WELDING TECHNOLOGY: CP

Certificate of Proficiency | 31 credit hours minimum

Area of Interest: Advanced Manufacturing, Industrial Occupations, and Transportation

Academic Advising

Program Description

Welding Technology, Certificate of Proficiency equips students with the knowledge and expertise needed to excel in the field of welding. This program offers comprehensive training in various welding techniques. Student receive hands-on training in oxy-acetylene welding, brazing, cutting, SMAW (shielded metal arc welding), GMAW (gas metal arc welding), FCAW (flux core arc welding), GTAW (gas tungsten arc welding), and large diameter welding. Students complete OSHA 10 and safety training.

Locations. This program is offered in its entirety at Florissant Valley.

Financial Aid. This program is not currently approved for financial aid.

Related Programs. The Engineering Technology and Manufacturing Department offers an associate and a certificate in the following area:

Engineering Technology, Associate in Applied Science (http://catalog.stlcc.edu/programs/engineering-technology-aas/)

Welding Technology, Certificate of Specialization (http://catalog.stlcc.edu/programs/welding-technology-cs/)

Cost of Attendance. For more information on cost of attendance visit **MoSCORES (https://scorecard.mo.gov/Search/)**.

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: **https://scorecard.mo.gov/scorecard/(https://www.google.com/url/?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ)**. Search using School / Program "St. Louis Community College" and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the **Apply to STLCC (https://www.stlcc.edu/admissions/apply-to-stlcc/)** page.

At the completion of the program, students are expected to:

1. identify potential hazards to safe workplace operations.
2. fabricate projects according to specifications using trade equipment.
3. interpret shop drawings.
4. weld using oxy-acetylene techniques.
5. weld using SMAW (shielded metal arc welding) techniques.
6. weld using GMAW (gas metal arc welding) techniques.
7. weld using FCAW (flux core arc welding) techniques.
8. weld using GTAW (gas tungsten arc welding) techniques.
9. weld using large diameter techniques.

Program of Study

Code	Title	Credit Hours
Program Requirements		
GE 140	Industrial Occupations Fundamentals	3
GE 141	OSHA 10	1
WEL 100	Welding Theory	2
GE 135	Blueprint Reading for Engineering Technicians	2
WEL 150	Welding I - Oxy-Acetylene Welding	3
WEL 152	Welding II - Oxy-Acetylene Cutting, Brazing, and Soldering	2
WEL 154	Arc Welding I - Flat and Tee Joints	3
WEL 156	Arc Welding II - Horizontal, Vertical, and Overhead	6
WEL 160	GMAW and FCAW Welding	2
WEL 162	GTAW Welding	2
WEL 163	Large Diameter Welding	2
ME 249	Materials and Metallurgy	3
Total Credit Hours		**31**

PLEASE NOTE: If you originally enrolled at STLCC prior to Fall 2025, you may need to view an **archived catalog (http://catalog.stlcc.edu/archived-catalogs/)** for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
GE 140	Industrial Occupations Fundamentals	3	Reading Proficiency	
WEL 100	Welding Theory	2	Reading Proficiency	Exploratory Course, Gateway Course, Critical Course
GE 135	Blueprint Reading for Engineering Technicians	2	Reading Proficiency	
GE 141	OSHA 10	1	Reading Proficiency	

WEL 150	Welding I - Oxy-Acetylene Welding	3	Reading Proficiency	Critical Course. First 5 weeks
WEL 152	Welding II - Oxy-Acetylene Cutting, Brazing, and Soldering	2	WEL 150 with a minimum grade of "C" and Reading Proficiency	Second 5 weeks
WEL 154	Arc Welding I - Flat and Tee Joints	3	WEL 152 with a minimum grade of "C" and Reading Proficiency	Third 5 weeks. Submit application for graduation for Welding Technology, CS.
	Credit Hours	**16**		
Spring				
ME 249	Materials and Metallurgy	3	Reading Proficiency	
WEL 156	Arc Welding II - Horizontal, Vertical, and Overhead	6	WEL 154 with a minimum grade of "C" and Reading Proficiency	First 8 weeks
WEL 160	GMAW and FCAW Welding	2	WEL 156 with a minimum grade of "C" and Reading Proficiency	Weeks 9-12
WEL 162	GTAW Welding	2	WEL 152 with a minimum grade of "C" and Reading Proficiency	Weeks 13-14
WEL 163	Large Diameter Welding	2	WEL 156 with a minimum grade of "C" and Reading Proficiency	Weeks 15-16
	Credit Hours	**15**		
	Total Credit Hours	**31**		

Critical Courses: Critical courses are most important to a student's declared major and most strongly predict later success in the major. A critical course requires a minimal grade to progress to higher-level courses.

Exploratory Courses: Exploratory courses are first-semester courses that introduce the program and career field.

Gateway Courses: Gateway courses are courses in many career pathways that must be completed before progression in higher-level courses. These may be the same as critical and/or exploratory courses.

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.