

# Labor Market Assessment: Agricultural Technicians and Farming Managers (TOP 0104.00 Viticulture, Enology, and Wine Business) (CIP 01.0309 Viticulture and Enology)

Inland Empire/Desert Center of Excellence, April 2026

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FOR LABOR MARKET RESEARCH

INLAND EMPIRE/DESERT

## Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Program LMI Endorsement Criteria		
Supply Gap	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> There is <i>projected</i> to be <b>382 annual job openings</b> throughout the Inland Empire/Desert region, which is more than the <b>0 annual average awards conferred by educational institutions over the last 3 years</b> . Supply data includes both community college awards (0) and non-community college awards (0).	
Living Wage	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> <b>The minority (12%) of annual job openings</b> for these four occupations <b>have entry-level hourly wages above the IE/D living wage of 20.42.</b> <sup>1</sup>	
Education	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> The <b>minority (17%)</b> of annual job openings for these four occupations have <b>some college or postsecondary degree or associate degree</b> as their <b>typical entry-level education level</b> , and <b>less</b> than 33% of all workers in the field (30%) have completed <b>some college or an associate degree</b> as their <b>highest level of education</b> . See Exhibit 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Below Middle-Skill (typically require training/education at or below HS diploma)
  - Farmers, Ranchers, and Other Agricultural Managers (11-9013)
  - First-Line Supervisors of Farming, Fishing, and Forestry Workers (45-1011)
- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor's degree)
  - Agricultural Technicians (19-4012)
  - Food Science Technicians (19-4013)

## Summary of findings

### Demand

- The number of jobs related to the assessed occupations is projected to decrease 2% through 2029, 382 annual job openings (new and replacement jobs).
- Hourly entry-level wages for only one of the four occupations are above living wage at the 25<sup>th</sup> percentile, with all hourly wages ranging from \$16.00 to \$21.00 in IE/D.
- There were 157 online job postings from 76 employers over the past 12 months with the highest postings for agricultural technicians.
- Most job postings for target occupations require a high school diploma or equivalent (61%), followed by a bachelor's degree (35%), and then above a bachelor's degree (4%).

### Supply

- On average, there were 0 annual awards conferred by educational institutions over the last 3 years in related fields: 0 from community colleges and 0 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2022-23 academic year earned a median annual wage of 31,660 (\$15.22 per hour).
- 55% of California students that exited their program in 2022-23 reported that they are now earning a living wage.

<sup>1</sup> The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

## Introduction

California Community College Viticulture, Enology, and Wine Business (TOP 0104.00) programs prepare students for employment in the cultivation of wine grapes and making and marketing of wine (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Viticulture, Enology, and Wine Business programs lead to employment in occupations related to agricultural operations.

## Job Demand

In 2024, there were 3,364 jobs in occupations related to agricultural operations in the IE/D region. Regional employment for this occupation group is projected to decrease by 2% through 2029 with 382 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

**Exhibit 1. Five-year projections for occupations related to agricultural operations, IE/D Region, 2024-2029**

Occupation	SOC	2024 Jobs	2029 Jobs	2024 - 2029 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Farmers, Ranchers, and Other Agricultural Managers	11-9013	2,417	2,313	-4%	1,230	246
Agricultural Technicians	19-4012	131	134	2%	101	20
Food Science Technicians	19-4013	273	291	7%	228	46
First-Line Supervisors of Farming, Fishing, and Forestry Workers	45-1011	543	543	0%	349	70
<b>Total</b>		<b>3,364</b>	<b>3,281</b>	<b>-2%</b>	<b>1,908</b>	<b>382</b>

SOURCE: LIGHTCAST 2026.1

## Job Postings

The following analysis for occupations related to agricultural operations using online job posting data.

**Important note:** The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.<sup>2</sup> While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to agricultural operations over the last 12 months and the median posting duration. Over the previous 12 months, there were 157 unique job postings for occupations related to agricultural operations in the region from 76 employers.

