

Labor Market Assessment: Biological Technicians (TOP 0430.00 Biotechnology and Biomedical Technology) (CIP 41.0101 Biology/Biotechnology Technology/ Technician)



Inland Empire/Desert Center of Excellence, July 2026

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Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	✓	☐	☐

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No ☐
	<i>Comments:</i> There is <i>projected</i> to be 19 annual job openings throughout the Inland Empire/Desert region, which is more than the 0 annual average awards conferred by educational institutions over the last 3 years . Supply data includes both community college awards (0) and non-community college awards (0).	
Living Wage	Yes ✓	No ☐
	<i>Comments:</i> Biological Technicians have entry-level hourly wages \$3 above the IE/D living wage of 20.42¹ .	
Education	Yes ✓	No ☐
	<i>Comments:</i> This occupation does not have some college or postsecondary degree or associate degree as its typical entry-level education level . However, more than 33% of all workers in the field (33.2%) have completed some college or an associate degree as their highest level of education . See Exhibit 9 for more details.	

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

- Above Middle-Skill (typically require a bachelor's degree)
 - Biological Technicians (19-4021)

Summary of findings

Demand

- The number of jobs related to the assessed occupation is projected to increase 8% through 2030, with 19 annual job openings (new and replacement jobs).
- Hourly entry-level wages for this occupation are above living wage at the 25th percentile hourly wage, estimated to be \$23 in IE/D.
- There were 26 online job postings from 19 employers over the past 12 months with the highest postings for research assistants and laboratory assistants.
- Most job postings for target occupations require a high school diploma or equivalent (44%), followed by an associate degree (31%), bachelor's degree (13%), and above a bachelor's degree (13%).

Supply

- On average, there were 0 annual awards conferred by educational institutions over the last 3 years in related fields: 0 from community colleges and 0 from other institutions (e.g., 4-year universities, private schools).
- California community college students that exited these programs in the 2023-24 academic year earned a median annual wage of \$50,448 (\$24.25 per hour).
- 45% of California students that exited their program in 2023-24 reported that they are now earning a living wage.

¹ The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024.

Introduction

California Community College Biotechnology and Biomedical Technology (TOP 0430.00) programs prepare students for employment using the theories, operations, and technical skills used to assist researchers and engineers engaged in developing or manufacturing biological, biotechnical, or medical systems or products (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Biotechnology and Biomedical Technology programs lead to employment in biological technicians.

Job Demand

In 2025, there were 152 biological technician jobs in the IE/D region. Regional employment for this occupation group is projected to increase by 8% through 2030 with 19 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 biological technicians, IE/D Region, 2025-2030

Occupation	SOC	2025 Jobs	2030 Jobs	2025-2030 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Biological Technicians	19-4021	152	165	8%	96	19

SOURCE: LIGHTCAST 2026.3

Job Postings

The following analysis is for biological technicians 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.² While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, de-duplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for biological technicians over the last 12 months and the median posting duration. Over the previous 12 months, there were 26 unique job postings for biological technicians in the region from 19 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, July 2025 – June 2026

