

# Structural Welding

## › 16-Week Skills Certificate



Are you interested in metalwork? Are you looking for steady employment and good pay? With a **16-Week Structural Welding Skills Certificate** from State Fair Community College, you could quickly enter this versatile career.

This **fast-track program** meets four days a week on the Sedalia campus for 16 weeks, and tuition is free for eligible students.

Welding is the most common way of joining together two pieces of metal. Extreme heat is used to melt the metals, fusing them together and creating a strong bond. The process is used in construction, auto making, aerospace manufacturing, shipbuilding, steel mills, oil rig platform construction, and thousands of other manufacturing activities. Jobs are available throughout the United States, especially in the south and southeast parts of the country.

Welding is a high-demand field. In 2010, the U.S. Department of Labor estimated there would be more than 337,000 jobs in the field by 2020.

In this program, there are 12 D1.1 American Welding Society (AWS) certifications available. They include shielded metal arc (smaw or stick); gas metal arc (gmaw or mig); and flux core arc (fcaw or flux core). Certifications from the AWS are recognized throughout the country and world and will give you the competitive edge when searching for a welding job.

Welders need good eyesight, hand-eye coordination and manual dexterity. You should be able to concentrate on detailed work for long periods, and must be able to lift up to 45 pounds, bend, stoop, crawl, kneel, climb ladders, and work in awkward positions.

SFCC's welding program also includes a traditional two-semester Skills Certificate in Structural Welding (17 credit hours), a 25-hour Skills Certificate in Pipe Welding, a 31-hour Professional Certificate in Welding Technology and a 66-hour Associate of Applied Science degree. The program meets the needs of beginners and professionals seeking certification.

### Contacts

#### Instructor

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#### Admissions and Advisement Coordinator

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#### Admissions Checklist:

- Complete program eligibility form found at [www.sfccmo.edu/applications](http://www.sfccmo.edu/applications).
- Complete an application for admission online at [www.sfccmo.edu/admissions](http://www.sfccmo.edu/admissions).
- Request official high school transcript or copy of GED be sent to SFCC.
- Request official academic transcripts from each college or university from which you attended.

Learn more.

Do more.

**State Fair**  
Community College

## 16-Week Skills Certificate in Structural Welding

### Required Courses

Course .....	Credit Hours
WELD 101 Introduction to Welding .....	4
CNST 162 Construction Safety .....	3
WELD 114 Structural Layout and Shapes ...	3
WELD 102 Structural Welding .....	4
WELD 115 Print Reading for Welders and Machinists .....	3
<b>Certificate Total</b>	<b>17</b>

### Gainful Employment Disclosure

For more information about our graduation rates, the median debt of students who completed this certificate, and other important information, please visit [www.sfccmo.edu/welding](http://www.sfccmo.edu/welding).

### Course Descriptions

**WELD 101 Introduction to Welding**—Basic course beginning with instruction in the technical knowledge and skills required for oxyacetylene cutting, plasma arc cutting, shielded metal arc welding, flux core arc welding and gas metal arc welding. A minimum of two lecture hours per week will include subjects such as safety, metallurgy, welding equipment, and other technical knowledge applicable to the welding industry. (1 lecture, 3 lab)

**CNST 162 Construction Safety**—Comprehensive discussion of job safety and best practices as they pertain to the construction industry. A general philosophy of safety awareness is achieved through study of specific hazards and case studies. Students learn to navigate OSHA regulations as well as legal implications on the construction industry.

**WELD 114 Structural Layout and Shapes**—Course is designed to provide students with the knowledge and skills to accurately setup various structural welding layouts. Students will learn to utilize multiple geometric instruments, fixtures, and other tools to attain and maintain strict tolerance and adhere to industry standards for the preparation and methods of structural welding.

**WELD 102 Structural Welding**—Prerequisite: WELD 101. Basic course using the American Welding Society (AWS) D1.1 Structural Welding Code, with AWS welder qualifications included. Course includes out of position welding on plate with the shielded metal arc welding, flux core arc welding and gas metal arc welding processes. The CNC plasma arc cutting process is introduced. (1 lecture, 3 lab)

**WELD 115 Print Reading for Welders and Machinists**—Study of symbols, industry standards, measurement systems, terminology, and prints and diagrams associated with work performed by professional welders and machinists, including the interpretation of GD&T symbols and terminology, machine prints, welding symbols and prints, and related technologies.



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**NOTE:** Not all courses are offered every semester. Check with an advisor. For a complete description of degree requirements and for course descriptions, please visit [www.sfccmo.edu](http://www.sfccmo.edu) and select Course Catalog, or call the Admissions Office at (660) 530-5833. The catalog and any subsequent addendums are the official source for a program's sequence of courses. 4/14

State Fair Community College does not discriminate on the basis of race, color, national origin, sex, disability, religion, sexual orientation, veteran status, or age in its programs and activities or in employment. The following persons have been designated to handle inquiries regarding the nondiscrimination policy: Director of Human Resources, Hopkins Student Services Center, (660) 596-7484, or Dean of Student and Academic Support Services, Hopkins Student Services Center, (660) 596-7393. The Hopkins Center is located on SFCC's Sedalia campus at 3201 W. 16th St., Sedalia, MO 65301. Inquiries also may be directed to the U.S. Department of Education, Office of Civil Rights at [OCR.KansasCity@ed.gov](mailto:OCR.KansasCity@ed.gov).

Interested persons may obtain information as to the existence and location of services, activities and facilities at State Fair Community College that are accessible to and usable by persons with disabilities by contacting the Access Advisor, Student Services Office, Hopkins Student Services Center, SFCC, 3201 W. 16th Street, Sedalia, MO 65301, (660) 530-5832.

SFCC is tobacco- and smoke-free. For details, visit [www.sfccmo.edu](http://www.sfccmo.edu).