPTION

The Imperial Valley College Welding Technology Program curriculum is designed to educate, train, and prepare our students to meet the minimum Knowledge Skill Sets and Technical/ Manipulative Skill Sets for Entry Level Welders as established by the American Welding Society (AWS). The emphasis of the teaching and learning activities is to qualify the student to meet the minimum competencies for the Theory, Technology, Applied Science, and Technical/Manipulative Skills Sets that are the foundation of the A.W.S.; S.E.N.S.E. Standards (Schools Excelling through National Skills Standards Education). All of the IVC Welding Technology courses are a combination of academic (Lecture) and Technical/Manipulative (Lab) instructional activities. The Welding Technology courses include core competencies for students to attain qualification to Entry Level Welding Personnel SENSE Standards. These courses are; WELD 100, Welding Technology, WELD 115 Flux Cored Arc Welding on Plate, WELD 120 Gas Tungsten Arc Welding on Plate, WELD 130 Shielded Metal Arc Welding on Plate, WELD 220 Gas Tungsten Arc Welding on Pipe, and WELD 230 Shielded Metal Arc Welding on Pipe. Some of the major teaching and learning modules throughout the Welding Technology Program are; Industrial Safety, Oxy-Fuel Welding and Cutting, Technical Drawing Interpretation, Weld/Welding Symbols, Fundamentals of Welding Metallurgy, Plasma Arc Cutting, Welding Power Sources, Welding Materials, Air Carbon Arc Cutting, and Welder Qualification and Certification.

PROGRAM LEARNING OUTCOMES

1. Explain the hierarchy of "Hazard Control" in a Welding Environment and how this relates to Occupational Safety and Health, to include; (1) Identification of Hazards, (2) Elimination of Hazards, (3) Administration of Hazards, (4) Engineering Controls, and (5) Personal Protective Equipment.
2. Demonstrate an understanding of Oxyacetylene Welding and Cutting to include the proper and safe procedures for set-up and use of related equipment.
3. Define and explain the Physical and Mechanical properties of metals and how these influence the development of Performance Qualification Records (PQR) and Welding Procedure Specifications (WPS) related to welding processes and applications.
4. Explain and Demonstrate the proper set-up and use of all related components used in Gas Tungsten Arc Welding (GTAW).
5. Using the prescribed specifications and accepted parameters, apply the predetermined inspection criteria to assess "acceptable" weld samples for Destructive and Nondestructive testing.

ASSOCIATE DEGREE AND CERTIFICATE OF ACHIEVEMENT PROGRAMS

The Associate in Arts (AA) or the Associate in Science (AS) Degree involves satisfactory completion of a minimum of 60 semester units with a C average or higher, including grades of C in all courses required for the major, and fulfillment of all IVC district requirements for the associate's degree along with all general education requirements. The degree provides a sound basis for transfer to upper division institutions for additional degrees or for higher vocational preparation. To be eligible to receive an Associate Degree the student must complete the requirements for the major, the District requirements for an Associate Degree, and the General Education requirements. In addition students must maintain a minimum grade point average and meet the minimum grade requirements of their program. Detailed information is available in the college catalog.

The Certificate of Achievement program is designed for students with personal or occupational goals who wish early employment. To qualify for the Certificate, a student must satisfy the following requirements: (1) complete all courses listed for a particular certificate.; (2) achieve a "C" average (2.0 GPA) for all courses used to complete the certificate; and, (3) file a Certificate Application form with Admissions and Records by the appropriate deadline(s) identified on the application.