**Exhibit 2. Job ads and posting duration, IE/D Region, Apr 2025 – Mar 2026**

Job Title	Job Ads	Median Posting Duration
Agricultural Technicians	80	25 days
Farmers, Ranchers, and Other Agricultural Managers	64	22 days
Food Science Technicians	13	15 days
<b>Total</b>	<b>157</b>	

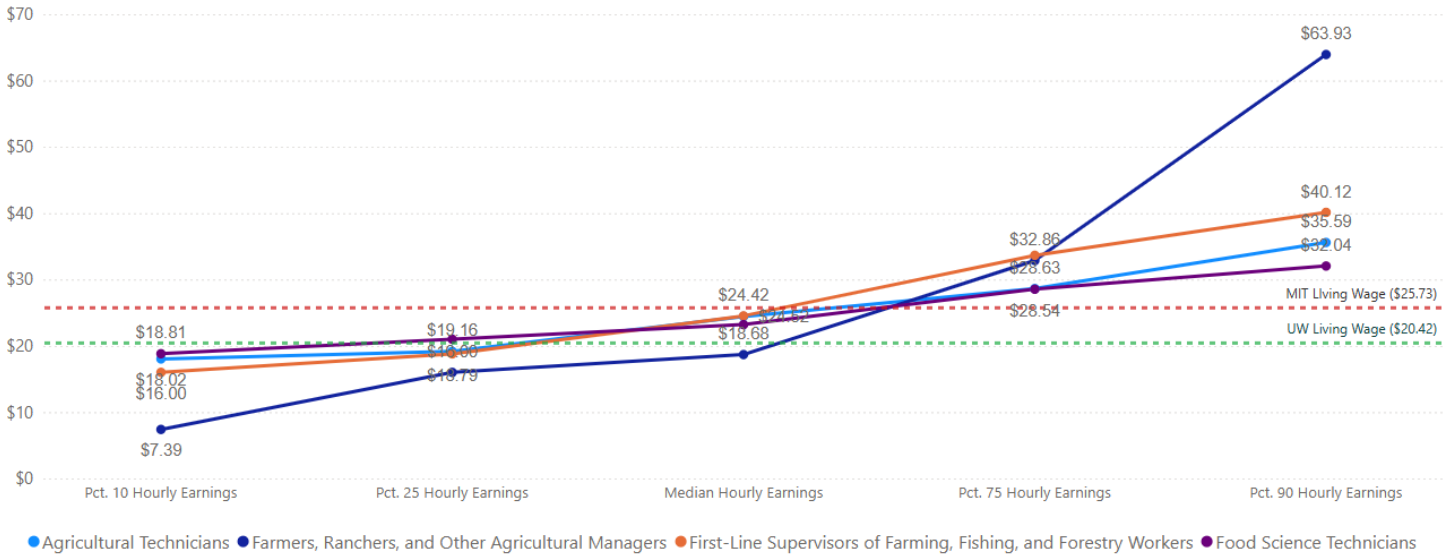
SOURCE: LIGHTCAST 2026.1

<sup>2</sup> "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

# Earnings

Exhibit 3 displays the hourly earnings for occupations related to agricultural operations compared to both the UW Self-Sufficiency Standard for the IE/D of \$20.42<sup>3</sup> and the MIT IE/D living wage of \$25.73.<sup>4</sup>

**Exhibit 3. Projected hourly earnings by percentile, IE/D Region, 2024**



Description	Pct. 10 Hourly Earnings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Pct. 90 Hourly Earnings
Food Science Technicians	\$18.81	\$21.00	\$23.20	\$28.54	\$32.04
Agricultural Technicians	\$18.02	\$19.16	\$24.42	\$28.63	\$35.59
First-Line Supervisors of Farming, Fishing, and Forestry Workers	\$16.00	\$18.79	\$24.52	\$33.65	\$40.12
Farmers, Ranchers, and Other Agricultural Managers	\$7.39	\$16.00	\$18.68	\$32.86	\$63.93

SOURCE: 2026.1

All projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) for three of the four occupations were below the UW Self-Sufficiency Standard for the IE/D, with only one occupation above the standard (see Exhibit 3). The occupations listed were all below the MIT living wage for an adult with no children (\$25.73) in projected entry-level earnings (see Exhibit 3).

