

Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input type="checkbox"/>	Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
Program LMI Endorsement Criteria			
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Supply Gap:	<i>Comments:</i> there is projected to be 196 annual job openings in the South Central Coast (SCC) Region for these welding technology occupations, which is more than the 144 awards conferred by educational institutions.		
	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
Self-Sufficiency Standard Living Wage ¹ :	<i>Comments:</i> All (100%) annual job openings for these welding technology occupations have entry-level hourly wages below the Ventura County living wage of \$24.53.		
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	<i>Comments:</i> though all (100%) annual job openings for these welding technology occupations typically require a high school diploma or equivalent, 32% of workers in the field have completed some college or an associate degree as their highest level of education.		
Additional Considerations			
Emerging Occupation(s):	Yes <input type="checkbox"/>	Some <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> N/A		

The South Central Coast Center of Excellence for Labor Market Research (SCC COE) prepared this report to determine whether there is a supply gap in the SCC regional labor market related to two middle-skill occupations:

- *Welders, Cutters, Solderers, and Brazers (51-4121)*
- *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)*

Based on the available data there appears to be a supply gap for these welding technology occupations and typical education requirements for these occupations align with a community college education. However, all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

¹ The living wage endorsement criteria in this report uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard, which the COE refers to as a living wage; the living wage for Los Angeles, San Luis Obispo, Santa Barbara, and Ventura counties, last updated in March 2024.

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25 th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Welders, Cutters, Solderers, and Brazers (51-4121)	183	144	Ventura: \$21.47	High school diploma or equivalent	32%
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)	13	Accounted for Above	Ventura: \$19.02	High school diploma or equivalent	32%
Total	196	144	N/A	N/A	N/A

Demand:

- The number of jobs related to these welding technology occupations is projected to increase 2% through 2029 in the SCC region. There are projected to be 196 annual job openings due to new job creation and replacements.
- Hourly entry-level wages for these welding technology occupations in Ventura County range from \$19.02 to \$21.47; all (100%) annual job openings have entry-level wages below the Self-Sufficiency Standard living wage (\$24.53 for Ventura County).
- There were 228 online job postings for these welding technology occupations over the past 12 months. The highest number of postings were for welders, TIG welders, and welders/fabricators.
- The typical entry-level education for these welding technology occupations is a high school diploma or equivalent.
- Approximately 32% of workers in the field have completed some college or an associate degree as their highest level of education.

Supply:

- There was an average of 144 awards conferred by five community colleges in the SCC Region from 2021 to 2024.
- Non-community college institutions did not confer any related awards from 2020 to 2023.
- SCC community college students that exited Welding Technology programs in the 2022-23 academic year had a median annual wage of \$47,024 (\$22.61 per hour) after exiting the program and 45% attained the regional living wage (Self-Sufficiency Standard).
- Throughout California, 72% of Welding Technology students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.

Demand

Occupational Projections:

Exhibit 2 compares historical and projected changes in employment for these occupations compared to the number of jobs in 2019. Notably, employment for these welding technology

occupations in Northern Los Angeles County declined 15% from 2019 to 2024, which is significantly lower when compared to employment for these occupations in California, the SCC Region, and all other counties in the SCC region. From 2024 to 2029, employment for these welding technology occupations is projected to steadily grow in all areas except Northern Los Angeles County, where employment is projected to continue to decline.

Exhibit 2: Historical and Projected Employment for Welding Technology Occupations in the SCC Region, 2019-2029

