

Accounting

Inland Empire/Desert Region (Riverside and San Bernardino counties combined)

This workforce demand report uses state and federal job projection data that was developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.

Summary

- The knowledge, skills, and abilities provided by the community college *accounting* programs lead to four distinct, middle-skill occupations, collectively referred to as the *accounting occupational group* in this report.
- Employment for the *accounting occupational group* is expected to **increase by 3% between 2019 and 2024**. A total of **2,462 annual job openings** will be available each year over the five-year timeframe.
- The **median hourly wages** for the occupations in this group are between **\$16.73 and \$26.25 per hour**. Median wages for two of the four accounting occupations in this group are **above the \$21.78 per hour self-sustainable hourly wage** estimate for a single adult with one child.
- There were **257 credentials issued** from regional community college *accounting* programs over the last three academic years.

Introduction

This report provides data on programs and occupations related to the California Community College accounting (TOP 0502.00) program. This program prepares students for employment through the instruction of procedures to systematize information about transactions and activities into accounts and quantitative reports to verify accuracy of data by applying accounting, internal reporting, and decision making principles. This program includes accounting and financial reporting that assists in making internal management decisions (Taxonomy of Programs, 2012).

The knowledge, skills, and abilities trained by these programs lead to the following occupations. These four occupations are collectively referred to as the *accounting occupational group* in this report:

- Tax Preparers (SOC 13-2082)
- Bookkeeping, Accounting, and Auditing Clerks (43-3031)
- Payroll and Timekeeping Clerks (43-3051)
- Brokerage Clerks (43-4011)

Job Opportunities

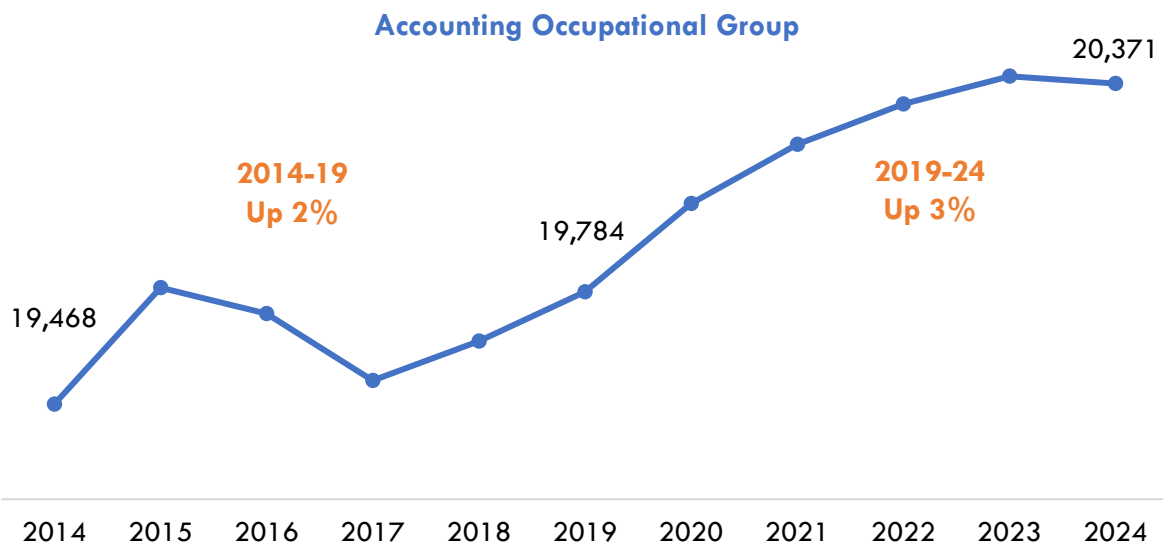
In 2019, there were 19,784 jobs in the *accounting occupational group* in the Inland Empire/Desert region (IEDR). This occupational group is projected to increase employment by 3% through 2024. Employers are expected to have 12,308 job openings over the next five years to fill new jobs and backfill jobs that workers are permanently vacating (includes occupational transfers and retirements). Exhibit 1 displays five-year projected job growth, and Exhibit 2 displays historical (2014 to 2019) and projected (2019-2024) jobs for the *accounting occupational group*.