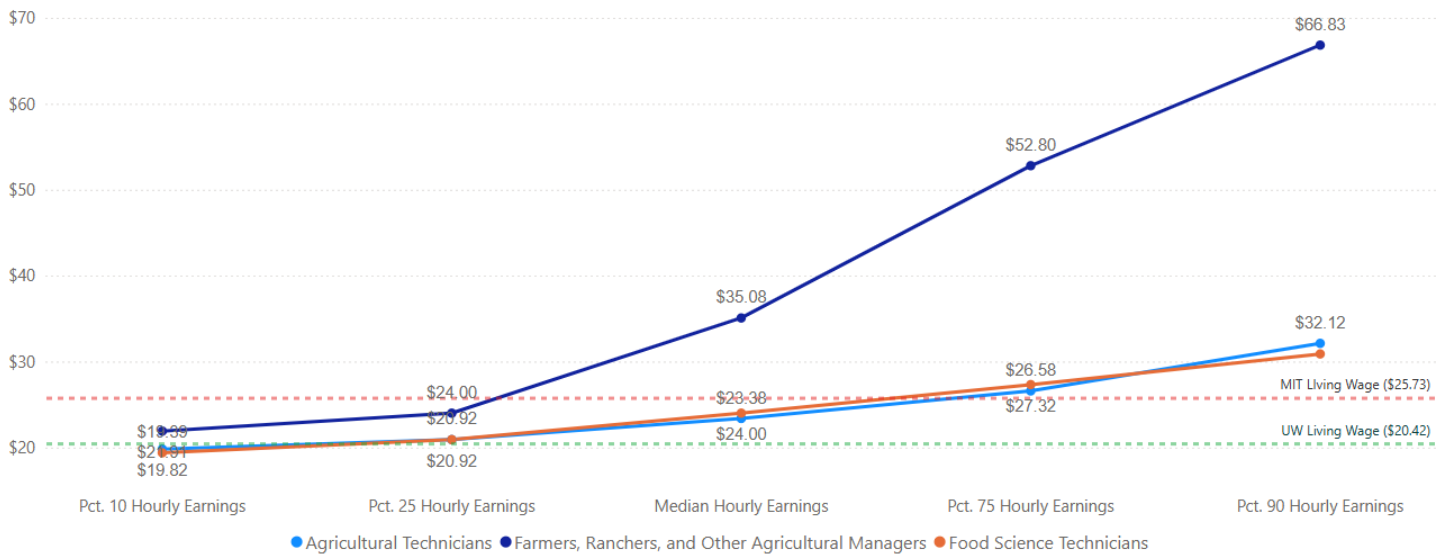
<sup>3</sup> The UW self-sufficiency standard is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

<sup>4</sup> *ibid.*

## Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to agricultural operations over the last 12 months. The salary information of online job ad data suggests employers advertise entry level hourly wages between \$20.92 and \$24.00 (estimated to be equal to an annual salary between \$43,514 and \$49,920).

**Exhibit 4. Hourly earnings of job postings by percentile, IE/D Region, Apr 2025 – Mar 2026**



Description	Pct. 10 Hourly Earnings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Pct. 90 Hourly Earnings
Agricultural Technicians	\$19.82	\$20.92	\$23.38	\$26.58	\$32.12
Farmers, Ranchers, and Other Agricultural Managers	\$21.91	\$24.00	\$35.08	\$52.80	\$66.83
Food Science Technicians	\$19.39	\$20.92	\$24.00	\$27.32	\$30.89

SOURCE: LIGHTCAST 2026.1

## Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to agricultural operations over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

**Exhibit 5. Job titles most frequently used in job ads, IE/D Region, Apr 2025 – Mar 2026**

Job Title	Unique Postings
Agricultural Technicians	20
Nutrition Assistants	10
Manufacturing Maintenance Technicians	8
Food Service Technicians	7
Activation Managers	4
Food Equipment Service Technicians	4
Food Safety Quality Assurance Technicians	4
Manufacturing Industrial Engineers	4
Manufacturing Technicians	4
Agricultural Specialists	3
Assistant Managers	3

SOURCE: LIGHTCAST 2026.1

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. Magnolia Foods and the State of California had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are de-duplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast’s Job Posting Analytics dashboard.