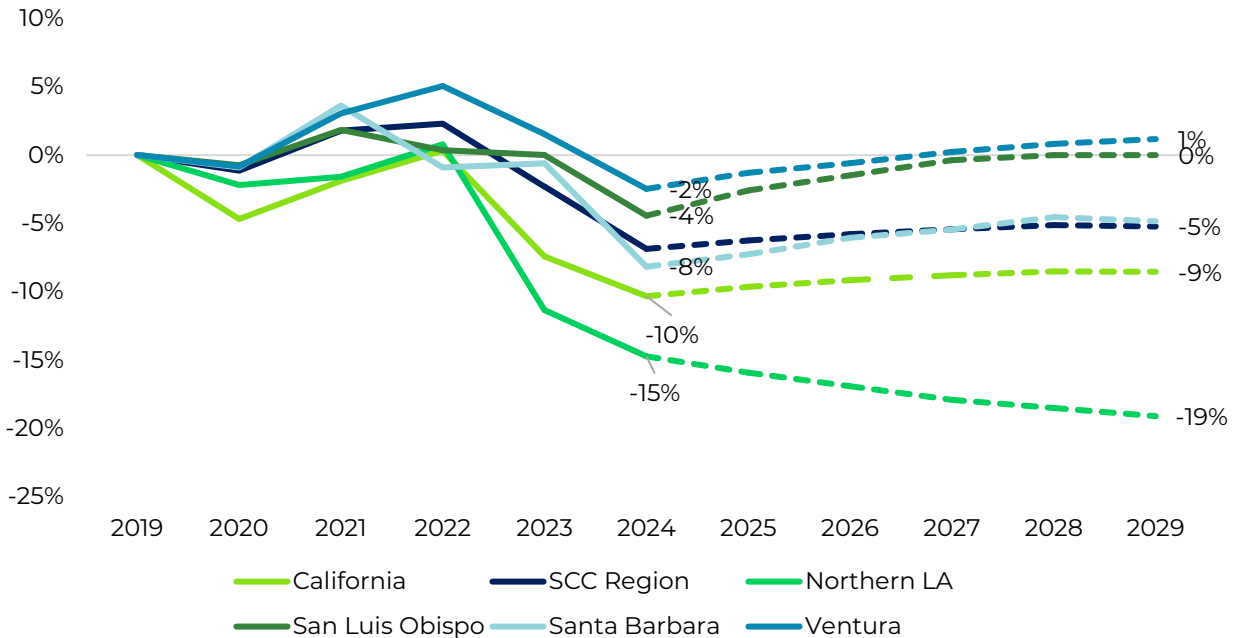


Exhibit 3 shows the five-year occupational demand projections for these welding technology occupations. In the SCC Region, the number of jobs related to these occupations is projected to increase 2% through 2029. There is projected to be 196 jobs available annually. Ventura County has the highest number of jobs and annual openings, but employment is projected to remain flat through 2029.

Exhibit 3: Occupational Demand in the SCC Region²

Geography	2024 Jobs	2029 Jobs	2024-2029 Change	2024-2029 % Change	Annual Openings
Northern LA	429	407	(22)	(5%)	42
San Luis Obispo	259	271	12	5%	29
Santa Barbara	304	316	12	4%	33
Ventura	830	860	30	4%	90
SCC Region	1,822	1,853	31	2%	196

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these welding technology occupations in relation to the living wage of the county where the requesting community college is located. This report was requested by Ventura College, which is in Ventura County. Wages for other counties are included below to provide a complete analysis of the SCC Region.

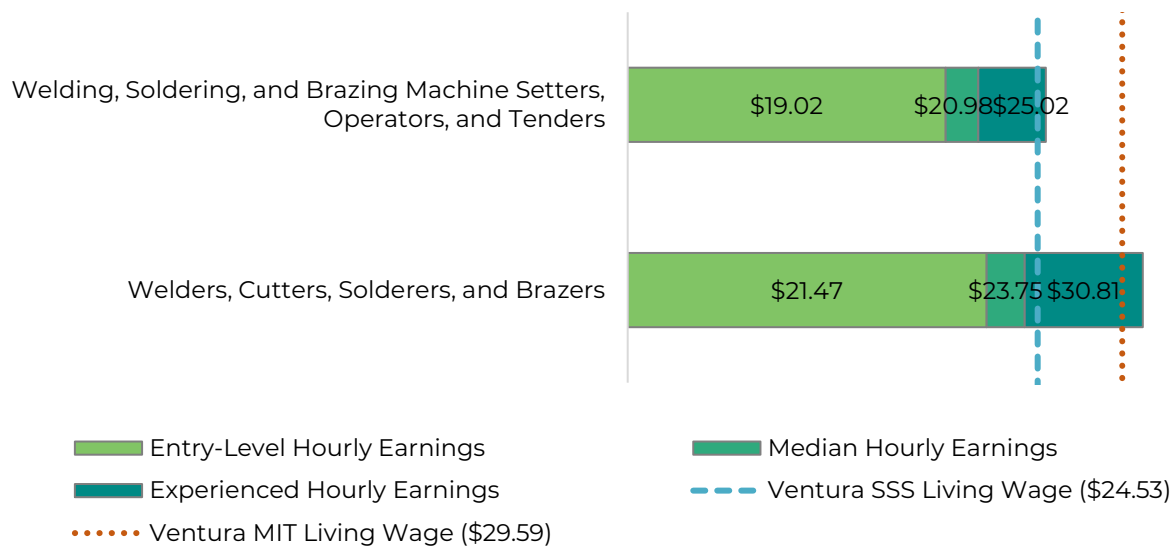
² Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

In addition to the Self Sufficiency Standard living wage, data for the MIT Living Wage, updated on February 10, 2025, is provided as a reference. Currently, the MIT Living Wage in Ventura County is \$29.59. Both figures account for geographic-specific costs of necessities such as housing, food, health care, and transportation to assess the cost of living, and are notated in the exhibits below.

