



Summary

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

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No <input type="checkbox"/>
	<i>Comments: There is projected to be 5,461 annual job openings throughout the Inland Empire/Desert region, which is more than the 438 annual average awards conferred by educational institutions over the last 3 years. Supply data includes both community college awards (172) and non-community college awards (266).</i>	
Living Wage	Yes ✓	No <input type="checkbox"/>
	<i>Comments: All (100%) of annual job openings for these five occupations have entry-level hourly wages above the IE/D living wage of 13.74.¹</i>	
Education	Yes ✓	No <input type="checkbox"/>
	<i>Comments: Most job postings for target occupations require a high school diploma or equivalent award (74%). See exhibits 8 and 9 for more details.</i>	

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

- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor’s degree)
 - Office Clerks, General (43-9061)
 - Correspondence Clerks (43-4021)
 - Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (43-6014)
 - Data Entry Keyers (43-9021)
 - Word Processors and Typists (43-9022)
- *Additional Note:*
 - If this research is intended for use in the design of a program that includes Notary Public training, here is some additional context. The Bureau of Labor Statistics lists the Notary Public occupation as part of the occupation Office and Administrative Support Workers, All Other (43-9199).² However, this occupation does not map to any current TOP codes and O*NET itself doesn’t fully support those types of miscellaneous occupation groups, writing: “All Other’ titles represent occupations with a wide range of characteristics which do not fit into one of the detailed O*NET-SOC occupations. O*NET data is not available for this type of title.” But, according to Lightcast compatibility analysis, which assesses how the knowledge, skills, and abilities of one occupation overlap with those of another, all five occupations listed above have a greater than 90% compatibility index score with the occupation Court, Municipal, and License Clerks (43-4031.00) – which is the only occupation that O*NET notes is directly tied to Notary tools and skills.³ This supports the analysis that this TOP code and associated occupations are highly compatible with the skills needed to perform Notary Public work activities.

Summary of findings

Demand

- The number of jobs related to the middle-skill occupations above is projected to decrease 1% through 2027, with 5,461 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from \$17.27 to \$19.43 in IE/D.
- There were 6,539 online job postings from 1,883 employers over the past 12 months with the highest postings for administrative assistants.

¹ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. For these reasons, 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 Bernardino County.

² https://www.bls.gov/soc/2018/soc_2018_manual.pdf

³ <https://www.onetonline.org/link/summary/43-4031.00>

- Most job postings for target occupations require a high school diploma or equivalent (74%), followed by bachelor's degree (17%), and associate degree (9%).

Supply

- On average, there were 438 annual awards conferred by educational institutions over the last 3 years in related fields: 172 from community colleges and 266 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2021-22 academic year earned a median annual wage of \$39,676 (\$19.08 per hour).
- 68% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. The plurality of IE/D professionals in office technology occupations are Hispanic/Latino (43%), "mid-career" age category (40%), and female (90%). Most community college students in related programs are Hispanic/Latino (58%), "pre-career/college" or "early career" age categories (66%), and female (72%).

Introduction

California Community College Office Technology/Office Computer Applications (TOP 0514.00) programs prepare students for employment recording and disseminating of information, by manual and/or electronic means, including administrative office practices (keyboarding, computer literacy/applications, internet usage, e-mailing, scheduling, etc.), global concepts, and office management skills (problem solving, critical thinking, and interpersonal relations) (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Office Technology/Office Computer Applications programs lead to employment in occupations related to office technology.

Job Demand

In 2022, there were 44,781 jobs in occupations related to office technology in the IE/D region. Regional employment for this occupation group is projected to decrease by 1% through 2027 with 5,461 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 office technology, IE/D Region, 2022-2027

Occupation	SOC	2022 Jobs	2027 Jobs	2022 - 2027 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Office Clerks, General	43-9061	25,828	26,549	3%	16,595	3,319
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	43-6014	16,681	15,944	-4%	9,360	1,872
Word Processors and Typists	43-9022	1,042	944	-9%	687	137
Data Entry Keyers	43-9021	1,191	1,073	-10%	653	131
Correspondence Clerks	43-4021	39	13	-66%	12	2
Total		44,781	44,523	-1%	27,306	5,461