**Exhibit 6. Employers posting the most job ads, IE/D Region, Apr 2025 – Mar 2026**

Company	Total/Unique (Apr 2025 - Mar 2026)	Posting Intensity	Median Posting Duration
Magnolia Foods	15 / 9	2 : 1	37 days
State of California	13 / 8	2 : 1	11 days
CommonSpirit Health	35 / 6	6 : 1	17 days
California Department Of Food & Agriculture	10 / 5	2 : 1	49 days
Walmart	15 / 4	4 : 1	18 days
Riverside Community College District	7 / 4	2 : 1	15 days
University of California-Riverside	9 / 3	3 : 1	33 days
Mission Foods	7 / 3	2 : 1	8 days
Yaamava' Resort & Casino At San Manuel	9 / 2	5 : 1	n/a
Desert Regional Medical Center	18 / 2	9 : 1	7 days

SOURCE: LIGHTCAST 2026.1

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole.<sup>5</sup>

**Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Apr 2025 – Mar 2026**

Common skills	Total Postings	Skill Growth Relative to Market
Operations	56	Stable
Communication	54	Lagging
Management	46	Stable
Customer Service	36	Stable
Leadership	31	Stable
English Language	25	Growing
Detail Oriented	22	Stable
Quality Assurance	22	Growing
Sales	22	Stable
Troubleshooting (Problem Solving)	19	Growing

<sup>5</sup> “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

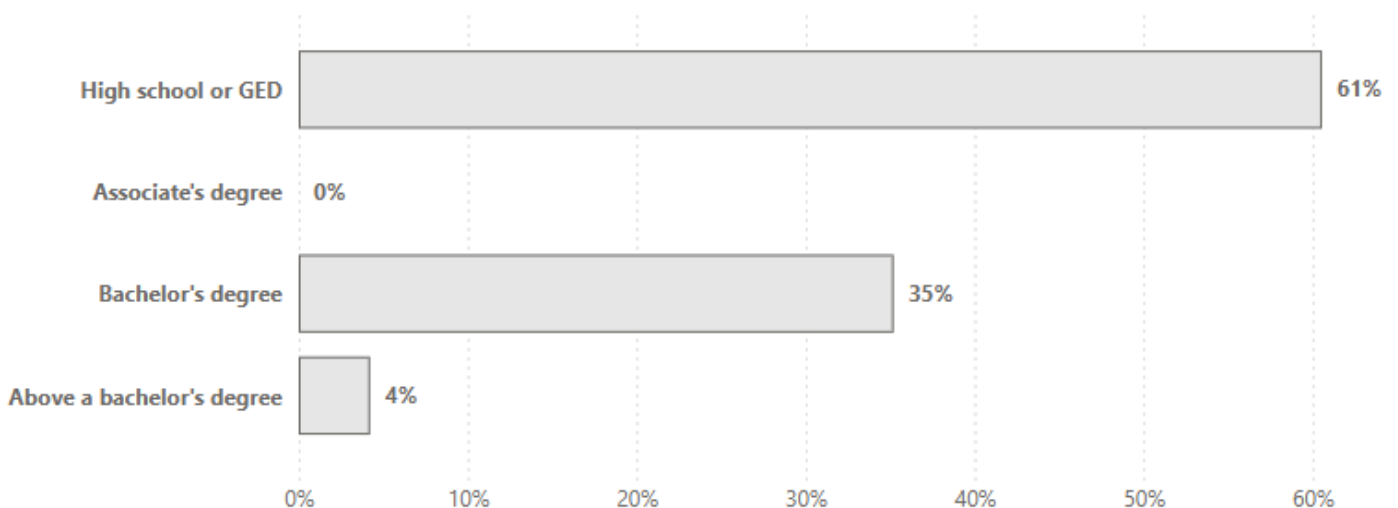
Specialized skills	Total Postings	Skill Growth Relative to Market
Food Safety And Sanitation	35	Growing
Food Services	25	Growing
Inventory Management	25	Growing
Agriculture	23	Growing
Irrigation (Landscaping And Agriculture)	21	Lagging
Packaging And Labeling	21	Growing
Sanitation	21	Growing
Cooking	20	Growing
Food Manufacturing	20	Stable
Lifting Ability	20	Growing

Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Office	10	Growing
Microsoft Excel	9	Growing
Microsoft Word	8	Stable
Microsoft Outlook	5	Rapidly Growing
Microsoft PowerPoint	3	Rapidly Growing
Workday (Software)	3	Growing
Microsoft Access	2	Lagging
Proprietary Software	2	Growing
Spreadsheets	2	Rapidly Growing
ArcGIS (GIS Software)	1	Growing
Disassembler	1	Growing

SOURCE: LIGHTCAST 2026.1

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (61%) significantly greater than bachelor's degree (35%) or above a bachelor's degree (4%).