Ventura

All (100%) annual openings for these welding technology occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$24.53 in Ventura County). Typical entry-level hourly wages range between \$19.02 and \$21.47. Experienced hourly earnings for these welding technology occupations in Ventura County are above the living wage. Exhibit 4 shows the wage range for each of these welding technology occupations in Ventura County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

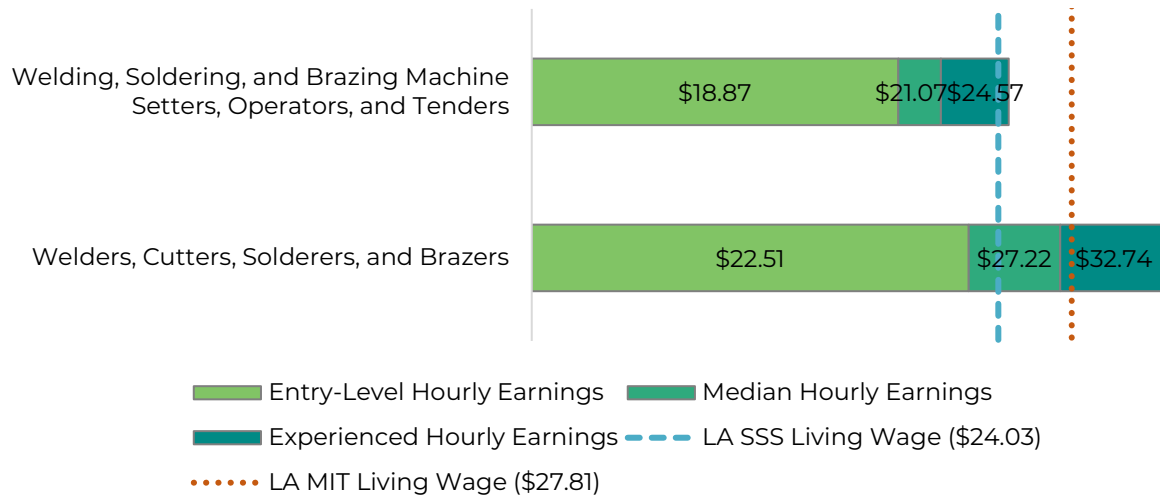
Exhibit 4: Wages by Occupation in Ventura County



Northern Los Angeles

All (100%) annual openings for these welding technology occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$24.03 in Los Angeles County). Typical entry-level hourly wages range between \$18.87 and \$22.51. *Welders, Cutters, Solderers, and Brazers (51-4121)* have median hourly earnings above the living wage in Northern Los Angeles County while *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)* have experienced hourly earnings above it. Exhibit 5 shows the wage range for each of these welding technology occupations in Northern Los Angeles and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

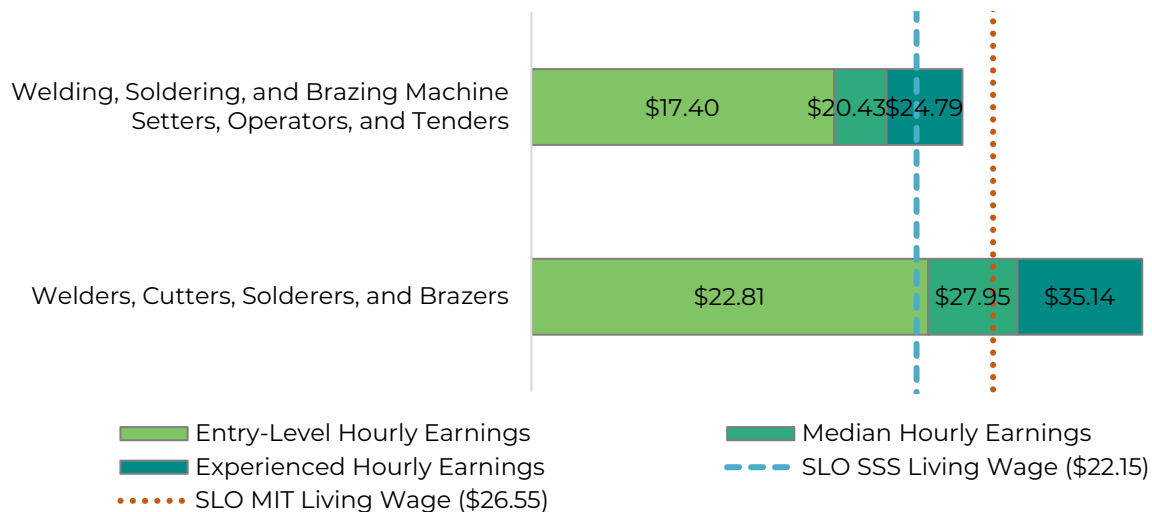
Exhibit 5: Wages by Occupation in Northern Los Angeles County



San Luis Obispo

The majority (97%) of annual openings for these welding technology occupations have entry-level wages above the Self-Sufficiency Standard living wage for one adult (\$22.15 in San Luis Obispo County). Typical entry-level hourly wages range between \$17.40 and \$22.81. *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)* have experienced level earnings above the living wage in San Luis Obispo County. Exhibit 6 shows the wage range for each of these welding technology occupations in San Luis Obispo County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