SOURCE: LIGHTCAST 2024.2

Job Postings

The following analysis for occupations related to office technology 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.⁴ 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 office technology over the last 12 months and the median posting duration. Over the previous 12 months, there were 6,539 unique job postings for occupations related to office technology in the region from 1,883 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, May 2023 – April 2024

Job Title	Job Ads	Median Posting Duration
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	5,121	25 days
Office Clerks, General	838	24 days
Data Entry Keyers	314	21 days
Word Processors and Typists	255	23 days
Correspondence Clerks	11	34 days
Total	6,539	

SOURCE: LIGHTCAST 2024.2

⁴ "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 office technology and includes comparison of hourly earnings as compared to the MIT IE/D living wage of \$25.73.⁵

Exhibit 3. Hourly earnings by percentile for occupations related to office technology, IE/D Region, 2022



SOURCE: LIGHTCAST 2024.2

All entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) were above the UW Self-Sufficiency Standard for the IE/D⁶. However, none of the occupations were above the MIT living wage for an adult with no children (\$25.73).

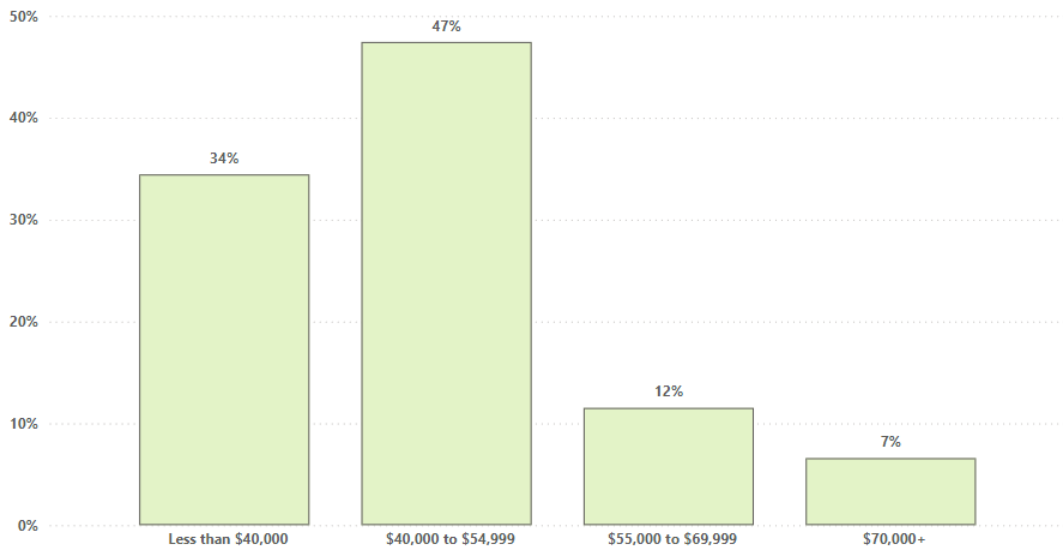
⁵ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. While the COE uses this standard for the LMI Wage criteria, For these reasons, the provides an alternative living wage calculation from MIT in the analysis 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.

⁶ *ibid*

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to office technology over the last 12 months. Online job ad salary information data suggests few employers (7%) advertise an annual salary greater than \$70,000 (\$33.65 per hour).

Exhibit 4. Online advertised salaries occupations related to office technology, IE/D Region, May '23 to April '24



SOURCE: LIGHTCAST 2024.2

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 office technology 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 Jul '23 to Jun '24

Job Title	Unique Postings
Administrative Assistants	1055
Office Assistants	421
Data Entry Clerks	97
Office Clerks	85
Front Office Medical Assistants	81
Personal Assistants	81
Administrative Support Coordinators	69
Service Coordinators	61
Administrative Coordinators	60
Office Coordinators	58

SOURCE: LIGHTCAST 2024.2

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. The California State University and Inland Regional Center 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 deduplicated. 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 Jul '23 to Jun '24

