Moreno Valley College

TOP Code 070800: Computer Infrastructure and Support

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 070800: Computer Infrastructure and Support. 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: California Community Colleges 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: CCCCO 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: CCCCO 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: CCCCO 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 070800- Computer Infrastructure and Support:

Program Title	Program Award
Information Technology (IT) Cybersecurity	A.S. Degree
IT Project Management	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units
IT Technician Pathway: Cybersecurity Analyst	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units
IT Technician Pathway: Cybersecurity Healthcare Specialist	Certificate of Achievement requiring 16 to less than 30 semester units or 24 to less than 45 quarter units
IT Technician Pathway: Cybersecurity Specialist	Certificate of Achievement requiring 8 to less than 16 semester units or 12 to less than 24 quarter units
IT Technician Pathway: IT Systems Specialist	Certificate of Achievement requiring 8 to less than 16 semester units or 12 to less than 24 quarter units

Source: The Chancellor's Office Curriculum Inventory System

MVC Student Achievement

Credit Program Awards (2020-2021) - TOP Code 070800

Total MVC Credit Program Awards	0

Source: CCCCO Datamart

Perkins Core Indicators (2020-2021) - TOP Code 070800

MVC Perkins Core Indicator Report is not available for this TOP Code.

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 070800:

- 15-1122
- 15-1141
- 15-1142
- 15-1143
- 15-1152

The table below shows short-term (2020-2022) occupational employment projections for the state of California in the occupations linked to TOP Code 070800. 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
15-1122	Information Security Analysts	1,890	Data not available
15-1141	Database Administrators	2,560	Data not available
15-1142	Network and Computer Systems Administrators	8,430	Data not available
15-1143	Computer Network Architects	4,020	Data not available
15-1152	Computer Network Support Specialists	4,320	Data not available

Source: CA Employment Development Department

Long-Term Projections:

The following table 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	Educational Requirement	% 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
15-1122 (updated to 15-1212)	Information Security Analysts	Requires a Bachelor's or Higher	16.4%	10.1%	42.8%	Data not available	$117,672
15-1141 (updated to 15-1242)	Database Administrators	Requires a Bachelor's or Higher	Data not Available	Data not Available	Data not Available	338	$99,680
15-1142 (updated to 15-1244)	Network and Computer Systems Administrators	Requires a Bachelor's or Higher	22.0%	16.5%	41.2%	1,228	$87,387
15-1143 (updated to 15-1241)	Computer Network Architects	Requires a Bachelor's or Higher	21.2%	16.2%	39.7%	267	$113,004
15-1152 (updated to 15-1231)	Computer Network Support Specialists	Requires an Associate Degree	24.5%	15.5%	37.1%	702	$60,787

Sources: CA EDD Demand Table, COE Crosswalk, Bureau of Labor Statistics, O*NET OnLine

Note, SOC Codes were updated in 2018. According to O*Net Online, all of the SOC Codes corresponding to TOP Code 070800 have been replaced. However, CA Employment Development Department projection data and the COE Crosswalk use 2010 SOC Codes. Therefore, job openings, wages, and educational requirements are reported for previous SOC Codes. Educational attainment data is provided for the new SOC Codes from the Bureau of Labor Statistics.

Long-Term Inland Empire Projected Job Openings by Transfer/Non-Transfer Pathways -TOP Code 070800

Transfer/Non-Transfer	Job Openings
Job Openings: Transfer (SOC Codes requiring a Bachelor's degree or higher)	1,833
Job Openings: Non-Transfer (SOC Codes requiring an Associate's degree or less)	702
Total Job Openings	2,535

Sources: CA Employment Development Department, COE Crosswalk

It is projected that between 2018-2028 there will be 2,535 Inland Empire job openings for the SOC Codes associated with TOP Code 070800 (based on available data). According to the COE, the occupational category "Computer Network Specialists" typically requires an Associate's degree. The Bureau of Labor Statistics estimates 37.1% of individuals in this occupation have a Bachelor's degree; 24.5% have some college, no degree; and 15.5% have an Associate's degree. There are estimated to be 702 job openings in this category. The other occupations associated with TOP Code 070800 typically require a Bachelor's degree or higher. The percentage of individuals in these occupations with a Bachelor's degree ranges from 39.7% to 42.8%, while the percentage with some college, no degree or an Associate's degree ranges from 26.5% to 38.5%. There are projected to be 1,833 job openings in these categories.

Using the Insight Center Family Needs Calculator, the median annual wages for all of the occupations matching TOP Code 070800 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 table below shows the number of degrees and credit certificates awarded in TOP Code 070800 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, Chaffey College and Riverside City College had program awards in this TOP Code in 2020-2021.

Inland Empire Community College Credit Program Awards 2020-2021 - TOP Code 070800

Total Credit Program Awards	82
Associate Degrees	**25**
Associate of Science (A.S.) degree	25
Credit Certificates	**57**
Certificate requiring 16 to < 30 semester units	48
Certificate requiring 8 to < 16 semester units	9

Source: CCCCO 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 Inland Empire job openings

in the SOC Codes corresponding to TOP Code 070800 between 2018 and 2028 is 2,535. Dividing that number by 10 produces an annual estimate of 254 openings. With 82 program completers for the year 2020-2021, there is an estimated net labor demand of 172.*

Net Annual Labor Demand - Inland Empire Community Colleges - TOP Code 070800

Total Estimated Annual Job Openings (Transfer and non-transfer pathways)	254
Program Completers (20-21)	82
Net Annual Labor Demand	**172***

*Based on available projected job openings data.

In evaluating net labor demand, it is important to note that the SOC Codes matching TOP Code 070800 are also linked to other TOP Codes. The table below shows all of the TOP Codes matching the SOC Codes in this report.

SOC Code	TOP Code
15-1122: Information Security Analysts	070200: Computer Information Systems 070600: Computer Science (transfer) 070800: Computer Infrastructure and Support 070810: Computer Networking
15-1141: Database Administrators	070100: Information Technology, General 070720: Database Design and Administration 070800: Computer Infrastructure and Support
15-1142: Network and Computer Systems Administrators	070800: Computer Infrastructure and Support
15-1143: Computer Network Architects	070730: Computer Systems Analysis 070800: Computer Infrastructure and Support 070810: Computer Networking
151152: Computer Network Support Specialists	070600: Computer Science (transfer) 070730: Computer Systems Analysis 070800: Computer Infrastructure and Support 070810: Computer Networking 070820: Computer Support

Source: COE Crosswalk