

# Welding\*

Manufacturing Career Cluster

(AAS Non-transfer Degree & 1 and 2 year certificates)

SAN JUAN COLLEGE

## NATURE OF WORK

The most common way to permanently join metal parts together is by welding. Welding is the process of heating metal pieces, then melting and fusing them to form a permanent bond. Welding, because of its strength, is used in shipbuilding, automobile manufacturing and repair, aerospace applications, and thousands of other manufacturing activities. In the construction of buildings, bridges and other structures, welding is used to join beams. There are many forms of welding, with the most popular being arc welding. The materials to be welded and the position of the weld such as flat, vertical, horizontal or overhead determines the level of difficulty and the amount of skill that a welder needs to be successful. To perform welding tasks welders may use semiautomatic welding, which incorporates machinery, such as a wire feeder, or they may perform manual welding, in which the work is entirely controlled by the welder.

## WORKING CONDITIONS

Welders are often exposed to a number of hazards, including the intense light created by the arc, poisonous fumes, and very hot materials. Safety gear includes: special shoes, goggles, hoods with protective lenses and other devices designed to prevent burns and eye injuries and as protection from falling objects. Welders can work outdoors in inclement weather and indoors in confined spaces. They may be required to lift heavy objects and work in a variety of awkward positions.

## TRAINING & QUALIFICATIONS

Training for welding can range from a few weeks of school or on-the-job training for low-skilled jobs to several years of combined school and on-the-job training for highly skilled positions. Formal training is available in high school and postsecondary institutions such as community colleges.

## JOB OUTLOOK

Job prospects are predicted to experience little or no change through 2018. Welding jobs should be plentiful, as employers are reporting having difficulty finding well trained welders. Openings will arise as workers retire. Almost every manufacturing industry uses welders at some stage of manufacturing or in the repair and maintenance of equipment. Locally, in New Mexico, welding positions may increase as the oil and gas industry creates new opportunities in this region.

## CAREER OPTIONS

Welding, soldering, and brazing workers

## ESTIMATED SALARY RANGE

New Mexico — \$14.00 per hour and up

Nationally — \$23,000 to over \$100,000 annually

Based on experience, welding ability and certifications

## RELATED OCCUPATIONS

Machinists, machine setters, operators, and tenders. Tool and die makers, sheet metal workers and boilermakers.

## SJC Basic Program Information

- A student must earn a grade of "C" or higher in order to receive a degree or certificate.
- Attendance is an intricate part of the learning process, thus poor attendance can contribute to poor student success.
- Courses must be taken in course number sequence.

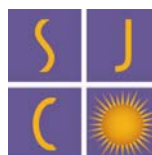


## For further information go to:

[www.sanjuancollege.edu/pages/158.asp](http://www.sanjuancollege.edu/pages/158.asp)

[www.bls.gov/oco/ocos226.htm](http://www.bls.gov/oco/ocos226.htm)

[www.aws.org/w/a/](http://www.aws.org/w/a/)



\*Most of this information is from the teacher of the welding program, his experience with his graduates and their placements; as well as from the Occupational Outlook Handbook, 2010-2011

Reviewed on February 25, 2010