Company	Total/Unique (Jul 2023 - Jun 2024)	Posting Intensity	Median Posting Duration
California State University	924 / 207	4 : 1	21 days
Inland Regional Center	189 / 84	2 : 1	n/a
Loma Linda University Health	635 / 73	9 : 1	26 days
University of California	345 / 73	5 : 1	37 days
County Of Riverside	149 / 65	2 : 1	30 days
Hemet Unified School District	95 / 46	2 : 1	12 days
San Bernardino Community College District	103 / 39	3 : 1	29 days
Walmart	87 / 37	2 : 1	29 days
County of San Bernardino	50 / 34	1 : 1	17 days
State of California	89 / 34	3 : 1	14 days

SOURCE: LIGHTCAST 2024.2

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.⁷

Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Jul '23 to Jun '24

Common skills	Total Postings	Skill Growth Relative to Market
Communication	2708	Lagging
Customer Service	1982	Stable
Clerical Works	1950	Growing
Detail Oriented	1706	Stable
Management	1609	Stable
Filing	1490	Rapidly Growing
Microsoft Excel	1294	Growing
Microsoft Office	1274	Growing
Operations	1257	Stable
Multitasking	1148	Growing

Specialized skills	Total Postings	Skill Growth Relative to Market
Data Entry	1280	Lagging
Administrative Support	1270	Growing
Office Equipment	945	Growing
Invoicing	794	Growing
Office Supply Management	619	Growing
Accounting	552	Rapidly Growing
Office Procedures	449	Rapidly Growing
Front Office	443	Growing
Punctuation and Capitalization	429	Growing
Travel Arrangements	398	Lagging

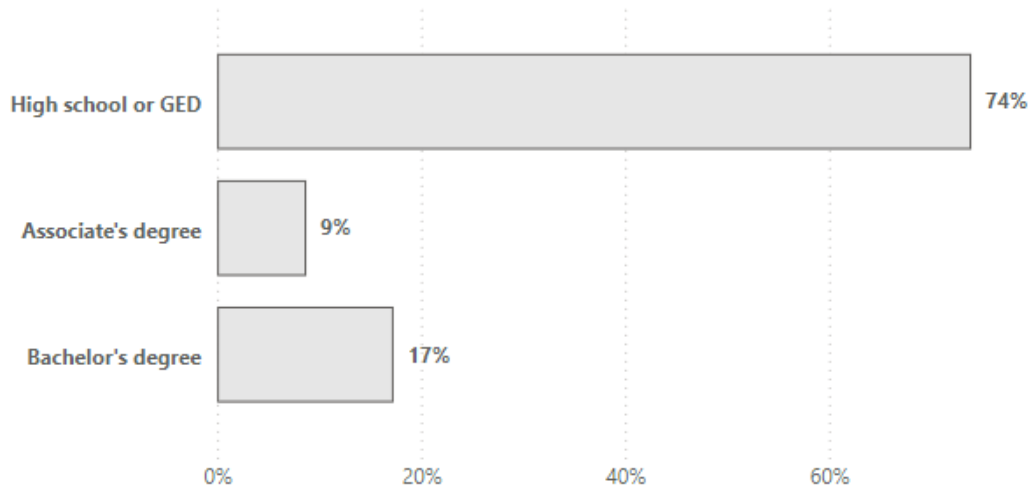
Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Excel	1294	Growing
Microsoft Office	1274	Growing
Microsoft Outlook	853	Rapidly Growing
Microsoft PowerPoint	657	Rapidly Growing
Microsoft Word	586	Stable
Spreadsheets	559	Rapidly Growing
QuickBooks (Accounting Software)	232	Growing
Google Workspace	108	Growing
Microsoft Access	97	Lagging
PeopleSoft Applications	89	Growing

SOURCE: LIGHTCAST 2024.2

⁷ "What are Lightcast Skill Projects", Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (74%) significantly greater than bachelor's degree (17%) or associate degree (9%)