Exhibit 1: Five-year projections for each occupation in the accounting occupational group

Occupation	2019 Jobs	2024 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Bookkeeping, Accounting, and Auditing Clerks	16,544	17,047	3%	10,396	2,079	36%
Payroll and Timekeeping Clerks	2,036	2,084	2%	1,190	238	28%
Tax Preparers	1,001	1,034	3%	613	123	53%
Brokerage Clerks	204	206	1%	109	22	26%
Total	19,784	20,371	3%	12,308	2,462	36%

Source: EMSI 2020.2

Exhibit 2: Historical and projected jobs for the accounting occupational group, 2014 – 2024



Source: EMSI 2020.2

Job Postings

Exhibit 3 displays the number of job ads posted during the last 12 months, along with the regional and statewide average time to fill for the *accounting occupational group*. It is important to note limitations when examining employer job ads. Job postings data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Although accounting postings in the region are numerous, additional opportunities may exist.

On average, local employers fill online job postings for the *accounting occupational group* within 19 days. This regional average is five days shorter than the statewide average of 24 days, indicating that it is easier for local employers to fill open positions than other employers in California as a whole.

Exhibit 3: Job ads and time to fill, May 2019 – April 2020

Occupation	Job Ads	Regional Average Time to Fill (Days)	California Average Time to Fill (Days)
Bookkeeping, Accounting, and Auditing Clerks	4,700	18	23
Payroll and Timekeeping Clerks	919	19	24
Tax Preparers	477	24	32
Brokerage Clerks	3	19	25
Total	6,099	19	24

Source: Burning Glass – Labor Insights

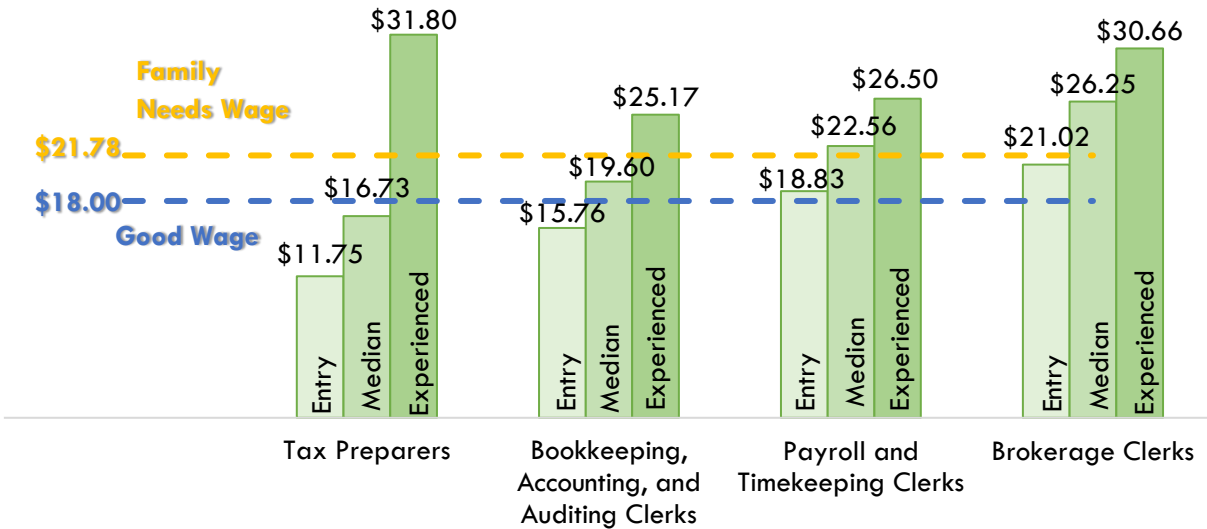
Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide a self-sustainable level of income. The Brookings Institute in their *Advancing Opportunity in California's Inland Empire* report found that a "good job" wage in the region is above \$18.00 per hour, or \$37,440 per year (Shearer, Shah & Gootman, p. 25). The Family Needs Calculator estimates that a self-sustainable wage for a single adult with one school-age child is \$21.78 per hour (Pearce & Manzer, 2020).