Job Title	Job Ads	Median Posting Duration
Biological Technicians	26	28 days

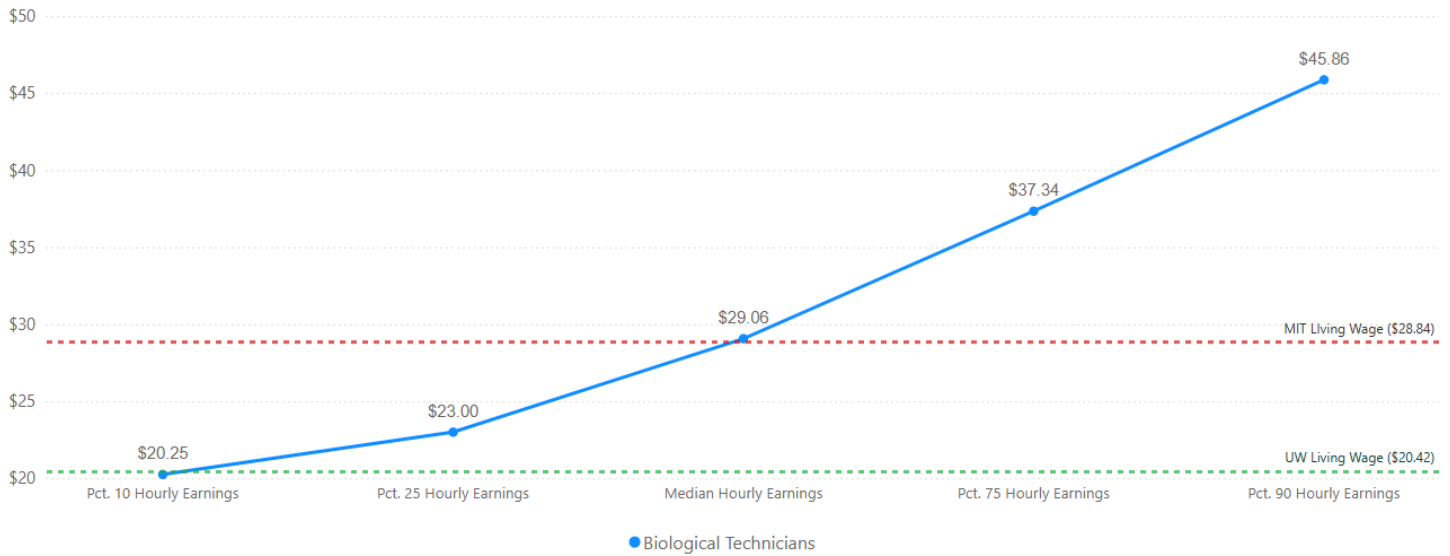
SOURCE: LIGHTCAST 2026.3

² "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 biological technicians compared to both the UW Self-Sufficiency Standard for the IE/D of \$20.42³ and the MIT IE/D living wage of \$28.84.⁴

Exhibit 3. Projected hourly earnings by percentile, IE/D Region, 2025



SOURCE: 2026.3

The projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) for biological technicians are above the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3). However, this occupation is below the MIT living wage for an adult with no children (\$28.84) in projected entry-level earnings (see Exhibit 3).

³ The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, 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 \$28.84 in Riverside County and \$27.60 in San Bernadino County.

⁴ *ibid.*

Advertised Salary from Online Job Ads

There is insufficient recent job posting data to show regional online advertised salaries for the biological technicians over the last 12 months, so no estimates can be displayed.

Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the biological technicians 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 Region, July 2025 – June 2026**

Job Title	Unique Postings
Research Assistants	6
Laboratory Assistants	5
Microbiology Technicians	5
Medical Research Assistants	2

SOURCE: LIGHTCAST 2026.3

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 National Institute of Clinical Research 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 de-duplicated. 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 Region, July 2025 – June 2026**

Company	Total/Unique (Jul 2025 - Jun 2026)	Posting Intensity	Median Posting Duration
National Institute Of Clinical Research	5 / 3	2 : 1	29 days
Abbott Laboratories	2 / 2	1 : 1	32 days
Loma Linda University	9 / 2	5 : 1	17 days
La Sierra University	2 / 2	1 : 1	30 days
Insightful Technologies	1 / 1	1 : 1	5 days
University of California-Riverside	7 / 1	7 : 1	n/a
Astrix Technology	1 / 1	1 : 1	9 days
L&L Environmental	1 / 1	1 : 1	21 days
United States Department of the Interior	3 / 1	3 : 1	19 days
Great Basin Institute	3 / 1	3 : 1	42 days

