



WELDING

Welding Certification

Read blueprints, fabricate, and weld to industry and AWS code standards

AWS (American Welding Society) certification is embedded in the course as part of the curriculum. This program is a great fit for students who are independent, creative, and focused. The welding program will help students learn a variety of skills used in the industry, including the following:

- Perform a number of different welding techniques, including: oxyacetylene, shielded metal arc, gas metal arc, gas tungsten arc, and flux cord arc welding
- Read blueprints for metal fabrication and welding
- Measure dimensions of completed products or work pieces to verify conformance to specifications
- Select production equipment according to product specifications
- Adjust equipment controls to safely and effectively fabricate and weld
- Understand and utilize American Welding Society S.E.N.S.E school concepts and standards,

Suggested educational levels:

- English literacy (reading, writing, speaking, and listening)
- Understanding of basic algebra

Suggested physical abilities:

- Capable of lifting 30 pounds
- Capable of sustained activity for 5 hours at a time

Class Hours:

- Morning: 7:50am - 10:40am Mon.- Fri.
- Afternoon: 12:05pm - 2:55pm Mon.- Fri.
- Evening: 5:30pm - 9:30pm Mon.-Thu.
- Program is 2 semesters in length, with start dates in Fall.

Tuition and Credit Hour Calculation

Semester 1

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|------------------------------|
| \$2,192.00 (Tuition) |
| + \$210.00 (Credit Hour Fee) |
| \$2,402.00 |

Semester 2

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|------------------------------|
| \$2,603.00 (Tuition) |
| + \$240.00 (Credit Hour Fee) |
| \$2,843.00 |

Based on Colorado Resident In-State Tuition

Estimated Program Costs (to be paid at Picken's payment office)

Tuition and Credit Hour Fees:

Semester 1: \$2,402.00
Semester 2: \$2,843.00

Required On Campus Costs:

Program Charges: \$500.00 (each semester)
Student ID: \$10.00 (each year)
Proxy Disc: \$15.00 (semester 1)
CTSO Charge: \$20.00 (each year)
Books: \$171.80.00 (+ tax)
Tungsten Arc Charge: \$50.00 (each semester)

Estimated Total:

Welding Certificate: \$6,512.80 (+tax)

Credits:
35

Length:
1 year

Cost:
\$6,512



Cost and information revised **March 2024**
500 Airport Blvd., Aurora, CO 80011 • www.pickenstech.org • (303)344-4910

WELDING

Courses required for this certificate: Semester 1

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|---|----------|
| WEL 1000 Safety for Welders | 1 |
| Covers the hazards of welding on health and safety, locating essential safety information from a code or other standard, and identifying and applying shop safety procedures. | |
| WEL 1001 Allied Cutting Processes | 4 |
| Covers setting up equipment and performing cutting and gouging operations utilizing the oxyacetylene, air carbon arc, exothermic, and plasma arc cutting processes. This course will also provide an introduction to blueprint reading. | |
| WEL 1006 Blueprint Reading for Welders and Fitters | 4 |
| Covers interpreting weld symbols on blueprints, identifying proper layout methods and tools, and proper joint design necessary for various welding processes. | |
| WEL 1021 Structural Welding I | 3 |
| Covers theory and practice in oxy-acetylene processes with emphasis toward AWS welder qualification with mild steel electrode E-7018 welding in horizontal and vertical position. | |
| WEL 2001 Gas Metal Arc Welding I | 4 |
| Covers safety inspections, minor repairs, operating parameters, operation of GMAW equipment on plain carbon steel utilizing short circuit and spray transfer, and fundamental metallurgy principles. | |

Courses required for this certificate: Semester 2

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| WEL 1022 Structural Welding II | 3 |
| Continues WEL 121 with final emphasis toward AWS welder qualification with mild steel electrode E-7018 qualification test in the 2G, 3GU, and 4G position. | |
| WEL 1024 Introduction to Gas Tungsten Arc Welding | 4 |
| Covers welding in all positions and on various joint configurations using the GTAW (tig) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry. | |
| WEL 2003 Flux Cored Arc Welding I | 4 |
| Covers safety inspections, minor repairs, operating parameters, operation of FCAW equipment utilizing self shielded wire, and principles of joint design, preparation, and material selection to welding operations. | |
| WEL 2004 Flux Cored Arc Welding II | 4 |
| Covers safety inspections, minor repairs, operating parameters, operating FCAW equipment utilizing gas shielded wire, and applying fundamentals of welding applications and cost estimating to welding, fabrication, and inspection. | |
| WEL 2050 Layout and Fabrication | 4 |
| Develops welding and associated skills in the use of drawings and blueprints in planning. Includes designing and layout projects. | |

WELDING CERTIFICATE

Certificate Total: Clock Hours: 630 Credit Hours: 35

Certificate Length: 2 semesters

Additional costs may apply. All books, kits & supply costs are estimated. Cost, information, and classes are subject to change. Statistics present are based on the US Bureau of Labor Statistics. This certificate is eligible for Financial Aid. You may begin the Financial Aid process by completing your Free Application for Federal Aid (FAFSA) at www.FAFSA.ed.gov. If you have further questions, please call (303)344-4910.