Median wages for *payroll and timekeeping clerks* and *brokerage clerks* are above the Family Needs Calculator self-sustainability rate. In contrast, *bookkeeping, accounting, and auditing clerks* and *tax preparers* do not pass this threshold until at the experienced-level. The accounting occupations surpass the

Brookings Institute's "good job" wage at the experienced-level. Exhibit 4 displays the IEDR hourly earnings for each occupation.

Exhibit 4: Hourly earnings for the accounting occupational group



Source: EMSI 2020.2

According to occupational guides developed by the California Labor Market Information Division, benefits for the *accounting occupational group* generally include medical and dental insurance, as well as other benefits, when employed full time (Detailed Occupational Guides, 2020).

Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers posting the most job ads for the *accounting occupational group* during the last 12 months in the IEDR. There were not enough job postings for *brokerage clerks* to obtain accurate employer information.

Exhibit 5: Employers posting the most job ads for accounting occupations, May 2019 – April 2020

Occupation	Employers
Bookkeeping, Accounting, and Auditing Clerks (n=1,599)	<ul style="list-style-type: none"> • El Super • Co-Op Financial Services • Nexgrill Industries, Inc. • Riverside County • University of California, Riverside
Payroll and Timekeeping Clerks (n=297)	<ul style="list-style-type: none"> • Platinum Resource Group • Orkin, Inc. • CBIZ, Inc.

Occupation	Employers
Tax Preparers (n=373)	<ul style="list-style-type: none"> • H&R Block • Jackson Hewitt Tax Service
Brokerage Clerks (n=3)	<ul style="list-style-type: none"> • -

Source: Burning Glass – Labor Insights

Exhibit 6 displays a sample of specialized and employability skills that employers are seeking when looking for workers to fill positions in the *accounting occupational group*. Specialized skills are occupation-specific skills that employers are requesting for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized as a helpful guide for curriculum development. Approximately 46% of all accounting job postings were seeking candidates with Microsoft Excel skills, and 18% were seeking candidates with QuickBooks skills. There were too few postings for *brokerage clerks* to determine which skills employers find valuable.

Exhibit 6: Sample of in-demand skills from employer job ads, May 2019 – April 2020

Occupation	Specialized Skills	Employability Skills
Bookkeeping, Accounting, and Auditing Clerks (n=4,406)	<ul style="list-style-type: none"> • Accounts Payable/Receivable • Data Entry • Accounts Reconciliation 	<ul style="list-style-type: none"> • Detail-Oriented • Communication Skills • Organizational Skills • Research
Payroll and Timekeeping Clerks (n=863)	<ul style="list-style-type: none"> • Payroll Processing • Data Entry • Calculation • Multi-State Payroll 	<ul style="list-style-type: none"> • Detail-Oriented • Communication Skills • Organizational Skills • Multi-Tasking
Tax Preparers (n=447)	<ul style="list-style-type: none"> • Tax Returns • Customer Retention • Tax Planning • Audit Planning 	<ul style="list-style-type: none"> • Writing • Mentoring • Problem Solving • Teamwork/Collaboration
Brokerage Clerks (n=3)	<ul style="list-style-type: none"> • - 	<ul style="list-style-type: none"> • -

Source: Burning Glass – Labor Insights

Exhibit 7 displays the entry-level education typically required to enter each occupation according to the Bureau of Labor Statistics (BLS), educational attainment for incumbent workers with "some college, no degree" and an "associate degree" according to the U.S. Census (2016-17) and the real-time minimum advertised education requirement from employer job ads. Please use caution when viewing minimum

advertised education requirement information for *brokerage clerks*, as this information only represents the desires of two employers.

Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements for the accounting occupational group, May 2019 – April 2020

Occupation	Typical Entry-Level Education Requirement	CC-Level Educational Attainment*	Real-Time Minimum Advertised Education Requirement			
			Number of Job Ads	High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Bookkeeping, Accounting, and Auditing Clerks	Some college, no degree	49%	2,467	41%	10%	49%
Payroll and Timekeeping Clerks	High school diploma or equivalent	47%	323	56%	13%	31%
Tax Preparers	High school diploma or equivalent	30%	331	87%	0%	13%
Brokerage Clerks	High school diploma or equivalent	30%	2	-	-	100%

Source: EMSI 2020.2, Burning Glass – Labor Insights

*Percentage of incumbent workers with a Community College Credential or Some Postsecondary Coursework

Exhibit 8 displays the work experience typically required to enter each occupation and the real-time work experience requirements from employer job ads. Most employers were looking for a candidate with zero to two years of work experience.

Exhibit 8: Work experience required and real-time work experience requirements, May 2019 – April 2020

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of Job Ads	0 – 2 years	3 – 5 years	6+ years
Bookkeeping, Accounting, and Auditing Clerks	None	2,811	62%	36%	2%
Payroll and Timekeeping Clerks	None	625	54%	43%	3%
Tax Preparers	None	357	56%	44%	-
Brokerage Clerks	None	2	100%	-	-

Source: EMSI 2020.2, Burning Glass – Labor Insights

Student Completions and Program Outcomes

Exhibit 9 displays annual average completion data for the California Community College *accounting* program, based on the most recent three academic years.

Exhibit 9: 2016-19, Annual average community college credentials for the accounting program in the IEDR

0502.00 – Accounting	Associate of Science (A.S.)	Associate of Arts (A.A.)	Certificate requiring 30 to <60 semester units	Certificate requiring 18 to <30 semester units	Certificate requiring 6 to <18 semester units	CCC Annual Average Credentials, Academic Years 2016-19
Barstow	9	-	-	3	-	12
Chaffey	31	-	3	5	-	39
Copper Mountain	-	-	3	1	-	4
Desert	5	-	8	-	-	13
Moreno Valley	5	-	6	-	4	15
Mt. San Jacinto	-	-	5	-	-	5
Norco	10	-	13	-	28	52
Riverside	16	-	18	-	16	49
San Bernardino	-	44	11	-	13	68
Total	75	44	67	9	60	257

Source: MIS Data Mart

California program outcome data may provide a useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP codes and region is provided in Exhibit 10. The outcome methodology is available in the appendix section of this report.

Exhibit 10: 0502.00 – Accounting strong workforce program outcomes

Strong Workforce Program Metrics: 0502.00 – Accounting Academic Year 2016-17, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2017-18)	7,327	101,022
Completed 9+ career education units in one year (2017-18)	33%	31%
Economically disadvantaged students	79%	68%
Students who attained a noncredit workforce milestone in a year (2017-18)	-	42%
Students who earned a degree, certificate, or attained apprenticeship (2017-18)	133	2,256
Transferred to a four-year institution (transfers)	370	7,950

Strong Workforce Program Metrics: 0502.00 –Accounting Academic Year 2016-17, unless noted otherwise	Inland Empire/Desert Region	California
Job closely related to the field of study (2015-16)	64%	74%
Median annual earnings (all exiters)	\$28,778	\$27,802
Median change in earnings (all exiters)	28%	36%
Attained a living wage (completers and skills-builders)	59%	58%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Recommendation

Community college accounting programs lead to four distinct, middle-skill occupations. These occupations combined are expected to have 2,462 annual job openings over the next five years. Annual job openings range from 2,079 for *bookkeeping, accounting, & auditing clerks* and 22 annual job openings for *brokerage clerks*. Three out of the four occupations in this group provide a median wage that exceeds the \$18.00 per hour "good wage" established by the Brookings Institute. Two of the occupations in this group exceed \$21.78 per hour needed to support a single adult with one child (*payroll & timekeeping clerks* and *brokerage clerks*).

Nine IEDR colleges offer accounting programs, conferring an annual average of 257 awards over the last three academic years. A review of annual job openings (2,079 annual job openings for the accounting occupational group) and the number of potentially qualified program completers suggests there is an opportunity to create new or expand existing accounting programs.

