

# Welding Technology – Certificate of Achievement

+If you have completed coursework at another college and/or are starting in a semester other than a Fall term, please follow up with the Counseling Department to determine if this sequence is appropriate for your academic and career goals.

## Program Description:

Welding Technology is a career education program designed to prepare students for a variety of entry-level positions in today's welding and fabrication related industries. Course offerings range from very basic welding fundamentals to the most technically advanced. Students gain skills in safety procedures, applied theory, metal fabrication, and related welding processes. Emphasis is placed on individual instruction. Instructors are AWS Certified Welding Inspectors/Educators. Welding curriculum is aligned with the American Welding Society SENSE Entry Welder Program. Students can earn welder certifications in accordance with the American Welding Society (AWS), The Los Angeles Department of Building and Safety (LADBS), and The American Society of Mechanical Engineers (ASME). Upon successful completion of the program, students are prepared to enter into the following career opportunities: welder, welding inspector, welding technician/fitter, pipe fitter/welder, and metal fabricator.

## Program SLO:

Students will be able to demonstrate proficiency in industry-recognized principles and practices as they apply to today's welding and metal fabrication industries.

***The Welding program provides students with the flexibility to select their 15-unit core Welding Coursework based on their specific career interest area within welding. Refer to the chart below to help you determine which sequence best fits your career interest(s) in welding. For more information on careers in welding visit the [American Welding Society Careers in Welding link](#).***

<b>Welding Career Interest</b>	<b>Courses Aligned with Career Interest Area</b>
Pipe Welder, Boilermaker, Pipe Fitter	*WELD 113 A, WELD 113B, WELD 113C & Weld 113D; NOTE: WELD 101C is the pre-requisite for WELD 113A
Aerospace Welder	WELD 112 A, WELD 112B & WELD 112C
Structural Steel Welder, Ironworker, Pile Driver, Maintenance Welder,	WELD 101A, WELD 101B & WELD 101C and WELD 111A, WELD 111B & WELD 111C
Robotic Welding Technician	WELD 114 A, WELD 114B, & WELD 114 C
Sheet Metal Worker Fabricator	WELD 100A, WELD 100B, & WELD 100C

\*WELD 113A may be started in the third semester upon successful completion of WELD 101A, WELD 101B, and WELD 101C. If completing the WELD 113A-D sequence, you will need to stay an additional semester.

**Important Transfer Information:** For students interested in earning an Associate's degree and/or transfer, please follow up with the Counseling Office for additional information @ <https://www.canyons.edu/counseling> or (661)362-3288/(661)362-3811.

Major courses are sequenced and **BOLDED** based on recommendations by the [Welding Technology Department](#)

First Semester (2.5-11 units minimum)

FA = Fall; WI = Winter; SP = Spring; SU = Summer

Course	Title	Units	Major
<b>Group 1 Course</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>Group 1 Course</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>WELD 132</b>	<b>Blueprint Reading for Welders and Fabricators (FA, SP)</b>	3	<b>Major</b>
<b>ENGL 104 OR *ENGL 204</b>	<b>Technical Reading and Writing (FA, SP) OR Technical Report Writing (FA, SP)</b>	3	<b>Major</b>
<b>Term Total:</b>		<b>11 - 14</b>	

\*ENGL 204 has an ENGL 101 – English Composition pre-requisite.

Second Semester (12-22 units minimum)

Course	Title	Units	Major
<b>Group 1 Course</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>Group 1 Course</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>WELD 131</b>	<b>Non-Destructive Testing (FA, SP)</b>	3	<b>Major</b>
<b>MFGT 090</b>	<b>Measurements and Computations (FA, SP)</b>	3	<b>Major</b>
<b>Term Total:</b>		<b>11 - 14</b>	

Third Semester (23-34 units minimum)

Course	Title	Units	Major
<b>Group 1 Course (if additional units are needed to meet the 15)</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>Group 1 Course (if additional units are needed to meet the 15)</b>	Select a course from Group 1 below. Must complete at least 15 units of Welding Coursework from Option 1 or Option 2- see table below (FA, SP)	2.5-4	<b>Major</b>
<b>WELD 130</b>	<b>Welding Metallurgy (FA, SP)</b>	3	<b>Major</b>
<b>WELD 133</b>	<b>Welding Inspection (FA)</b>	3	<b>Major</b>
<b>CWE 186 WELD OR CWE 188 WELD</b>	<b>Cooperative Work Experience Education Welding Technology Internship (Unpaid or Paid)</b>	1-4	<b>Major</b>
<b>Term Total:</b>		<b>12+</b>	

\*Visit the [Internship Website](#) to learn more about internship opportunities and to register with JobSpeaker, internship database.

**Total Units: 34**

**Group 1: Complete fifteen units from one of the two options below:**

**Option 1: Complete fifteen units from two of the course blocks below.** It is recommended you take courses that align with one of the Certificate pathways: Metal Fabrication, Gas Tungsten Arc Welding, Robotic Welding Automation, Semiautomatic Welding and/or Structural Steel Welding. Consult with the Counseling or Welding Department for more information.