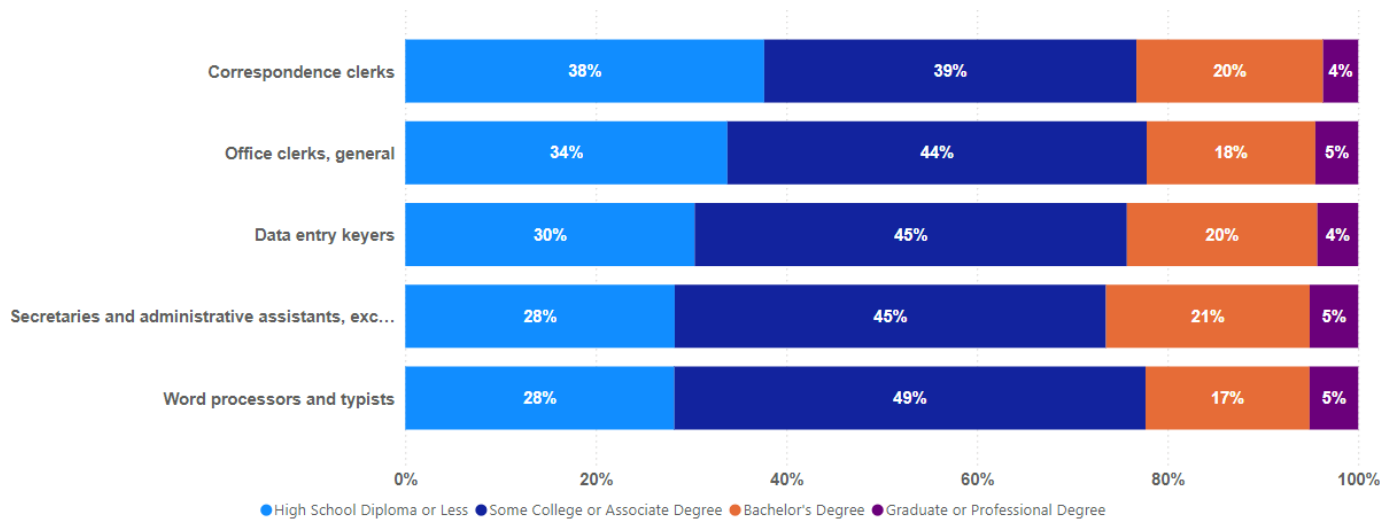
Exhibit 8 Minimum educational requirements in job postings for this occupational group, Jul '23 to May '24



SOURCE: LIGHTCAST 2024.2

For the middle-skill occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 39% and 49% of workers have completed some college or an associate degree as their highest level of education.

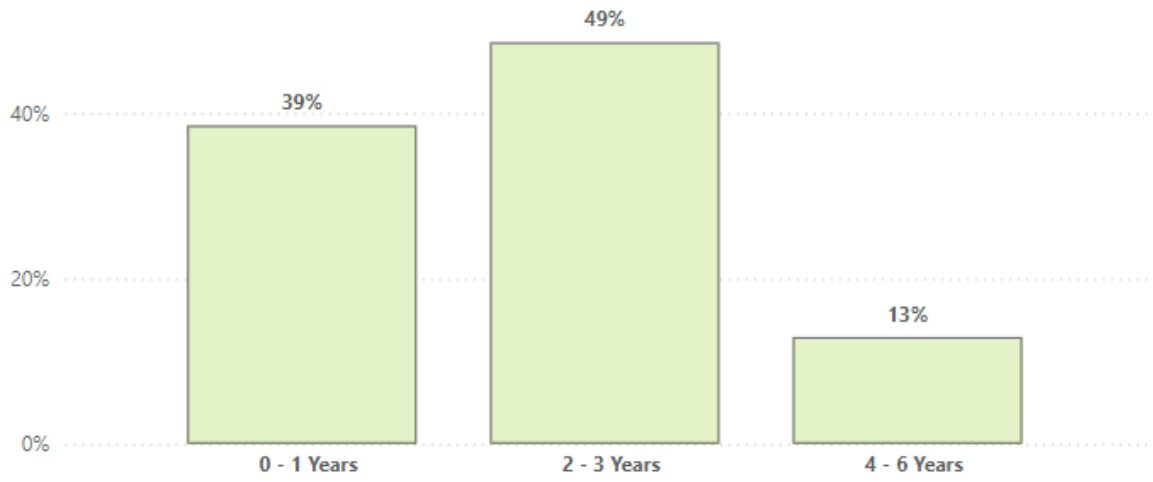
Exhibit 9 National-level Education Attainment for Occupations



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The plurality (49%) of employers listing minimum experience requirements sought candidates with 2 – 3 years of previous work experience.