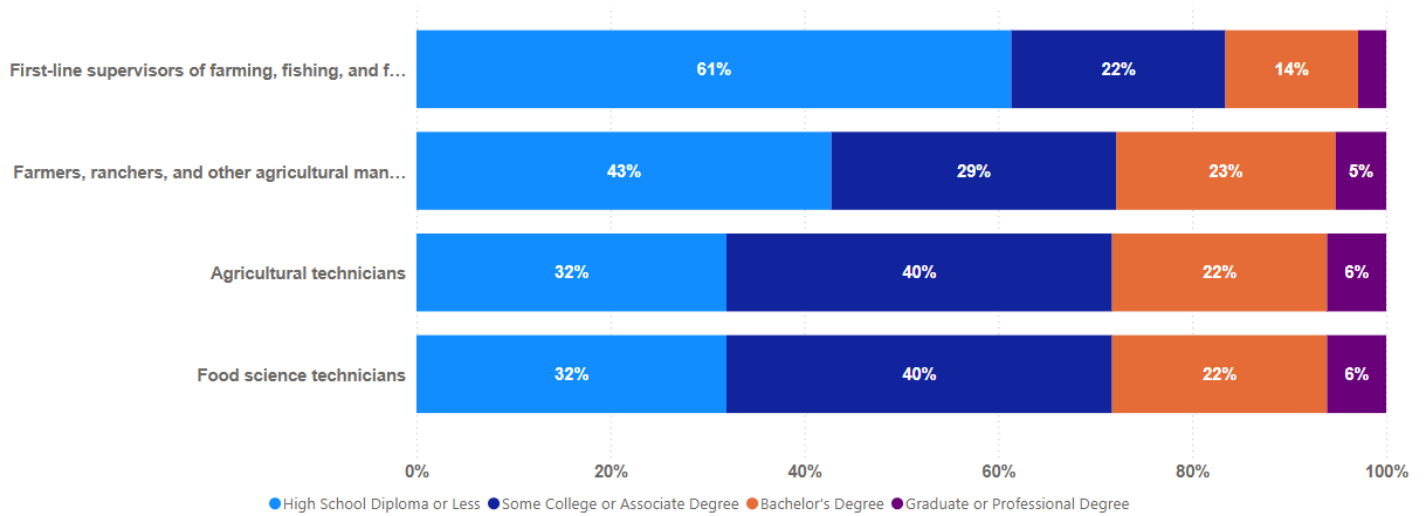
**Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Apr 2025 – Mar 2026**



SOURCE: LIGHTCAST 2026.1

For the assessed occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 22% and 40% of workers have completed some college or an associate degree as their highest level of education.

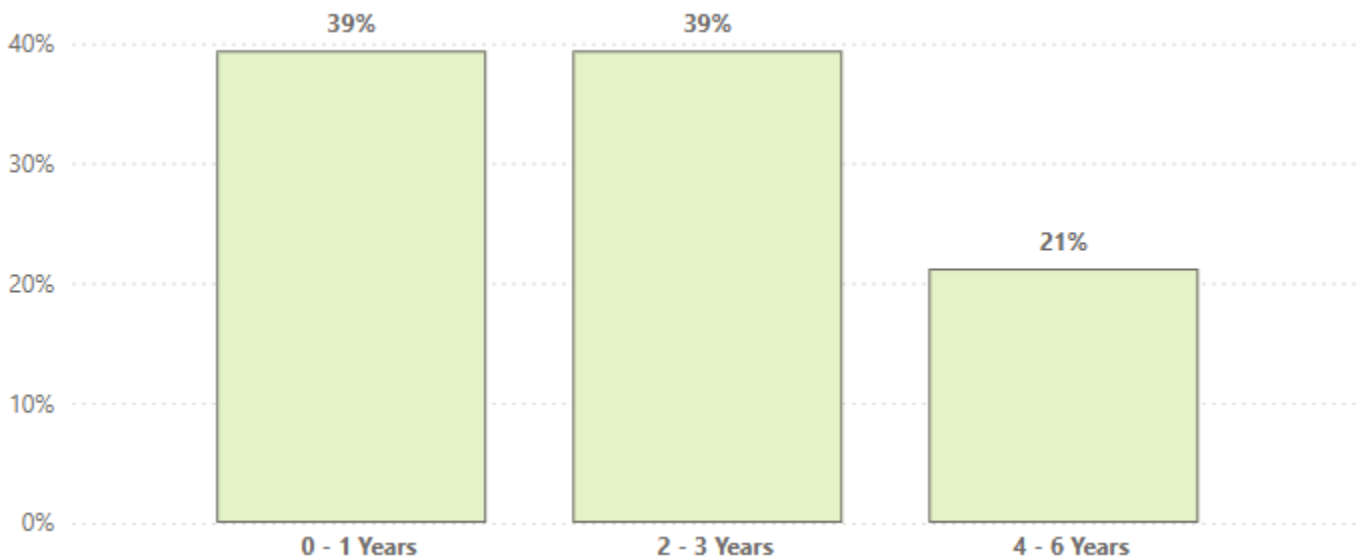
**Exhibit 9 National-level Education Attainment for the Occupational Group**



