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# Labor Market Analysis

## Paramedic



Prepared by Central Valley/Mother Lode Center of Excellence



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# Summary

The Central Valley/Mother Lode Center of Excellence developed this report for Taft College to determine whether there is demand in the local labor market that is not being met by the supply from postsecondary programs. This report summarizes labor market demand, wages, skills, and postsecondary supply for:

- Emergency Medical Technicians (SOC 29-2042)
- Paramedics (SOC 29-2043)

## Key Findings

- **Occupational Demand** — *Emergency medical technicians* and *paramedics* have a labor market demand of 159 annual job openings in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. Between 2021 and 2026, *emergency medical technicians* are projected to have the most demand with 109 annual job openings, growth of 13%.
- **Wages** — The average entry-level wage (25<sup>th</sup> percentile) for the two occupations is \$18.89/hour, which is higher than the living wage in the SCV/SML subregion – \$11.91/hour for a single adult.<sup>1</sup> *Paramedics* earn the highest entry-level wage, \$22.89/hour.
- **Employers** — Employers in the SCV/SML subregion include AMR, Global Medical Response, and Adventist Health.
- **Skills and Certifications** — The top baseline skill is professionalism; the top specialized skill is ambulances; and the top software skill is Cerner EHR. The most in-demand certification is Basic Life Support (BLS).
- **Education** — A postsecondary nondegree award is typically required for *emergency medical technicians* and *paramedics*.
- **Supply and Demand Analysis** — Based on 159 annual openings (i.e., demand) and 216 postsecondary degrees awarded (i.e., supply), an analysis of supply and demand suggests there is an oversupply of 57 workers in the SCV/SML subregion. In the CVML region, 264 awards were conferred suggesting an undersupply of 20 workers (based on 284 annual openings in the CVML region).

## Recommendation

Based on a comparison of demand and supply, there is an oversupply of 57 workers in the SCV/SML subregion. However, there is a shortage of 20 workers in the CVML region. *Emergency medical technicians* and *paramedics* are in constant need, so based on these findings the Center of Excellence recommends that Taft College work with the regional directors, the college's advisory board, and the local industry in the development or modification of programs training for *emergency medical technicians* and *paramedics*.

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<sup>1</sup> The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>

# Introduction

The Central Valley/Mother Lode Center of Excellence developed this report to provide Taft College with labor market information for *emergency medical technicians* and *paramedics*. The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. Analysis of the program and occupational data related to *emergency medical technicians* and *paramedics* is included in the report. The Standard Occupational Classification (SOC) System codes and occupational titles used in this report are from the Bureau of Labor Statistics and O\*NET OnLine.

## Emergency Medical Technicians (SOC 29-2042)

- **Job Description:** Assess injuries and illnesses and administer basic emergency medical care. May transport injured or sick persons to medical facilities.
- **Knowledge:** N/A
- **Skills:** N/A

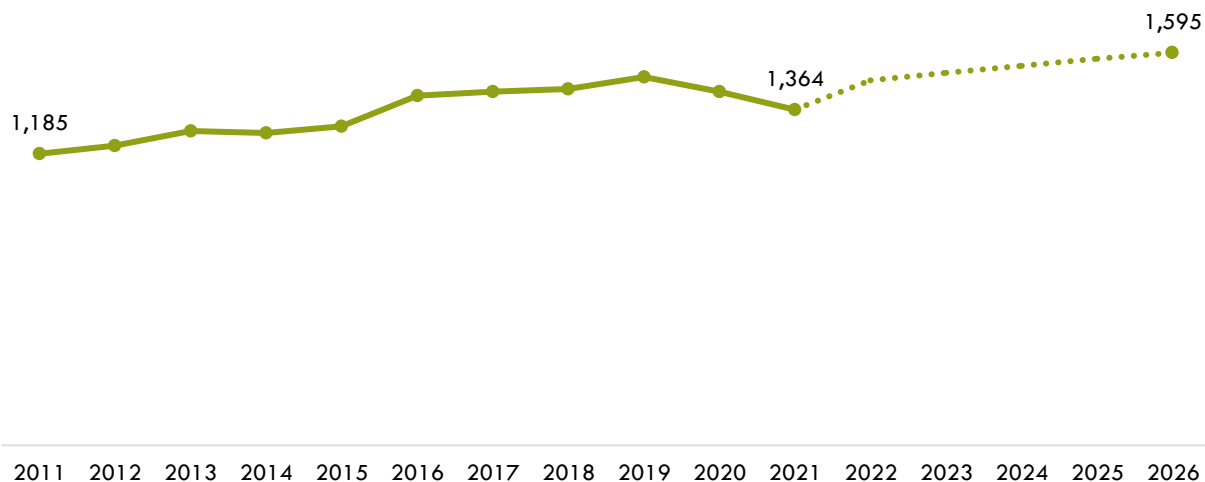
## Paramedics (SOC 29-2043)