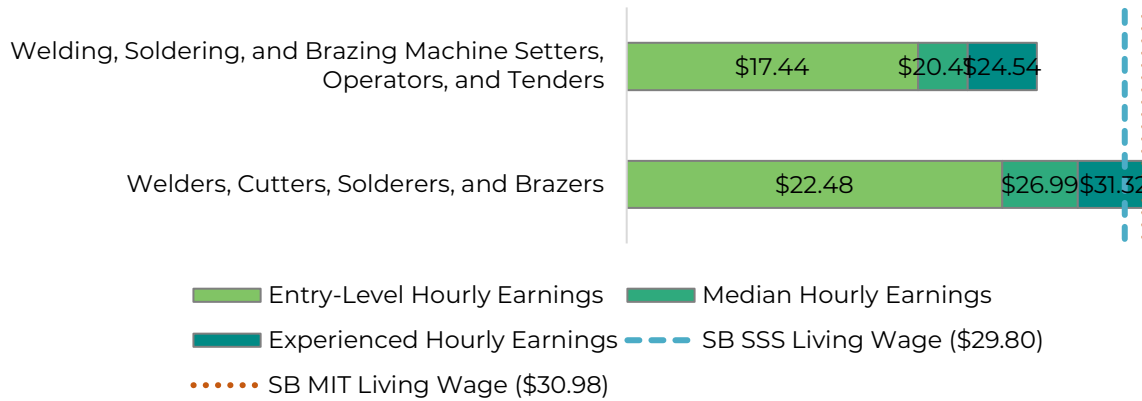
Exhibit 6: Wages by Occupation in San Luis Obispo County



Santa Barbara

All (100%) annual openings for these welding technology occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$29.80 in Santa Barbara County). Typical entry-level hourly wages range between \$17.44 and \$22.48. Experienced level wages are above the living wage for *Welders, Cutters, Solderers, and Brazers (51-4121)* in Santa Barbara County, while *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)* do not meet the living wage even at the experienced level. Exhibit 7 shows the wage range for each of these welding technology occupations in Santa Barbara County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

Exhibit 7: Wages by Occupation in Santa Barbara County



Job Postings:

There were 228 online job postings related to these welding technology occupations listed in the past 12 months in the SCC Region. Exhibit 8 shows the number of job postings by county. Approximately 49% of job postings were in Ventura County.

Exhibit 8: Number of Job Postings by County (n=228)

County	Job Postings	Percentage of Job Postings
Ventura	111	49%
Northern Los Angeles	71	31%
San Luis Obispo	23	10%
Santa Barbara	23	10%
Total Postings	228	100%

Of the 228 online job postings, the majority (86%) were for *Welders, Cutters, Solderers, and Brazers (51-4121)*, followed by *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)*, as shown in Exhibit 9.

Exhibit 9: Number of Job Postings by Occupation (n=228)

Occupation	Job Postings	Percentage of Job Postings
Welders, Cutters, Solderers, and Brazers	197	86%
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	31	14%
Total Postings	228	100%

The top employers in the region, by number of job postings, are shown in Exhibit 10.

Exhibit 10: Top Employers by Number of Job Postings (n=228)

Employer	Job Postings	Percentage of Job Postings
Aerotek	68	30%
AppleOne	15	7%
ResourceMFG	12	5%
Asc Process Systems	9	4%
Express Employment Professionals	6	3%
Belcan	6	3%
Lockheed Martin	4	2%
TriMas	4	2%
Roth Staffing Companies	4	2%
Computer Metal Products	4	2%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 11.

Exhibit 11: Top Skills by Number of Job Postings (n=228)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Welding (116)	Detail Oriented (49)	Fleet Maintenance Software (3)
Gas Tungsten Arc Welding (95)	Operations (46)	Operating Systems (3)
Fabrication (69)	Communication (34)	SAP Applications (3)
Metal Inert Gas (MIG) Welding (68)	English Language (20)	App Store (iOS) (2)
Aluminum (51)	Mathematics (20)	N/A
Blueprinting (39)	Teamwork (14)	
Grinding (30)	Troubleshooting (Problem Solving) (13)	
Sheet Metal (29)	Quality Assurance (12)	
Soldering (28)	Problem Solving (11)	
Welding Equipment (28)	Arithmetic (10)	

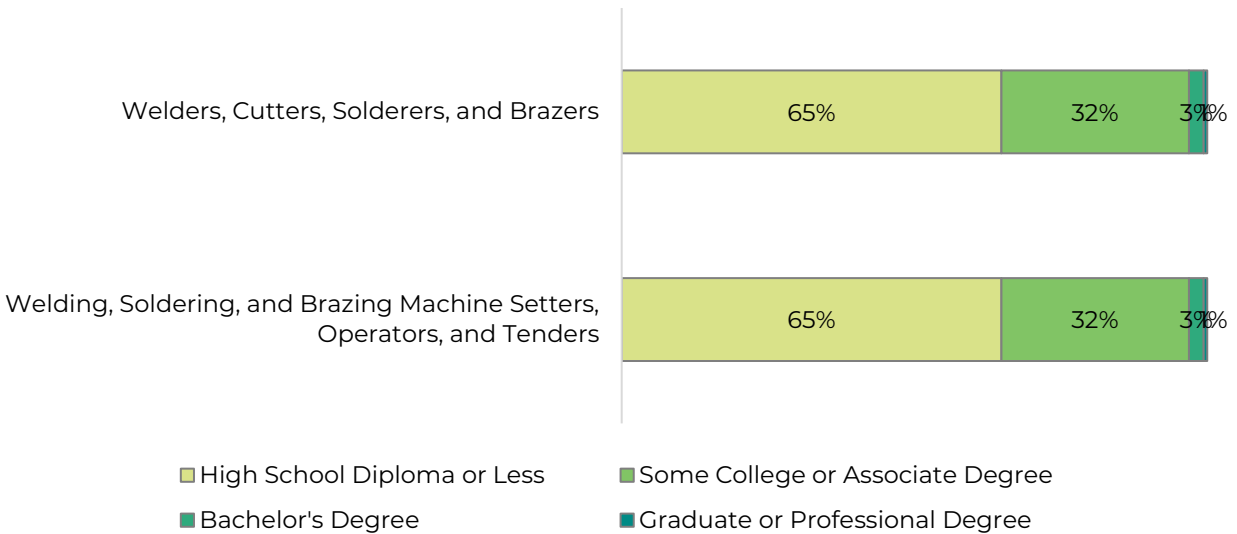
Educational Attainment:

The Bureau of Labor Statistics (BLS) lists the following as the typical entry-level education for these welding technology occupations:

- High School Diploma or Equivalent
 - *Welders, Cutters, Solderers, and Brazers (51-4121)*
 - *Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)*

The national-level educational attainment data indicates that 32% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 12 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Exhibit 12: National-level Educational Attainment for Occupations



Of the 26% of the cumulative job postings for these welding technology occupations that listed a minimum education requirement in the SCC Region, all 100% (60) requested a high school diploma or an associate degree.

Educational Supply

Community College Supply:

Exhibit 13 shows the three-year average number of awards conferred by community colleges in the related TOP codes:

- Welding Technology (0956.50)

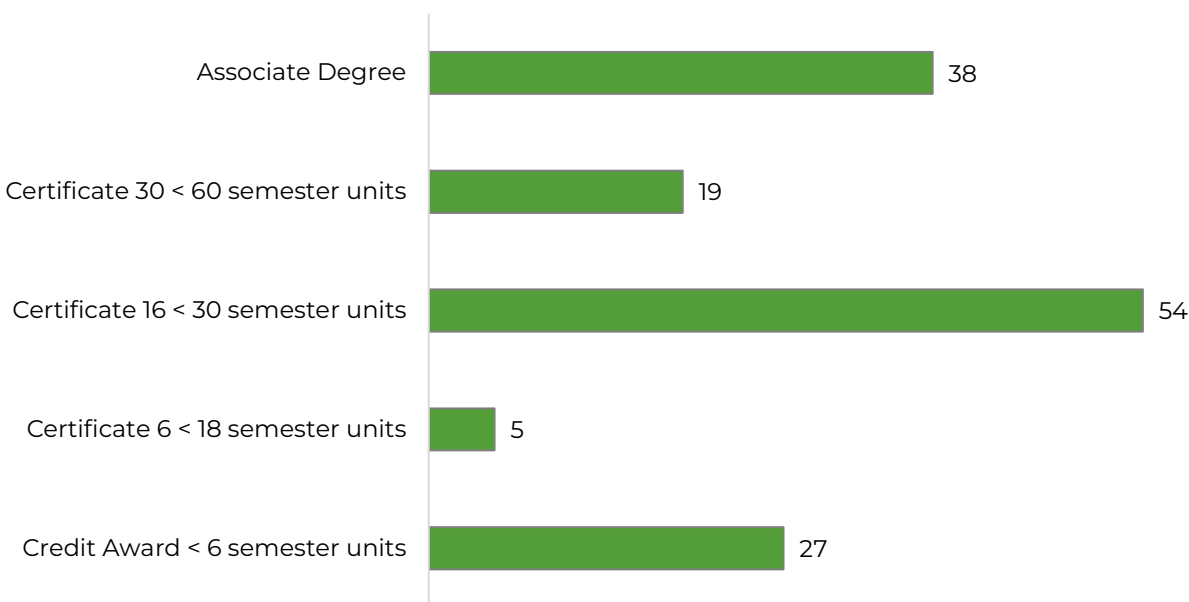
The college with the most completions in the region is Allan Hancock (45), followed by Cuesta (42), and Antelope Valley (25).

Exhibit 13: Regional Community College Awards (Certificates and Degrees), 2021-2024

TOP Code	Program	College	2021-2022 Awards	2022-2023 Awards	2023-2024 Awards	3-Year Award Average
0956.50	Welding Technology	Allan Hancock	28	36	70	45
		Antelope Valley	19	28	27	25
		Canyons	20	20	8	16
		Cuesta	14	33	79	42
		Ventura	12	19	19	17
Supply Subtotal/Average			93	136	203	144
Supply Total/Average			93	136	203	144

Exhibit 14 shows the annual average community college awards by type from 2021-22 to 2023-24. The plurality of the awards are for certificates between 16 and less than 30 semester units, followed by associate degrees, and credit awards less than 6 semester units.