<b>WELD 100A</b>	<b>Introduction to Metal Fabrication (FA)</b>	2.5
<b>WELD 100B</b>	<b>Intermediate Metal Fabrication (SP)</b> WELD 100A is a pre-requisite	2.5
<b>WELD 100C</b>	<b>Advanced Metal Fabrication (FA)</b> WELD 100B is a pre-requisite	2.5
<b>WELD 101A</b>	<b>Introduction to Shielded Metal Arc Welding – (5 week course - FA, SP)</b>	2.5
<b>WELD 101B</b>	<b>Intermediate Shielded Metal Arc Welding – (5 week course – FA, SP)</b> WELD 101A is a pre-requisite	2.5

<b>WELD 101C</b>	<b>Advanced Shielded Metal Arc Welding - (5 week course - FA, SP)</b> <i>WELD 101B is a pre-requisite</i>	<b>2.5</b>
<b>WELD 111A</b>	<b>Introduction to Semiautomatic Welding (FA)</b>	<b>2.5</b>
<b>WELD 111B</b>	<b>Intermediate Semiautomatic Welding (SP)</b> <i>WELD 111A is a pre-requisite</i>	<b>2.5</b>
<b>WELD 111C</b>	<b>Advanced Semiautomatic Welding (SP)</b> <i>WELD 111B is a pre-requisite</i>	<b>2.5</b>
<b>WELD 112A</b>	<b>Introduction to Gas Tungsten Arc Welding (FA)</b>	<b>2.5</b>
<b>WELD 112B</b>	<b>Intermediate Gas Tungsten Arc Welding (SP)</b> <i>WELD 112A is a pre-requisite</i>	<b>2.5</b>
<b>WELD 112C</b>	<b>Advanced Gas Tungsten Arc Welding (FA)</b> <i>WELD 112B is a pre-requisite</i>	<b>2.5</b>
<b>WELD 114A</b>	<b>Introduction to Robotic Welding Automation (FA)</b>	<b>2.5</b>
<b>WELD 114B</b>	<b>Intermediate Robotic Welding Automation (SP)</b> <i>WELD 114A is a pre-requisite</i>	<b>2.5</b>
<b>WELD 114C</b>	<b>Advanced Robotic Welding Automation (FA)</b> <i>WELD 114B is a pre-requisite</i>	<b>2.5</b>

**OR**

**Option 2: Complete fifteen units from the following:**

<b>WELD 113A</b>	<b>Introduction to Pipe Welding (FA)</b> <i>WELD 101C is a pre-requisite &amp; WELD 113B is a co-requisite</i>	<b>4</b>
<b>WELD 113B</b>	<b>Pipe Layout and Fabrication (FA)</b> <i>WELD 113A is a co-requisite</i>	<b>3</b>
<b>WELD 113C</b>	<b>Intermediate Pipe Welding (SP)</b> <i>WELD 113A is a pre-requisite</i>	<b>4</b>
<b>WELD 113D</b>	<b>Advanced Pipe Welding (FA)</b> <i>WELD 113C is a pre-requisite</i>	<b>4</b>

**Counseling Resources**

Welding Technology Department: <https://www.canyons.edu/academics/welding/>

Counseling Department: <https://www.canyons.edu/studentservices/counseling/>

Internship Program (CWE): <https://www.canyons.edu/studentservices/internships/index.php>

Campus Alliances: <https://www.canyons.edu/administration/ie2/equity/alliances/index.php>

Petition for Certificate of Achievement: Petitions are due in the fall/spring/summer term you will complete the requirements and may be submitted before your last term or up until the final day of the term. The petition form must be reviewed with a counselor and may be found here:

[https://www.canyons.edu/resources/documents/studentservices/admissions/Petition\\_for\\_Associate\\_Degree\\_and\\_Certificate\\_of\\_Achievement.pdf](https://www.canyons.edu/resources/documents/studentservices/admissions/Petition_for_Associate_Degree_and_Certificate_of_Achievement.pdf)

**Career Resources**

Welding Career Tree: <https://www.canyons.edu/academics/welding/careertree/index.php>

Careers in Welding: <https://www.careersinwelding.com/>

American Welding Society (AWS): <https://www.aws.org/>

California Career Zone: <https://www.cacareerzone.org/>

O\*Net Online: <https://www.onetonline.org/>

Bureau of Labor and Statistics: [www.bls.gov](http://www.bls.gov)

**Industry Certifications**

LA Department of Building and Safety (LADBS): <https://www.ladbs.org/default>

FANUC Certified Education Robot Training (CERT): <https://www.fanucamerica.com/>

AWS Certified Welder Program (CW): <https://www.aws.org/certification/page/certified-welder-program>

FMA Metal Fabrication Certificate: <https://www.fmamfg.org/training/fundamentals-of-metal-fabrication-certificate-exam>

AWS Certified Robotic Arc Welding Program: <https://www.aws.org/certification/detail/certified-robotic-arc-welding#:~:text=Description,against%20standards%20for%20their%20occupation.>