CAREER OPPORTUNITIES

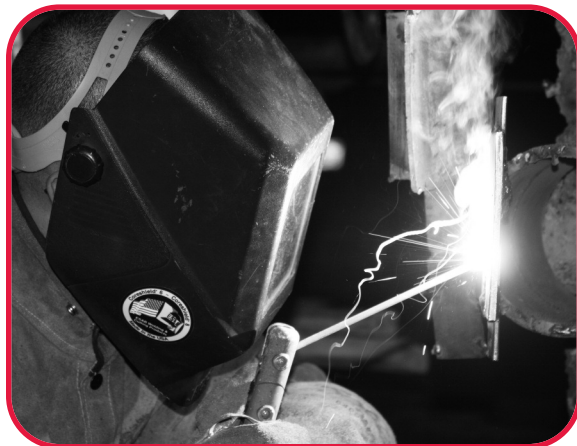
- Assembly Worker
- Auto Body Worker
- Structural and Iron Work Welder
- Machine Tool Operator
- Sheet Metal Worker
- Tool and Die Maker
- Welder

Industry fields:

- Aerospace and Manufacturing
- Automotive and Transportation
- Pipe and Vessel Welding
- Fabrication and Maintenance
- Petroleum and Energy
- Shipbuilding and Heavy Industry

Gainful Employment: Federal regulations require institutions to provide students with Gainful Employment information for specific certificate programs offered at IVC. Please click on our Programs of Study link to view the information for each certificate program:

<http://www.imperial.edu/courses-and-programs/programs-of-study/>



TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree at Imperial Valley College may not be the same as those required for completing the major at a transfer institution offering a bachelor's degree. Students who plan to transfer to a four-year college or university should schedule an appointment with an IVC Counselor to develop a student education plan (SEP) before beginning their program.

Transfer Resources:

www.ASSIST.org – CSU and UC Articulation Agreements and Majors Search Engine

www.CSUMentor.edu – CSU System Information

www.universityofcalifornia.edu/admissions/index.html - UC System Information

www.aiccu.edu – California Independent Colleges and Universities, Association of

<http://wiche.edu/wue> - Western Undergraduate Exchange Programs

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that IVC offers a full array of financial aid programs – grants, work study, scholarships, and fee waivers (we do not participate in the federal loan programs). These programs are available to both full and part time students who are seeking a degree or certificate. For those who qualify, financial aid is available to help with tuition, fees, books and supplies, food, housing, transportation, and childcare. Please log onto our website for additional information: www.imperial.edu/students/financial-aid-and-scholarships/

WELDING TECHNOLOGY

ASSOCIATE DEGREE PROGRAM

WELDING TECHNOLOGY MAJOR – A.S. DEGREE

Twenty-one (21) units required for the major.

ALL COURSES FOR THIS MAJOR MUST BE COMPLETED WITH A MINIMUM GRADE OF "C" OR BETTER.

I. Required courses for the major (21.0 units)

WELD 100	Welding Technology	5.0
WELD 115	Flux Cored Arc Welding on Plate	3.0
WELD 125	Gas Tungsten Arc Welding on Plate	3.0
WELD 135	Shielded Metal Arc Welding on Plate	4.0
WELD 225	Gas Tungsten Arc Welding on Pipe	3.0
WELD 230	Shielded Metal Arc Welding on Pipe	3.0
Total Major Units		21.0
IVC Graduation Requirements and GE Pattern:		30.0
Electives (as needed to reach 60 degree applicable units)		
Total Maximum Units:		60.0

CERTIFICATE PROGRAM

WELDING TECHNOLOGY CERTIFICATE

Twenty-one (21.0) units required for the certificate.

ALL COURSES FOR THIS CERTIFICATE MUST BE COMPLETED WITH A MINIMUM GRADE OF "C" OR BETTER.

II. Required courses for the major (21.0 units)

WELD 100	Welding Technology	5.0
WELD 115	Flux Cored Arc Welding on Plate	3.0
WELD 125	Gas Tungsten Arc Welding on Plate	3.0
WELD 135	Shielded Metal Arc Welding on Plate	4.0
WELD 225	Gas Tungsten Arc Welding on Pipe	3.0
WELD 230	Shielded Metal Arc Welding on Pipe	3.0
Total Certificate Units		21.0
Total Maximum Units:		21.0