

Moreno Valley College

TOP Code 213300: Fire Technology

Regional Labor Market Information and Analysis

August 2022

I. Introduction, Definitions, and Data Sources

This report summarizes program completion and employment data to analyze the regional labor market for TOP Code 213300: Fire Technology. It draws from the California Community Colleges Chancellor's Office (CCCCO) Curriculum Inventory, Datamart, and Perkins Core Indicator Reports; the U.S. Bureau of Labor Statistics; the Centers of Excellence for Labor Market Research (COE); the CA Employment Development Department; and O*NET OnLine.

Definitions:

Labor Market Supply and Demand

TOP Code

The California Community Colleges Taxonomy of Programs (TOP) Code is a numeric system used by the state to collect and report information on programs and courses with similar outcomes across colleges. This report refers to TOP Code Manual 6th Edition (2013).

Source: CCCCCO Curriculum and Instruction Unit

SOC Code

The Standard Occupational Classification (SOC) system is used by federal agencies to classify workers into occupational categories to collect, calculate, or disseminate data. All workers are classified into one of 867 detailed occupations according to their occupational definition. Detailed occupations with similar job duties, and in certain instances skills, education, and/or training, are grouped together. The SOC Code system provides a uniform framework to classify positions based on the work performed regardless of the employer or industry.

Source: U.S. Bureau of Labor Statistics, CA Employment Development Department

Occupational Employment Projections

Occupational employment projections estimate changes in occupational employment over time as a result of industry growth, technological changes, and other factors. Projection data are estimates and assume the continuation of historical trends, while acknowledging that a variety of events can occur during the projection period that can impact employment levels.

Source: CA Employment Development Department

Short-term projections:

Short-term (2-year) projections are based on quarterly average employment levels by industry for base and target quarters. Averages may reflect seasonality in some occupations.

Source: CA Employment Development Department

Long-term projections:

Long-term (10-year) projections are based on annual average employment levels by industry for base and target years. When using long-term projections data, it is important to note the annual average employment levels for seasonal occupations in agriculture, construction, retail sales, or recreation may vary significantly from seasonal peak periods.

Source: CA Employment Development Department

Total Job Openings

Total job openings represents the sum of growth (new jobs) and replacement needs. It is the sum of exits (projected number of workers leaving an occupation and exiting the labor force entirely), transfers (projected number of workers permanently leaving an occupation and transferring to a different occupation), and numeric change (projected number of job gains or losses in an occupation for the projection period).

Source: CA Employment Development Department

Median Annual Wage

Median wage estimates are the mid-point of the wage distribution. 50% of workers in an occupation earn wages below and 50% earn wages above the median wage.

Source: CA Employment Development Department

Student Progress Measures**Perkins Core Indicator 2: Completions**

This indicator measures student attainment of an industry-recognized credential, a certificate, or a degree. It is the percentage of leaver and completer concentrators who: 1) receive a degree, certificate, or equivalent; or 2) complete a transfer program and are classified as Transfer Ready.

Source: CCCCCO Perkins Core Indicator Reports

Perkins Core Indicator 3: Persistence

This indicator measures student retention in postsecondary education or transfer to a baccalaureate degree program. It is the percentage of student concentrators who: 1) persisted in education at the community college level, or 2) transferred to a four-year institution. It excludes Life-Long-Learners and those who left with a certificate or degree and did not transfer.

Source: CCCCCO Perkins Core Indicator Reports

Perkins Core Indicator 4: Employment

This indicator measures student placement in military service, apprenticeship programs, or placement or retention in employment, including placement in high skill, high wage, or high demand occupations or professions. It is the percentage of Career Technical Education (CTE) program leavers and completers who did not transfer to a two or four-year institution and who, during one of the four quarters following the cohort year, were in an apprenticeship program, Unemployment Insurance covered employment, the federal government, or the military.

Source: CCCCCO Perkins Core Indicator Reports

Data Sources:TOP-SOC Codes

Moreno Valley College active credit CTE program TOP Codes were obtained from the Chancellor's Office Curriculum Inventory System. The COE TOP-CIP-SOC crosswalk was used to match TOP Codes to SOC Codes.

Total Job Openings and Median Annual Wage

Total job openings and median annual wage projection data were obtained from the CA Employment Development Department.

Educational Attainment and Requirements

Educational attainment and requirement data were obtained from the U.S. Bureau of Labor Statistics and the COE TOP-CIP-SOC Crosswalk.