Exhibit 14: Annual Average Community College Awards by Type, 2021-2024



Community College Student Outcomes:

Exhibit 15 shows the Strong Workforce Program (SWP) metrics for Welding Technology (0956.50) programs at Ventura County Community College District (VCCCD), the SCC Region, and California. Of the 235 Welding Technology students throughout the region in the 2023-24 academic year, 90% (211) attended a VCCCD college.

VCCCD students that exited Welding Technology programs in the 2022-23 academic year had lower median annual earnings (\$33,956 or \$16.33 per hour) compared to all Welding Technology students in the SCC Region (\$47,024 or \$22.61 per hour) and statewide (\$42,744 or \$20.55 per hour). A lower percentage of VCCCD (28%) and SCC (45%) Welding Technology students attained the living wage when compared to all Welding Technology students in the state (46%).

Exhibit 15: Welding Technology (0956.50) Strong Workforce Program Metrics, 2023-24^{3,4}

SWP Metric	COC	SCC Region	California
SWP Students	211	235	13,440
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	36%	43%	33%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Data Unavailable	80%	67%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	5%	12%	10%
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2022-23)	Data Unavailable	Data Unavailable	1%
SWP Students with a Job Closely Related to Their Field of Study (2021-22)	Data Unavailable	Data Unavailable	72%
Median Annual Earnings for SWP Exiting Students (2022-23)	\$33,956 (\$16.33)	\$47,024 (\$22.61)	\$42,744 (\$20.55)
Median Change in Earnings for SWP Exiting Students (2022-23)	39%	29%	39%
SWP Exiting Students Who Attained the Living Wage (2022-23)	28%	45%	46%

Non-Community College Supply:

To comprehensively analyze the regional supply, it is crucial to include data from other institutions offering welding technology training programs. Over the past three years (2020-2023), there were no awards conferred by non-community college institutions under the related Classification of Instructional Programs (CIP) codes:

- Welding Engineering Technology/Technician (15.0614)
- Welding Technology/Welder (48.0508)

³ All SWP metrics are for 2023-24 unless otherwise noted. Metrics data is sourced from DataVista.

⁴ Data that is not available in DataVista is denoted in Exhibit 15 as "data unavailable." Data may not be available for various reasons, including cases where data is masked to protect personally identifiable information.

Regional Demographics

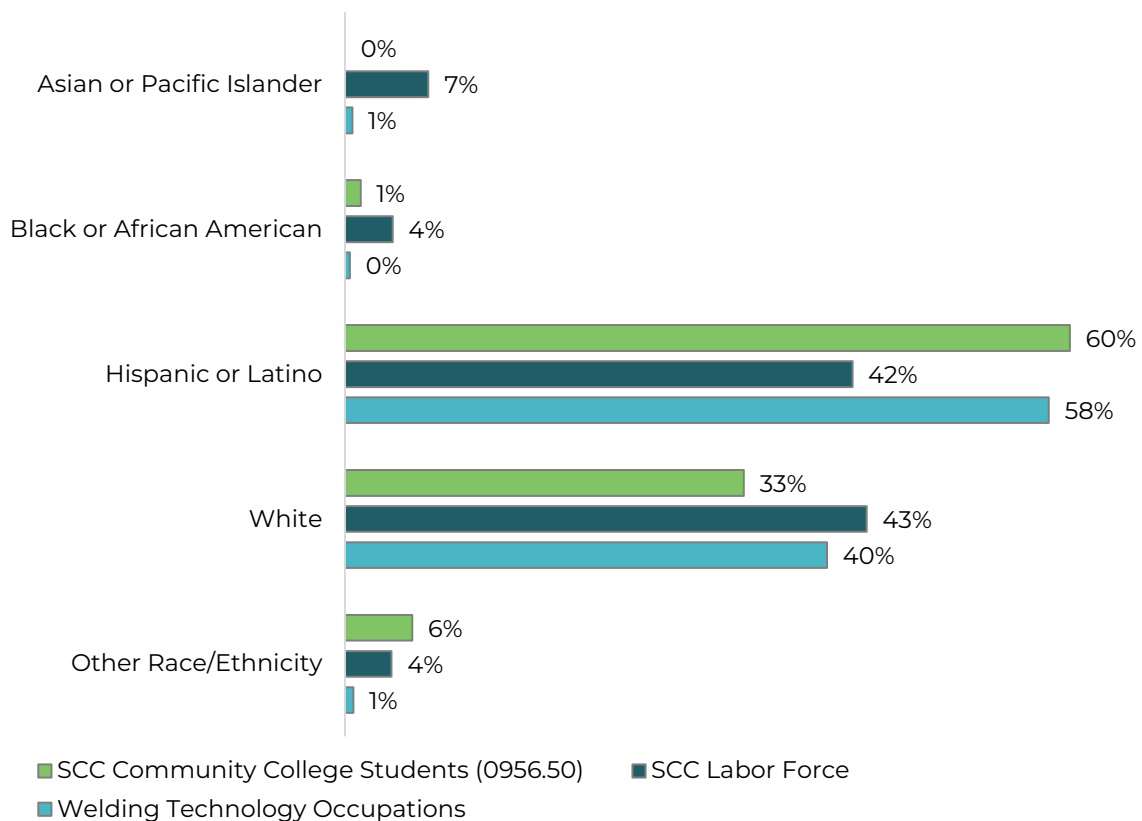
This section examines demographic data for SCC community college students in Welding Technology programs compared to the SCC labor force, along with occupational data, to identify potential diversity and equity issues addressable by community college programs.