Exhibit 10 Work experience requirements, IE/D Jul '23 to Jun '24



SOURCE: LIGHTCAST 2024.2

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Office Technology/Office Computer Applications (TOP 0514.00) programs over the last three academic years (2020-2023). In the previous three academic years, ten regional community colleges issued an average of 172 awards in relevant programs.

Exhibit 11 Annual average community college awards for Office Technology/Office Computer Applications (TOP 0514.00)

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
0514.00	Office Technology/Office Computer Applications	Chaffey	40	31	26	32
0514.00	Office Technology/Office Computer Applications	Victor Valley	25	36	29	30
0514.00	Office Technology/Office Computer Applications	Riverside	46	22	18	29
0514.00	Office Technology/Office Computer Applications	Palo Verde	21	30	19	23
0514.00	Office Technology/Office Computer Applications	Mt. San Jacinto	25	20	21	22
0514.00	Office Technology/Office Computer Applications	San Bernardino	14	12	17	14
0514.00	Office Technology/Office Computer Applications	Desert	20	11	10	14
0514.00	Office Technology/Office Computer Applications	Moreno Valley	0	11	0	4
0514.00	Office Technology/Office Computer Applications	Norco College	6	1	0	2
0514.00	Office Technology/Office Computer Applications	Barstow	3	1	0	1
Total			200	175	140	172

SOURCE: MIS DATA MART

Non-Community College Supply

Award completion data is available for – Data Entry/Microcomputer Applications, General (CIP 11.0601), Administrative Assistant and Secretarial Science, General (CIP 52.0401), Business/Office Automation/Technology/Data Entry (CIP 52.0407), General Office Occupations and Clerical Services (CIP 52.0408) – in the IE/D for non-community college programs.

In the previous three academic years, nine regional non-community colleges institutions issued an average of 266 awards in relevant programs.

CIP	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
52.0401	Administrative Assistant and Secretarial Science, General	Riverside County Office of Education-School of Career Education	44	32	0	25
52.0407	Business/Office Automation/Technology/Data Entry	California Technical Academy	174	168	0	114
52.0407	Business/Office Automation/Technology/Data Entry	CET-Coachella	23	11	13	16
52.0408	General Office Occupations and Clerical Services	San Joaquin Valley College-Hesperia	27	18	9	18
52.0408	General Office Occupations and Clerical Services	San Joaquin Valley College-Ontario	26	14	10	17
52.0408	General Office Occupations and Clerical Services	San Joaquin Valley College-Rancho Mirage	0	5	2	2
52.0408	General Office Occupations and Clerical Services	San Joaquin Valley College-Temecula	14	5	5	8
52.0408	General Office Occupations and Clerical Services	UEI College-Ontario	23	33	38	31
52.0408	General Office Occupations and Clerical Services	UEI College-Riverside	47	28	29	35
Total			378	314	106	266

SOURCE: IPEDS

California 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 12.

Exhibit 12 Office Technology/Office Computer Applications strong workforce program outcomes, IE/D, most recent academic year

Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)	66%	55%
Completed 9+ career education units in one year	33%	29%
Job closely related to the field of study	68%	65%
Median annual earnings (all exiters)	\$39,676	\$40,436
Students who attained a noncredit workforce milestone in a year	64%	77%
Students who earned a degree, certificate, or attained apprenticeship	95	1,525
Unduplicated count of enrolled students	2,631	33,230