Colleges considering accounting programs should focus their resources on the KSAs needed to train more *payroll & timekeeping clerks, brokerage clerks, and bookkeeping, accounting, & auditing clerks*. This will ensure students can access occupations that have plentiful job openings and offer a self-sustainable wage. Colleges should meet with relevant employers to understand their demand for more workers and the specific requirements needed to achieve gainful employment.

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Appendix: Occupation definitions, sample job titles, five-year projections for accounting occupations

Occupation Definitions (SOC) code, Education and Training Requirement, Community College Educational Attainment

Tax Preparers (13-2082)

Prepare tax returns for individuals or small businesses.

Sample job titles: Certified Income Tax Preparer (CTP), Corporate Tax Preparer, Enrolled Agent, Income Tax Preparer, Master Tax Advisor, Tax Advisor, Tax Associate, Tax Consultant, Tax Preparer, Tax Specialist

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: Between one and twelve months on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 30%

Bookkeeping, Accounting, and Auditing Clerks (43-3031)

Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

Sample job titles: Account Clerk, Accounting Assistant, Accounting Associate, Accounting Clerk, Accounting Specialist, Accounting Technician, Accounts Payable Clerk, Accounts Payable Specialist, Accounts Payables Clerk, Accounts Receivable Clerk

Entry-Level Educational Requirement: Some college, no degree

Training Requirement: Between one and twelve months on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 49%

Payroll and Timekeeping Clerks (43-3051)

Compile and record employee time and payroll data. May compute employees' time worked, production, and commission. May compute and post wages and deductions, or prepare paychecks.

Sample job titles: Accounting Technician, Human Resources Assistant (HR Assistant), Payroll Administrator, Payroll Assistant, Payroll Clerk, Payroll Coordinator, Payroll Manager, Payroll Representative, Payroll Specialist, Payroll Technician

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: Between one and twelve months on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 47%

Brokerage Clerks (43-4011)

Perform duties related to the purchase, sale or holding of securities. Duties include writing orders for stock purchases or sales, computing transfer taxes, verifying stock transactions, accepting and delivering securities, tracking stock price fluctuations, computing equity, distributing dividends, and keeping records of daily transactions and holdings.

Sample job titles: Account Administrator, Client Associate, Client Service Associate, Operations Clerk, Operations Coordinator, Registered Account Administrator, Registered Sales Assistant, Sales Assistant, Sales Trader, Trading Assistant

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: Between one and twelve months on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 30%

Appendix: Student Completions and Program Outcome Methodology

Exhibit 9 displays the average annual regional California Community College (CCC) credentials conferred during the three academic years between 2016 and 2019, from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, along with the enrollments from the most recent year available on LaunchBoard. Credentials are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation that might be present in a single year. Enrollments are the count of enrollments in courses assigned to the TOP code in the selected year.

Community college student outcome information is from LaunchBoard 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 records provided by 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 LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2020a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2020a).

Table 1: 2019 to 2024 job growth, wages, education, training, and work experience required for the accounting occupational group, IEDR

Occupation (SOC)	2019 Jobs	5-Yr Change	5-Yr % Change	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage Range (25 th to 75 th percentile)	Median Hourly Wage (50 th percentile)	Average Annual Earnings	Typical Entry-Level Education & On-The-Job Training Required	Work Experience Required
Bookkeeping, Accounting, and Auditing Clerks (43-3031)	16,544	503	3%	2,079	\$15.76 to \$25.17	\$19.60	\$44,700	Some college, no degree & 1-12 months	None
Payroll and Timekeeping Clerks (43-3051)	2,036	48	2%	238	\$18.83 to \$26.50	\$22.56	\$48,000	High school diploma or equivalent & 1-12 months	None
Tax Preparers (13-2082)	1,001	33	3%	123	\$11.75 to \$31.80	\$16.73	\$61,900	High school diploma or equivalent & 1-12 months	None
Brokerage Clerks (43-4011)	204	2	1%	22	\$21.02 to \$30.66	\$26.25	\$52,700	High school diploma or equivalent & 1-12 months	None
Total	19,784	587	3%	2,462	-	-	-	-	-

Source: EMSI 2020.2