Ethnicity:

Exhibit 16 compares the ethnicity of SCC community college students enrolled in Welding Technology programs, the overall SCC labor force, and occupation-specific data for the two welding technology occupations included in this report.

Notably, 40% of workers employed in these welding technology occupations are white, which is slightly lower than the labor force (43%) but higher than community college Welding Technology students (33%). Conversely, 60% of community college Welding Technology students are Hispanic or Latino, which is similar to workers in these welding technology occupations (58%), but higher in comparison to the overall SCC labor force (42%).

Exhibit 16: Program and County Demographics by Ethnicity

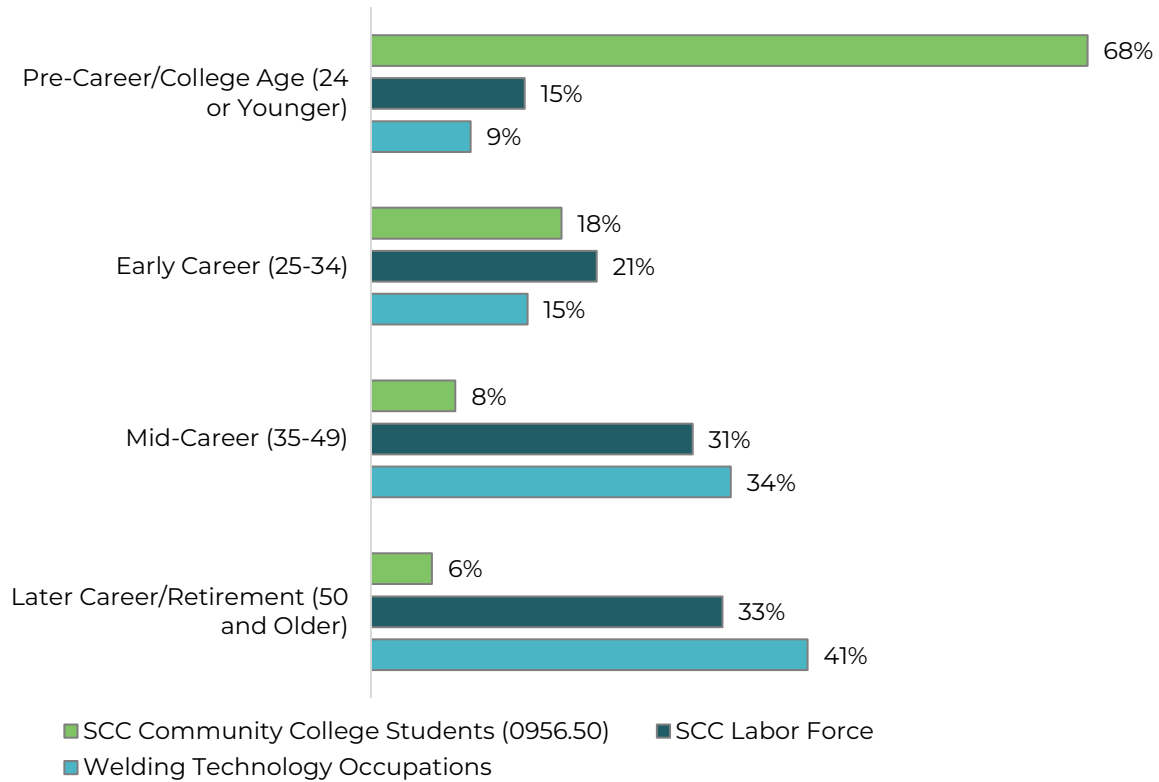


Age:

Exhibit 17 compares the age of SCC community college students enrolled in Welding Technology programs, the overall SCC labor force, and occupation-specific data for the two welding technology occupations included in this report.

The majority (41%) of workers in these welding technology occupations are Later Career/Retirement (50 and Older) age, which is higher than the labor force (33%) and community college Welding Technology students (6%).

Exhibit 17: Program and County Demographics by Age

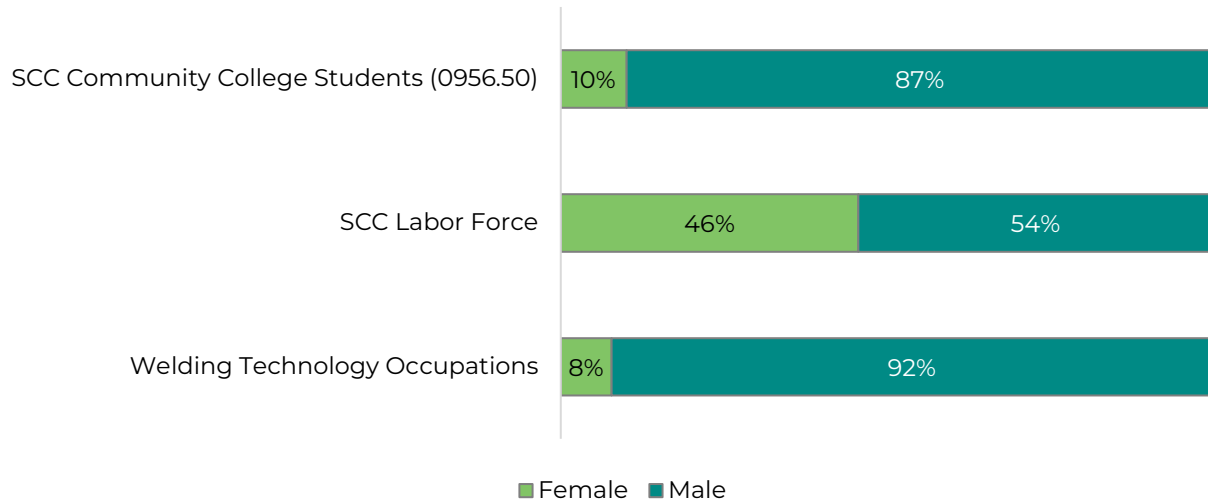


Sex:

Exhibit 18 compares the sex of SCC community college students enrolled in Welding Technology programs, the overall SCC labor force, and occupation-specific data for these welding technology occupations.

There is a majority of male students (87%) and workers in these welding technology occupations (92%), which is significantly higher than the overall SCC labor force (54% male).

Exhibit 18: Program and County Demographics by Sex



Appendix A: Methodology

Traditional Labor Market Data

The SCC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies.

Data included in this analysis represents the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the SCC COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges.

Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the SCC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

The SCC COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a "supply table" with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP code data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data), also known as IPEDS.

TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Online Job Postings Data

Online job postings data, also known as real-time labor market information, captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees but is not a perfect measure of the quantity of open positions. Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more.

There are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

Additionally, Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words of phrases; determining differences in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors.⁵ For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast’s database.

Geography

The South Central Coast region encompasses San Luis Obispo, Santa Barbara, and Ventura counties, as well as parts of Northern Los Angeles County. Exhibit 19 shows the 34 ZIP codes used to define Northern Los Angeles County.

Exhibit 19: Northern Los Angeles ZIP Codes

ZIP Code	Primary City	ZIP Code	Primary City
91310	Castaic	93532	Lake Hughes
91321	Newhall	93534	Lancaster
91322	Newhall	93535	Lancaster
91350	Santa Clarita	93536	Lancaster
91351	Canyon Country	93539	Lancaster
91354	Valencia	93543	Littlerock
91355	Valencia	93544	Llano
91380	Santa Clarita	93550	Palmdale
91381	Stevenson Ranch	93551	Palmdale
91382	Santa Clarita	93552	Palmdale
91383	Santa Clarita	93553	Pearblossom
91384	Castaic	93563	Valyermo
91385	Valencia	93584	Lancaster
91386	Canyon Country	93586	Lancaster
91387	Canyon Country	93590	Palmdale
91390	Santa Clarita	93591	Palmdale
93510	Acton	93599	Palmdale

Though traditional labor market information is available at the ZIP code level, it does not always add up to data reported at the county level for multiple reasons:

- ZIP codes are not official geographically bounded areas, unlike states and counties.
- ZIP codes may cross county lines, such as ZIP code 93461, which is primarily in San Luis Obispo County, but also crosses into Kern County.

For these reasons, the number of jobs and average annual openings for each county may not add up to the total for the SCC Region. However, considering jobseekers may cross county lines for opportunities, the traditional labor market data is reflective of opportunities available to jobseekers in the SCC Region.

Additionally, job postings data is available only at the city or county level. To analyze job postings for the entire SCC region, the SCC COE developed a list of cities available in Lightcast for analysis. Additionally, demographic data is not available at the ZIP code level but is available at the Census Bureau’s Public Use Microdata Area (PUMA) level. Demographic data was sourced via IPUMS and analyzed by the SCC COE.

⁵ K. R. Chowdhary, Fundamentals of Artificial Intelligence (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	Traditional and real-time labor market information are captured using data from Lightcast , a labor market analytics firm.
Living Wage	Per the CCCCO, this report's endorsement criteria uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard last updated in March 2024. The MIT Living Wage , updated on February 10, 2025, is a nationally recognized living wage metric and is provided for reference.
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data.
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations.
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions).
Student Metrics and Demographics	Data Vista , a statewide data system supported by the California Community Colleges Chancellor's Office provides data on progress, success, employment, and earnings outcomes for California community college students.
Population and Occupation Demographics	The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. Data is sourced from IPUMS USA , a database providing access to ACS and other Census Bureau data products.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

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March 2026



FOR LABOR MARKET RESEARCH
SOUTH CENTRAL COAST