- **Job Description:** Administer basic or advanced emergency medical care and assess injuries and illnesses. May administer medication intravenously, use equipment such as EKGs, or administer advanced life support to sick or injured individuals.
- **Knowledge:** N/A
- **Skills:** N/A

# Employment

Exhibit 1a shows employment trends for *emergency medical technicians* and *paramedics* in the SCV/SML subregion. Between 2021 to 2026, the number of jobs for *emergency medical technicians* and *paramedics* is projected to increase by 231, growing by 17%.

**Exhibit 1a. Historical employment and projected occupational demand for *emergency medical technicians* and *paramedics* in the SCV/SML subregion, 2011-2026**



*Emergency medical technicians* and *paramedics* in the SCV/SML subregion employed 1,364 workers in 2021 (Exhibit 1b). The number of new jobs for *paramedics* are projected to grow by 26% over the next five years, while *emergency medical technicians* are projected to grow by 13%. Of the two occupations, *emergency medical technicians* are projected to have the most annual openings, 109.

**Exhibit 1b. Current employment and projected occupational demand for *emergency medical technicians* and *paramedics* in the SCV/SML subregion, 2021-2026**

Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
Emergency Medical Technicians	954	1,078	124	13%	109
Paramedics	410	517	107	26%	50
<b>TOTAL</b>	<b>1,364</b>	<b>1,595</b>	<b>231</b>	<b>17%</b>	<b>159</b>

# Wages

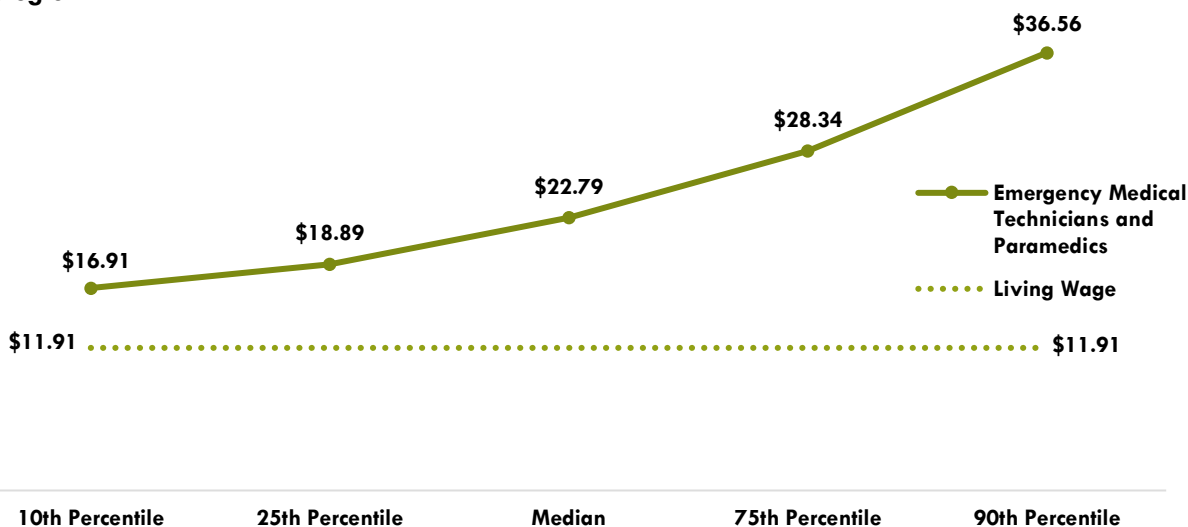
The average living wage for a single adult in the SCV/SML subregion is \$11.91/hour.<sup>2</sup> Exhibit 2a shows that the highest entry-level hourly wages are for *paramedics*, which has an entry-level wage of \$22.89/hour.<sup>3</sup>