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (78%) of employers listing minimum experience requirements sought candidates with between 0-3 years of previous work experience.

**Exhibit 10 Work experience requirements, IE/D Region, Apr 2025 – Mar 2026**



SOURCE: LIGHTCAST 2026.1

## Student Completions and Program Outcomes

No student completions for the Viticulture, Enology, and Wine Business (TOP 0104.00) programs were found over the last three academic years (2021-2024). Based on the lack of data, it appears that in the previous three academic years, 0 regional community colleges issued an average of 0 awards in relevant programs.

### Non-Community College Supply

Student award completion data was not found in the IE/D for other related non-community college programs: Viticulture and Enology (CIP 01.0309), Wine Steward/Sommelier (CIP 12.0510), Brewing Science (CIP 01.1003), Zymology/Fermentation Science (CIP 01.1005).

In the previous three academic years, 0 regional non-community college institutions issued an average of 0 awards in relevant programs.

### Strong Workforce Program Outcomes

California SWP program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 11.

#### ***Exhibit 11 Viticulture, Enology, and Wine Business strong workforce program outcomes, IE/D & California, AY 2022-23***

<b>Program Metric Title</b>	<b>Inland Empire</b>	<b>Statewide</b>
Students	51	767
Earned 9+ Career Education Units	-	24%
Completed Noncredit Workforce Preparation Milestone	-	-
Earned an Award: Degree or Cert or Attained Appren. Journey Level Status	-	5%
Transferred to a Four-Year Institution: Four-Year Postsecondary Institution	0%	3%
Median Annual Earnings	\$31,660	\$57,256
Median Change in Earnings	-	21%
Attained Living Wage	-	55%

SOURCE: DATAVISTA

## Appendix: Methodology

Community college student outcome information is from DataVista and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for DataVista's Strong Workforce Program Metrics Data Element Dictionary in the Resources section (DataVista, 2025).

## Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. <a href="https://lightcast.io/">https://lightcast.io/</a>
Living Wage (UW)	Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. <a href="http://www.selfsufficiencystandard.org/California">http://www.selfsufficiencystandard.org/California</a> .  The COE refers to the Self-Sufficiency Wage as a "living wage." This calculation measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. The living wage for one adult in San Bernardino County is \$20.07 per hour (\$42,392 annually). The living wage for one adult in Riverside County is \$20.76 per hour (\$43,854 annually). The average living wage to represent Inland Empire/Desert is \$20.42 per hour (\$43,123 annually).
Living Wage (MIT)	Glasmeier, A. K. (2024). <i>Living wage calculator</i> . Massachusetts Institute of Technology. Accessed on April 14, 2025, <a href="https://livingwage.mit.edu/states/06/locations">https://livingwage.mit.edu/states/06/locations</a>  The living wage is derived from MITs Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: <a href="https://livingwage.mit.edu/pages/methodology">https://livingwage.mit.edu/pages/methodology</a> The living wage for one adult in San Bernardino County is \$25.17 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$26.30 per hour (\$54,704 annually). The average living wage to represent Inland Empire/Desert is \$25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. 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. For more information, see <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a>
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: <a href="https://datamart.cccco.edu">https://datamart.cccco.edu</a> The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see <a href="https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions">https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</a>
Student Metrics and Demographics	DataVista aims to provide up-to-date and useful information on students within the California Community Colleges and its Adult

Education partners. DataVista is a modernization of the supporting architecture and visualization of metrics previously available on the LaunchBoard.

DataVista is a collaboration between the California Community Colleges Chancellor's Office and WestEd, see:  
[https://datavista.cccco.edu/data\\_views/swp\\_report](https://datavista.cccco.edu/data_views/swp_report)