SOURCE: LAUNCHBOARD

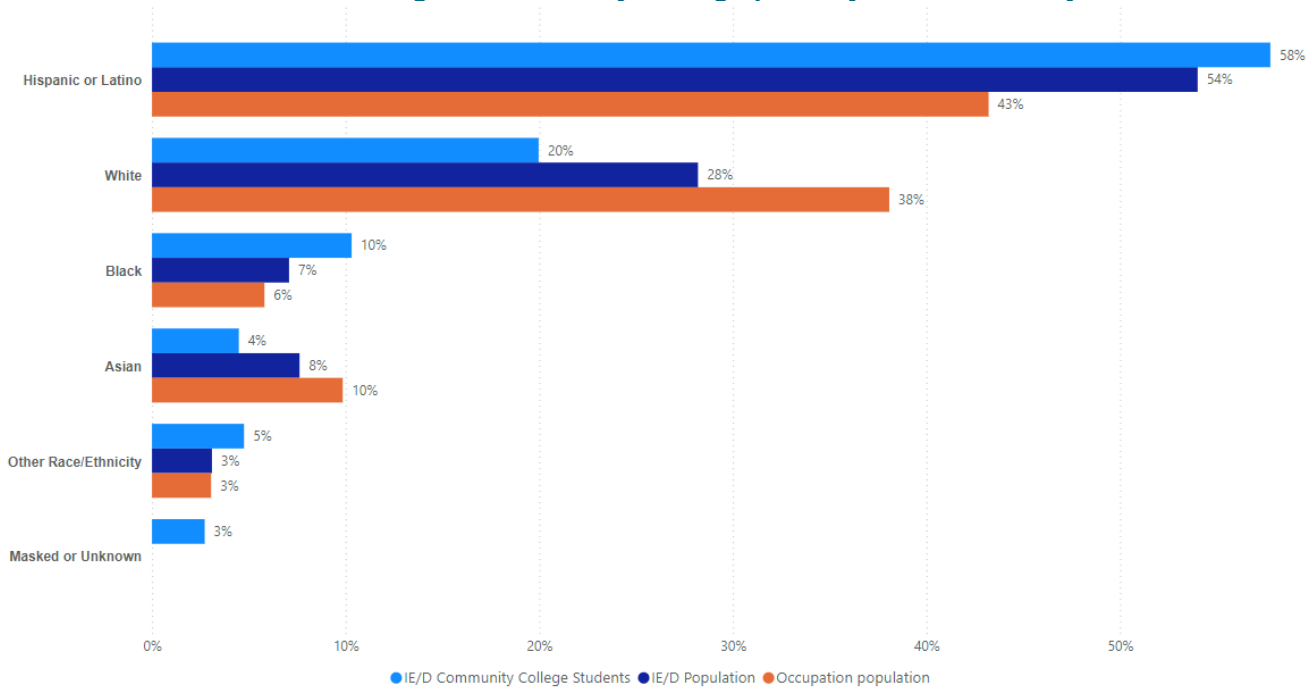
Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Office Technology/Office Computer Applications programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to office technology. This analysis can be used to:

- Understand the community college system’s current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 58% of students enrolled in Office Technology/Office Computer Applications programs are Hispanic/Latino, which is significantly higher than Hispanic/Latino workers in occupations related to office technology in the IE/D region (43%). Additionally, 10% of the IE/D community college students studying office technology are Black, which is significantly higher than both the IE/D population (7%) and IE/D population that are employed in related occupations (6%). Though 38% of the workers employed in occupations related to office technology are White, only 20% of students in Office Technology/Office Computer Applications programs and 28% of the IE/D population are White.

Exhibit 13 Program and County Demographics by Race & Ethnicity



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

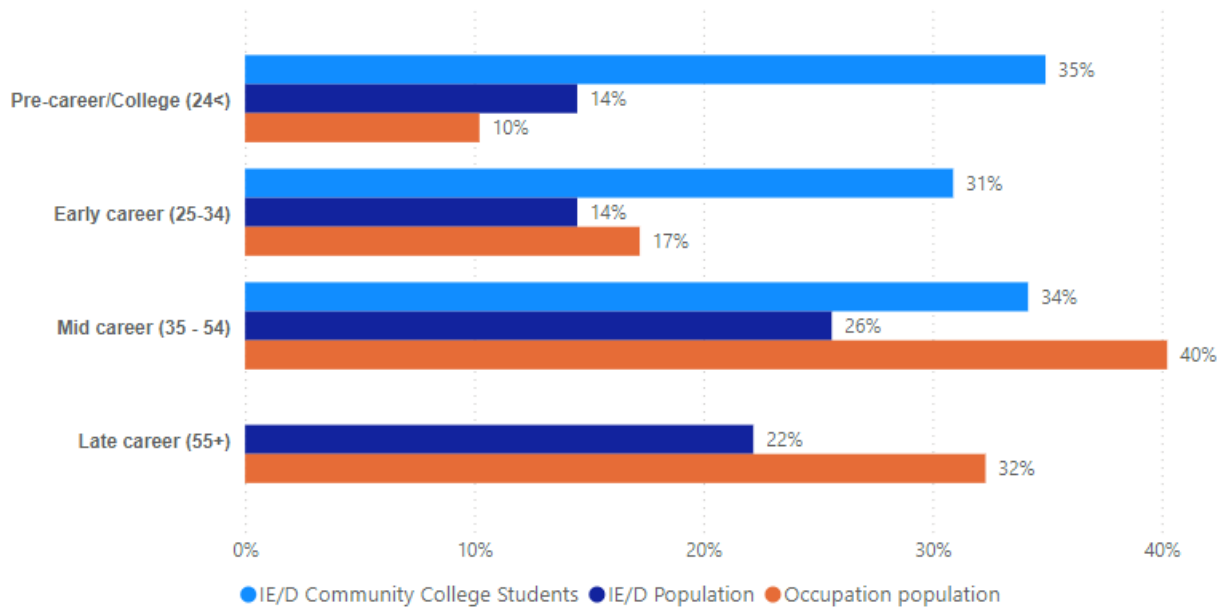
The plurality of IE/D professionals in office technology occupations are Hispanic/Latino (43%), “mid-career” age category (40%), and female (90%). Most community college students in related programs are Hispanic/Latino (58%), “pre-career/college” or “early career” age categories (66%), and female (72%). Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino professionals.
- College programs may want to consider strategies to engage more males into these programs.