**Exhibit 2a. Hourly wages for emergency medical technicians and paramedics in the SCV/SML subregion**

Occupation	25 <sup>th</sup> Percentile Hourly Earnings	Median Hourly Earnings	75 <sup>th</sup> Percentile Hourly Earnings
Paramedics	\$22.89	\$28.64	\$36.19
Emergency Medical Technicians	\$14.89	\$16.94	\$20.49

Exhibit 2b shows the average hourly wages for *emergency medical technicians* and *paramedics*; all five average entry-level wages are above the living wage for the SCV/SML subregion.

**Exhibit 2b. Average hourly wages for emergency medical technicians and paramedics in the SCV/SML subregion**



<sup>2</sup> The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

<sup>3</sup> Note: 10<sup>th</sup> and 25<sup>th</sup> percentiles are considered entry-level wages while 75<sup>th</sup> and 90<sup>th</sup> are considered experienced wages, which may be obtained through long-term employment or extra training, etc.

# Job Postings

There were 328 unique job postings for *emergency medical technicians* and *paramedics* in the SCV/SML subregion from February 2023 to July 2023.<sup>4</sup>

## Top Employers

The employers with the most job postings are listed in Exhibit 3. The top employers in online job postings were AMR, Global Medical Response, and Adventist Health.

**Exhibit 3. Top employers of *emergency medical technicians* and *paramedics***

Employer
AMR
Global Medical Response
Adventist Health
Hall Ambulance
Air Methods
Mammoth Hospital
Team Health
CommonSpirit Health
Work Health Solutions
Riggs Ambulance Service

## Salaries

Exhibit 4 shows the “Market Salaries” for *emergency medical technicians* and *paramedics*. These are calculated by Lightcast using a machine learning model built from millions of job postings every year. This accounts for adjustments based on location, industry, skills, experience, education, among other variables.

**Exhibit 4. Market salaries for *emergency medical technicians* and *paramedics***

Market Salary	Job Postings
\$75,000-\$82,999	102
\$43,000-\$50,999	65
\$35,000-\$42,999	27
\$51,000-\$58,999	22
\$115,000-\$166,000	18

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<sup>4</sup> Other than occupational titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

## Education

Of the 328 unique job postings, 289 listed a preferred or minimum educational requirement for the position being filled. Among those, 78% requested a high school or GED, 11% requested an associate degree, and 9% requested a bachelor's degree (Exhibit 5).

**Exhibit 5. Education levels requested in job postings for emergency medical technicians and paramedics**

Education Level	Job Postings	% of Job Postings
High school or GED	224	78%
Associate degree	31	11%
Bachelor's degree	26	9%
Master's degree	4	1%
Ph.D. or professional degree	4	1%

## Baseline, Specialized, and Software Skills

Exhibit 6 depicts the top baseline, specialized, and software skills in job postings. The most common baseline skill is professionalism. The most common specialized skill is ambulances. The most common software skill is Cerner EHR.

**Exhibit 6. In-demand baseline, specialized, and software skills for emergency medical technicians and paramedics in job postings**

Baseline Skills	Specialized Skills	Software Skills
Professionalism	Ambulances	Cerner EHR
Management	Medical Equipment	Dashboard
Good Driving Record	Electrocardiography	Proprietary Software
Communications	Emergency Medical Services	HealthStream
First Aid	Cardiopulmonary Resuscitation (CPR)	Clinic Management Systems

## Certifications

Of the job postings listing a certification, 16% indicated a need for Basic Life Support (BLS). The next top certification is Paramedic (EMT-P) (Exhibit 7).

**Exhibit 7. Top certifications requested in job postings**

Certifications	% of Job Postings
Basic Life Support (BLS)	16%
Paramedic (EMT-P)	12%
Emergency Medical Technician (EMT)	11%
Advanced Cardiovascular Life Support (ACLS)	11%
Pediatric Advanced Life Support (PALS)	11%



# Education, Work Experience, & Training

A postsecondary nondegree award is typically required for *emergency medical technicians* and *paramedics* (Exhibit 8).

**Exhibit 8. Education, work experience, training, and Current Population Survey results for emergency medical technicians and paramedics**<sup>5</sup>

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Emergency Medical Technicians	Postsecondary nondegree award	None	None	63%
Paramedics	Postsecondary nondegree award	None	None	70%

## Supply

An analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) for the last three program years shows that, on average, 216 awards were conferred in the SCV/SML subregion (Exhibit 9 and 10).

**Exhibit 9. TOP and CIP codes for emergency medical technicians and paramedics**

TOP Titles	CIP Titles
125000 - Emergency Medical Services	51.0904 - Emergency Medical Technology/Technician (EMT Paramedic)
125100 - Paramedic	

<sup>5</sup> "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

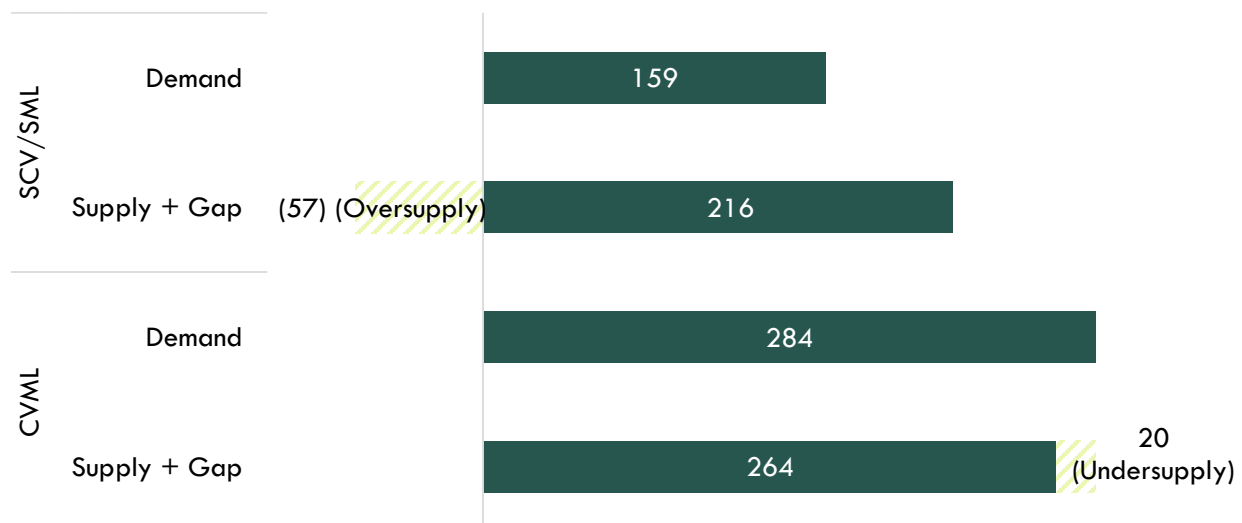
**Exhibit 10. Postsecondary supply for TOP 125000 - Emergency Medical Services and 125100 - Paramedic, years 2019-20 through 2021-22**

TOP/CIP Code- Title	College	Associate Degree	Certificate 30 < 60 Semester Units	Certificate 16 < 30 Semester Units	Certificate 8 < 16 Semester Units	Certificate 6 < 18 Semester Units	Credit Award, < 6 Semester Units	Total
125000 - Emergency Medical Services	Bakersfield					53		53*
	Cerro Coso					7		7*
	Columbia	2				1	1	4
	Merced					28		28
	Modesto				6	10		16
	Porterville					39		39*
	Sequoias					70		70*
125100 - Paramedic	Bakersfield	8	9					17*
	Fresno City		11					11*
	West Hills Lemoore	2		17				19*
<b>SCV/SML TOTAL</b>		<b>10</b>	<b>20</b>	<b>17</b>	<b>0</b>	<b>169</b>	<b>0</b>	<b>216</b>
<b>CVML TOTAL</b>		<b>12</b>	<b>20</b>	<b>17</b>	<b>6</b>	<b>208</b>	<b>1</b>	<b>264</b>

\*SCV/SML awards

There is an oversupply of 57 emergency medical technicians and paramedics in the SCV/SML subregion. However, there seems to be an undersupply of 20 workers in the larger CVML region (Exhibit 11).

**Exhibit 11. Emergency medical technicians and paramedics workforce demand (annual job openings), postsecondary awards (supply), and additional students needed to fill gap in the SCV/SML subregion and CVML region**



# Student Outcomes

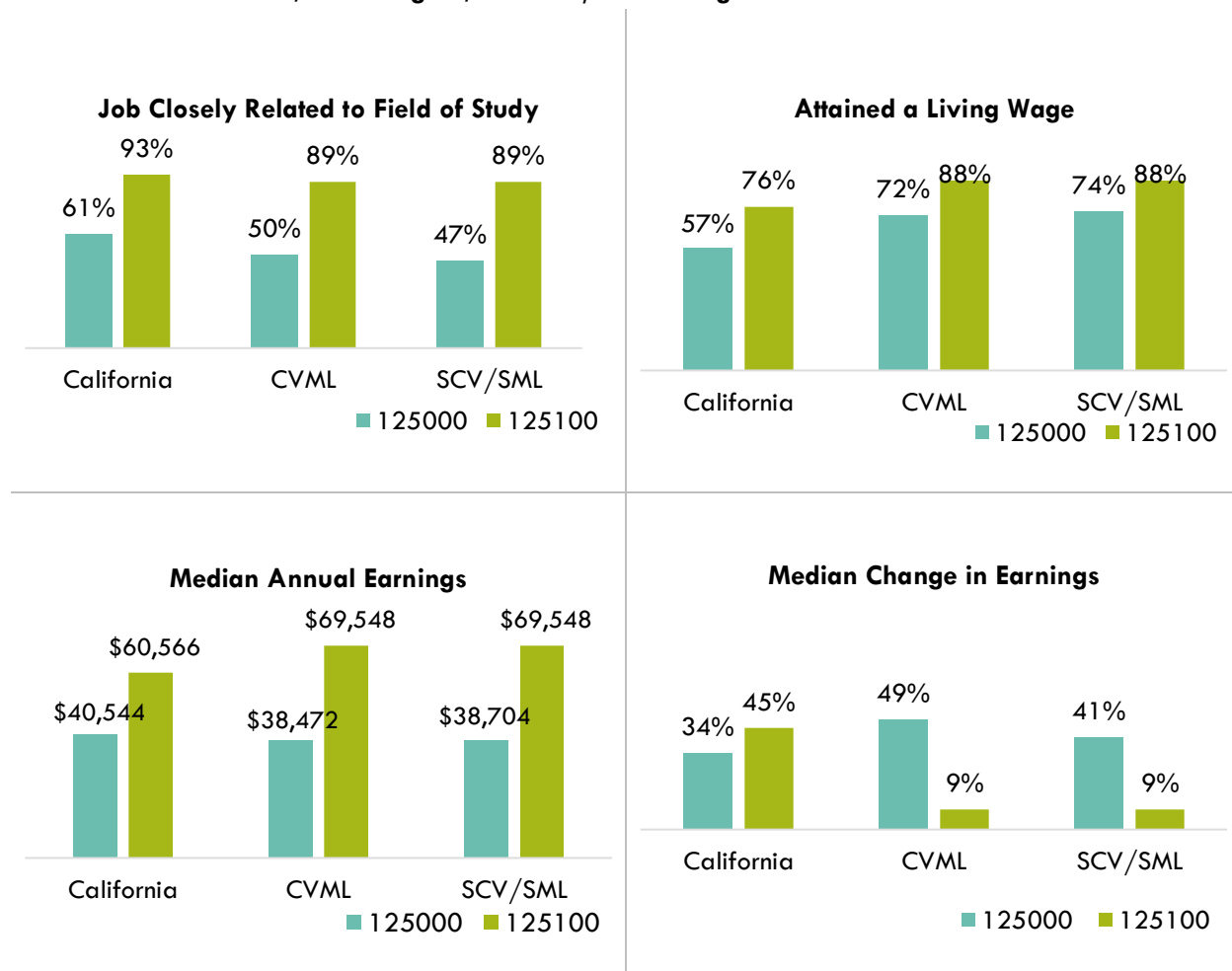
Exhibit 12a-12b summarizes outcomes from California Community College Chancellor’s LaunchBoard for TOP codes: emergency medical services (1250.00) and paramedic (1251.00)

**Exhibit 12a. LaunchBoard Metrics for TOP 1250.00 - Emergency Medical Services and 1251.00 - Paramedic in the subregion**

Metric	125000 - Emergency Medical Services	125100 - Paramedic
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	*	72

\*Denotes data not available

**Exhibit 12b. LaunchBoard Metrics for TOP 1250.00 - Emergency Medical Services and 1251.00 - Paramedic in California, CVML region, and SCV/SML subregion**



# Recommendation

This report suggests that although there is an oversupply of 57 workers in the SCV/SML subregion, there is a shortage of 20 workers in the CVML region for *emergency medical technicians* and *paramedics*.

Emergency medical technicians and paramedics are in constant need, so based on these findings the Center of Excellence recommends that Taft College work with the regional directors, the college's advisory board, and the local industry in the development or modification of programs training for emergency medical technicians and paramedics.

# Appendix: Methodology & Data Sources

## Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (Lightcast). Lightcast occupational employment data are based on final LIGHTCAST industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Lightcast earnings by industry: economicmodeling.com.
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: <a href="https://www.bls.gov/emp/tables/educational-attainment.htm">https://www.bls.gov/emp/tables/educational-attainment.htm</a> .
LaunchBoard	Chancellor’s LaunchBoard. <a href="https://www.calpassplus.org/LaunchBoard/SWP.aspx">https://www.calpassplus.org/LaunchBoard/SWP.aspx</a>
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: <a href="http://labormarketinfo.edd.ca.gov">labormarketinfo.edd.ca.gov</a> .
Job Posting and Skills Data	Lightcast. <a href="https://lightcast.io/">https://lightcast.io/</a> .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: <a href="http://onetonline.org">onetonline.org</a> .

## Key Terms and Concepts

**Annual Job Openings:** Annual openings are calculated by dividing the number of years in the projection period by total job openings.

**Education Attainment Level:** The highest education attainment level of workers age 25 years or older.

**Employment Estimate:** The total number of workers currently employed.

**Employment Projections:** Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (LIGHTCAST) formula that includes historical employment and economic indicators along with national, state and local trends.

**LaunchBoard (Attained the Living Wage):** Among SWP students who exited college and did not transfer to any postsecondary institution, the proportion who attained the district county living wage for a single adult measured immediately following academic year of exit.

**LaunchBoard (Median Annual Earnings):** Among SWP students who exited the community college system and who did not transfer to any postsecondary institution, median earnings following the academic year of exit.

**LaunchBoard (Median Change in Earnings):** Among SWP students who exited and who did not transfer to any postsecondary institution, median change in earnings between the second quarter prior to the beginning of the academic year of entry and the second quarter after the end of the academic year of exit from the last college attended.

**LaunchBoard (Job Closely Related to Field of Study):** Among SWP students who responded to the CTE Outcomes Survey and did not transfer to any postsecondary institution, the proportion who reported that they are working in a job very closely or closely related to their field of study.

**Living Wage:** The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

**Occupation:** An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

**Percent Change:** Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

**Replacements:** Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

**Total Job Openings (New + Replacements):** Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

**Typical Education Requirement:** represents the typical education level most workers need to enter an occupation.

**Typical On-The-Job Training:** indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.