II. Degrees and Certificates

At Moreno Valley College, the following active credit CTE programs are coded as TOP Code 213300 - Fire Technology:

Program Title	Program Award
Chief Officer	A.S. Degree
Chief Officer	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units
Fire Officer	A.S. Degree
Fire Officer	Certificate of Achievement requiring 18 or greater semester (or 27 or greater quarter) units
Fire Service Leadership	A.S. Degree
Fire Service Leadership	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units
Fire Technology	A.S. Degree
Fire Technology	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units

Source: The Chancellor's Office Curriculum Inventory System

MVC Student Achievement

Credit Program Awards (2020-2021) - TOP Code 213300

Total MVC Credit Program Awards	58
Associate of Science (A.S.) degree	27
Certificate requiring 16 to < 30 semester units	31

Source: CCCC Datamart

Perkins Core Indicators (2020-2021) -TOP Code 213300

Outcome	MVC	Statewide	Performance Goal
Completions	92.0%	91.0%	84.6%
Persistence	80.0%	90.2%	87.4%
Employment	87.5%	91.4%	73.2%

Source: CCCC CO Perkins Core Indicator Reports

III. Projected Job Outlook

Based on the TOP-CIP-SOC crosswalk provided by the COE, the following SOC Codes were examined to complete the job outlook for TOP Code 213300:

- 33-1021
- 33-2011
- 33-2021

Short-Term Projections:

The table below shows short-term (2020-2022) occupational employment projections for the state of California in the occupations linked to TOP Code 213300. Note, short-term projections are not available below the state level.

California Short-Term Job Outlook by SOC Code

SOC Code	Description	Total Job Openings	Median Annual Wage
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	460	\$133,301
33-2011	Firefighters	4,980	\$79,645
33-2021	Fire Inspectors and Investigators	Data not available	Data not available

Source: CA Employment Development Department

Long-Term Projections:

The table below shows Inland Empire long-term (2018-2028) projected job openings and median wages, educational requirements, and educational attainment of individuals within these occupations.

Inland Empire Long-Term Job Outlook by SOC Code

SOC Code	Description	Education	% of Individuals with Some College, No Degree	% of Individuals with an Associate's Degree	% of Individuals with a Bachelor's Degree	Inland Empire Total Job Openings	Median Annual Wage
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	Requires a Postsecondary Non-Degree Award	31.3%	22.0%	25.3%	104	\$110,814
33-2011	Firefighters	Requires a Postsecondary Non-Degree Award	37.3%	22.6%	21.8%	1,570	\$66,542
33-2021	Fire Inspectors and Investigators	On-The-Job Training, No College Required	30.1%	16.7%	22.2%	43	\$84,075

Sources: CA Employment Development Department, COE Crosswalk, Bureau of Labor Statistics

It is projected that between 2018-2028 there will be 1,717 Inland Empire job openings for the SOC Codes associated with TOP Code 213300. According to the COE, SOC Code 33-1021: First-Line Supervisors of Fire Fighting and Prevention Workers and SOC Code 33-2011: Firefighters require a postsecondary non-degree award; SOC code 33-2021: Fire Inspectors and Investigators requires no college. However, the Bureau of Labor Statistics estimates 47.3% of First-Line Supervisors of Fire Fighting and Prevention Workers, 44.4% of Firefighters, and 38.9% of Fire Inspectors and Investigators have an Associate's or Bachelor's degree. Using the Insight Center Family Needs Calculator, the median annual wages for these occupations, which range from \$66,542 to \$110,814 exceed the self-sufficiency standard for the annual wage of a single adult in Riverside (\$29,421) and San Bernardino (\$28,602) counties.

IV. Regional Completers

The following table shows the numbers of degrees and credit certificates awarded in TOP Code 213300 in 2020-2021 at Inland Empire community colleges. Included in this analysis are: Barstow Community College, Chaffey College, College of the Desert, Copper Mountain College, Crafton Hills College, Moreno Valley College, Mt. San Jacinto College, Norco College, Palo Verde College, Riverside City College, San Bernardino Valley College, and Victor Valley College.

Of these colleges, the following had credit program awards in TOP Code 213300 in 2020-2021: Chaffey College, College of the Desert, Copper Mountain College, Crafton Hills College, Moreno Valley College, Mt. San Jacinto, and Victor Valley College.

Inland Empire Community College Credit Program Awards 2020-2021 - TOP Code 213300

Total Credit Program Awards	504
Associate Degrees	97
Associate of Science (A.S.) degree	97
Credit Certificates	407
Certificate requiring 30 to < 60 semester units	1
Certificate requiring 16 to < 30 semester units	255
Certificate requiring 8 to < 16 semester units	151

Source: CCCCCO Datamart

V. Net Labor Demand

To estimate net annual labor demand, we consider the estimated number of job openings, minus the annual number of program completers. The estimated total annual job openings in the table below is calculated by dividing the total for the 10-year projection period by 10. The projected job openings between 2018 and 2028 for the SOC codes associated with TOP Code 213300 is 1,717. Dividing that number by 10 produces an annual estimate of 172 openings. With 504 program completers for the year 2020-2021, there is an estimated net annual labor demand of -332.

Net Annual Labor Demand - Inland Empire Community Colleges - TOP Code 213300

Total Estimated Annual Job Openings	172
Program Completers (2020-2021)	504
Net Annual Labor Demand	-332

In evaluating net labor demand, it is important to note that SOC Codes may match multiple TOP Codes. The table below shows the TOP Codes matching the SOC Codes in this report.

SOC Code	TOP Code
33-1021: First-Line Supervisors of Fire Fighting and Prevention Workers	213300: Fire Technology
33-2011: Firefighters	213300: Fire Technology 213310: Wildland Fire Technology 213350: Fire Academy
33-2021: Fire Inspectors and Investigators	213300: Fire Technology 213350: Fire Academy

Source: COE Crosswalk