Exhibit 14 compares the age of IE/D community college students enrolled in Office Technology/Office Computer Applications programs compared to the IE/D population.

The majority of students enrolled in Office Technology/Office Computer Applications programs are either in the “pre-career/college” category or “early career” category (66%) as compared to IE/D population (28%) and workforce (28%) in these five occupations related to office technology. These programs are an important entry point for young office technology professionals.

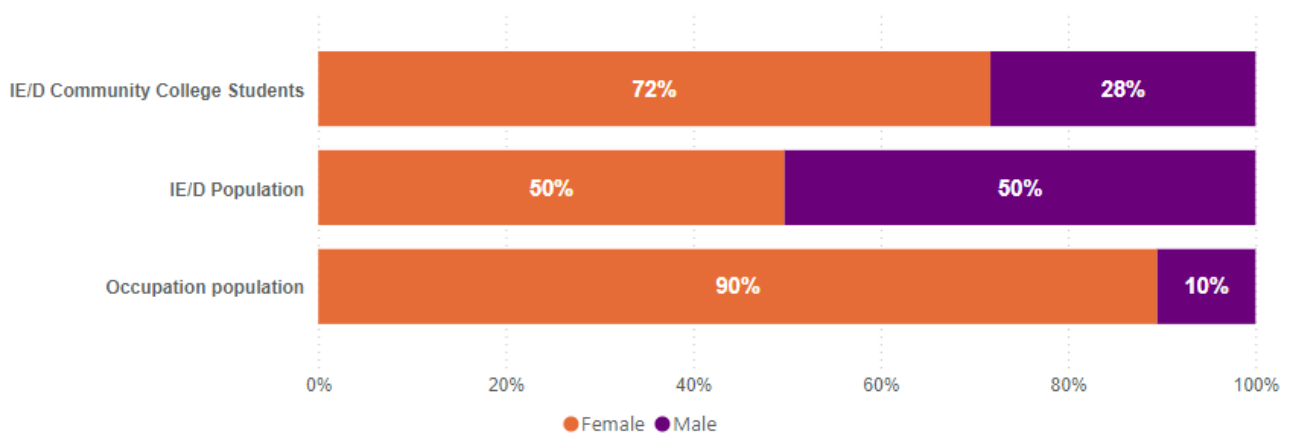
Exhibit 14 Program and County Demographics by Age



SOURCE: LIGHTCAST 2024.2

Exhibit 15 compares the gender of IE/D County community college students enrolled in Office Technology/Office Computer Applications programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to office technology to identify potential diversity and equity issues addressable by community college programs.

Exhibit 15 Program and County Demographics by Gender



SOURCE: LIGHTCAST 2024.2

Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single 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 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, 2023a). 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, 2023a).

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. https://lightcast.io/
Living Wage	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: https://livingwage.mit.edu/pages/methodology 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 https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCC Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu 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 https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx