



Labor Market Analysis for a Local Certificate Basic Welding Occupations Cabrillo College

Prepared by Bay Regions Center of Excellence for Labor Market Research

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Recommendation

Based on all available data, there appears to be an “undersupply” of Basic Welding workers compared to the demand for this cluster of occupations in the Bay Region and in the SC-Monterey sub-region (Monterey, San Benito, Santa Cruz counties). There is a projected annual gap of about 651 students in the Bay Region and 25 students in the SC-Monterey Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0956.50 - Welding Technology programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Cabrillo College and in the region.

This report profiles Basic Welding Occupations in the 12 county Bay region and in the SC-Monterey sub-region for Existing low unit, local certificate(s) for state chaptering at Cabrillo College.

- **Welders, Cutters, Solderers, and Brazers (51-4121):** Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.
Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Moderate-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 31%
- **Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122):** Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Includes workers who operate laser cutters or laser-beam machines.
Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Moderate-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 31%

Occupational Demand

Table 1. Employment Outlook for Basic Welding Occupations in Bay Region

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Welders, Cutters, Solderers, and Brazers	5,374	5,781	407	8%	3,142	628	\$25	\$29
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	1,010	1,051	41	4%	550	110	\$21	\$23
Total	6,384	6,832	448	7%	3,692	738	\$24	\$28

Source: Lightcast 2024.3

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Basic Welding Occupations in SC-Monterey Sub-Region

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Welders, Cutters, Solderers, and Brazers	432	474	42	10%	263	53	\$22	\$27
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	20	21	1	3%	11	2	\$20	\$23
Total	452	495	43	10%	274	55	\$22	\$27

Source: Lightcast 2024.3

SC-Monterey Sub-Region includes: Monterey, San Benito, Santa Cruz Counties

Job Postings in Bay Region and SC-Monterey Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Oct. 2023 - Sep. 2024)

Occupation	Bay Region	SC-Monterey
Welders, Cutters, Solderers, and Brazers	165	16
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	87	4

Source: Lightcast

Table 4a. Top Job Titles for Basic Welding Occupations for latest 12 months (Oct. 2023 - Sep. 2024) Bay Region

Title	Bay	Title	Bay
Welders	74	Brazers	3
Welders/Fabricators	38	Fitters/Welders	3
Certified Welding Inspectors	16	Journeyman Welders	3
Solderers	6	Rework Technicians	3
Certified Welders	5	AWS Certified Welding Inspectors	2
Container Shop Welders	5	Assembly Technicians	2
Robot Operators	5	Combination Pipe Welders	2
Structural Welders	5	Folder Operators	2
Fabricators	4	Link Builders	2

Title	Bay	Title	Bay
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Source: Lightcast

Table 4b. Top Job Titles for Basic Welding Occupations for latest 12 months (Oct. 2023 - Sep. 2024) SC-Monterey Sub-Region

Title	SC-Monterey
Welders/Fabricators	9
Welders	4
Cooks	1
Journeyman HVAC Technicians	1
Robot Technicians	1
Structural Welders	1
TIG Welders/Fabricators	1

Source: Lightcast

Industry Concentration

Table 5. Industries hiring Basic Welding Workers in Bay Region

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2023)	Jobs in Industry (2028)	% Change (2023-28)	% Occupation Group in Industry (2023)
Semiconductor Machinery Manufacturing	597	676	13%	9%
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	401	385	-4%	6%
Automobile and Light Duty Motor Vehicle Manufacturing	398	498	25%	6%
Sheet Metal Work Manufacturing	384	392	2%	6%
Machine Shops	352	365	4%	6%
Semiconductor and Related Device Manufacturing	297	306	3%	5%
Temporary Help Services	181	174	-4%	3%
Commercial and Institutional Building Construction	136	157	15%	2%
Electronic Computer Manufacturing	125	142	14%	2%
Plumbing, Heating, and Air-Conditioning Contractors	117	123	5%	2%

Source: Lightcast 2024.3

Table 6. Top Employers Posting Basic Welding Occupations in Bay Region and SC-Monterey Sub-Region (Oct. 2023 - Sep. 2024)

Employer	Bay	Employer	SC-Monterey
Aerotek	24	Wilbur-Ellis	5
Randstad	10	R&L Welding	2
Performance Contracting, Inc. (Pci)	9	Waste Management	2
Anytime Welding	6	Arena Staffing	1
Tradesmen International	6	Diligent Robotics	1
Trayer Engineering Corporation	5	Empire Contract Glazing	1

Source: Lightcast

Educational Supply

There are nine community colleges in the Bay Region issuing 69 awards on average annually (last 3 years ending 2021-23) on TOP 0956.50 - Welding Technology. In the SC-Monterey Sub-Region, there are two community colleges that issued 12 awards on average annually (last 3 years) on this TOP code.

There is one other CTE educational institutions in the Bay Region issuing 18 awards on average annually (last 3 years ending 2020-22) on CIP 48.0508- Welding Technology/Welder. There is one other CTE educational institution in the SC-Monterey Sub-Region issuing 18 awards on average annually (last 3 years) on this CIP code.

Table 7a. Community College Awards on TOP 0956.50 - Welding Technology in Bay Region

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Total
Cabrillo	SC-Monterey	0	0	6	6
Chabot	East Bay	3	0	5	8
Hartnell	SC-Monterey	3	3	0	6
Laney	East Bay	5	0	3	8
Las Positas	East Bay	3	0	2	5
Los Medanos	East Bay	7	3	1	11
Napa	North Bay	2	1	1	4
Santa Rosa	North Bay	1	0	15	16
Solano	North Bay	2	0	3	5
Total	-	26	7	36	69

Source: Data Mart

Note: The annual average for awards is 2020 to 2022-23.

Table 7b. Other CTE Institutions Awards on CIP 48.0508- Welding Technology/Welder. in Bay Region

College	Subregion	Certificates of at least 1 but less than 2 years
CET-Watsonville	SC-Monterey	18
Total	-	18

Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 738 annual openings for the Basic Welding occupational cluster and 87 annual (3-year average) awards for an annual undersupply of 651 students. In the SC-Monterey Sub-Region, there is also a gap with 55 annual openings and 30 annual (3-year average) awards for an annual undersupply of 25 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0956.50 - Welding Technology

Metric Outcomes	Bay All CTE Program	Cabrillo College All CTE Program	State 0956.50	Bay 0956.50	SC-Monterey 0956.50	Cabrillo College 0956.50
Students with a Job Closely Related to Their Field of Study	74%	80%	70%	70%	73%	NA
Median Annual Earnings for SWP Exiting Students	\$53,090	\$46,381	\$39,556	\$46,652	\$44,757	\$47,070
Median Change in Earnings for SWP Exiting Students	24%	23%	40%	32%	38%	37%
Exiting Students Who Attained the Living Wage	54%	44%	59%	56%	54%	47%

Source: Launchboard Strong Workforce Program Median of 2018 to 2021.

Skills, Certifications and Education

Table 9. Job Postings Top Skills for Basic Welding Occupations in Bay Region (Oct. 2023 - Sep. 2024)

Skill	Posting	Skill	Posting
Welding	101	Construction	29
Metal Inert Gas (MIG) Welding	82	Blueprinting	27
Fabrication	61	Soldering	22
Gas Tungsten Arc Welding	56	Brazing (Metal Work)	21
Sheet Metal	40	Flux-Cored Arc Welding	21
Welding Equipment	35	Calipers	18
Hand Tools	33	Electrical Wiring	18
Aluminum	32	General Mathematics	18
Structural Steel	32	Grinding	18
Machinery	31	Metal Fabrication	18

Source: Lightcast

Table 10. Job Postings Certifications for Basic Welding Occupations in Bay Region (Oct. 2023 - Sep. 2024)

Certification	Posting	Certification	Posting
American Welding Society Certification	5	American Concrete Institute (ACI) Certification	4

Certification	Posting	Certification	Posting
NICET Level II Certification	4	4G Welding Certification	1
NICET Construction Material Testing Certification	4	3G Welding Certification	1

Source: Lightcast

Table 11. Education Requirements for Basic Welding Occupations in Bay Region

Education Level	Job Postings	% of Total
High school or GED	69	78%
other	14	16%
Bachelor's degree & higher	6	7%

Source: Lightcast

Note: 69% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

Methodology

Occupations for this report were identified by use of job descriptions and skills listed in O*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart and CTE Launchboard.

Sources

O*Net Online

Lightcast

CTE LaunchBoard www.calpassplus.org

Launchboard

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor's Office MIS system

Contacts

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