SOURCE: LIGHTCAST 2026.3

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.⁵

**Exhibit 7. Top 10 in-demand skills from employer job ads,
IE/D Region, July 2025 – June 2026**

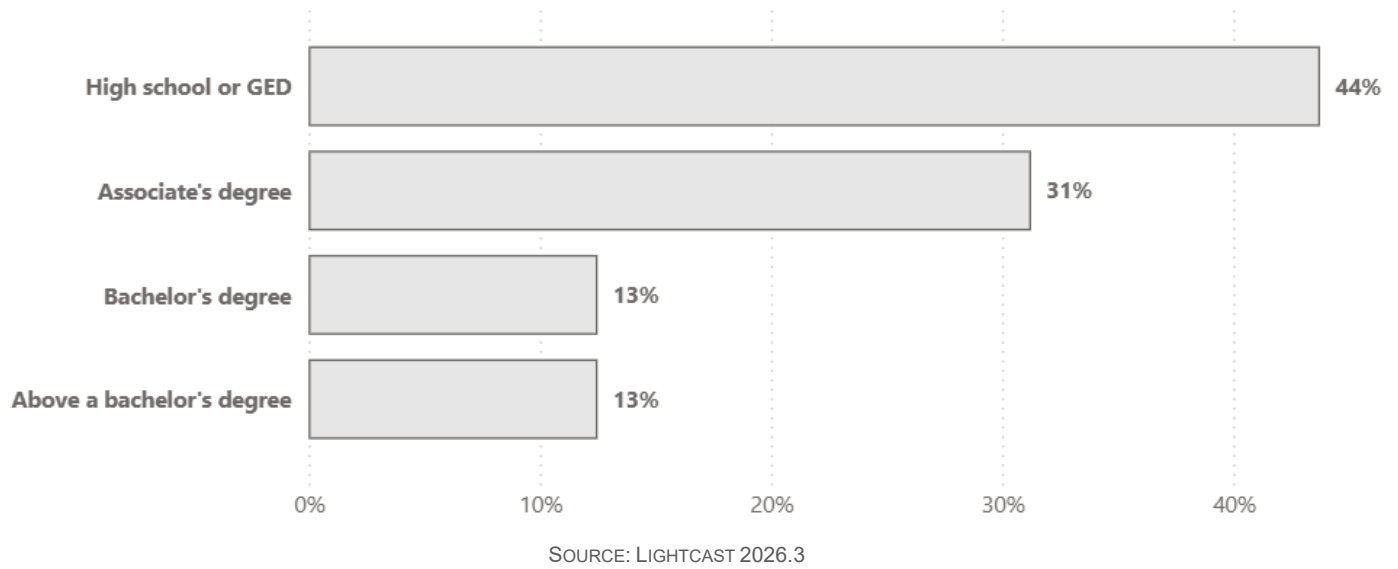
Common skills	Total Postings	Skill Growth Relative to Market
Research	14	Growing
Communication	8	Stable
Scheduling	8	Growing
Detail Oriented	7	Stable
Computer Literacy	6	Lagging
Management	6	Stable
Administrative Functions	5	Growing
Confidentiality	5	Stable
Quality Control	5	Growing
Clerical Works	4	Growing
Filing	4	Rapidly Growing
Organizational Skills	4	Growing
Willingness To Learn	4	Growing
Specialized skills	Total Postings	Skill Growth Relative to Market
Biology	9	Rapidly Growing
Electrocardiography	6	Growing
Clinical Trials	5	Growing
Laboratory Equipment	5	Stable
Laboratory Experience	5	Growing
Laboratory Testing	5	Growing
Microbiology	5	Stable
Phlebotomy	5	Growing
Vital Signs	5	Growing
Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Excel	2	Growing
Productivity Software	2	Growing

SOURCE: LIGHTCAST 2026.3

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (44%) greater than associate degree (31%) or bachelor's degree (13%) or above a bachelor's degree (13%).

⁵ "What are Lightcast Skill Projects", Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, July 2025 – June 2026



The Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupation of interest indicates that 33% of workers have completed some college or an associate degree as their highest level of education.

Exhibit 9 National-level Education Attainment for the Occupational Group

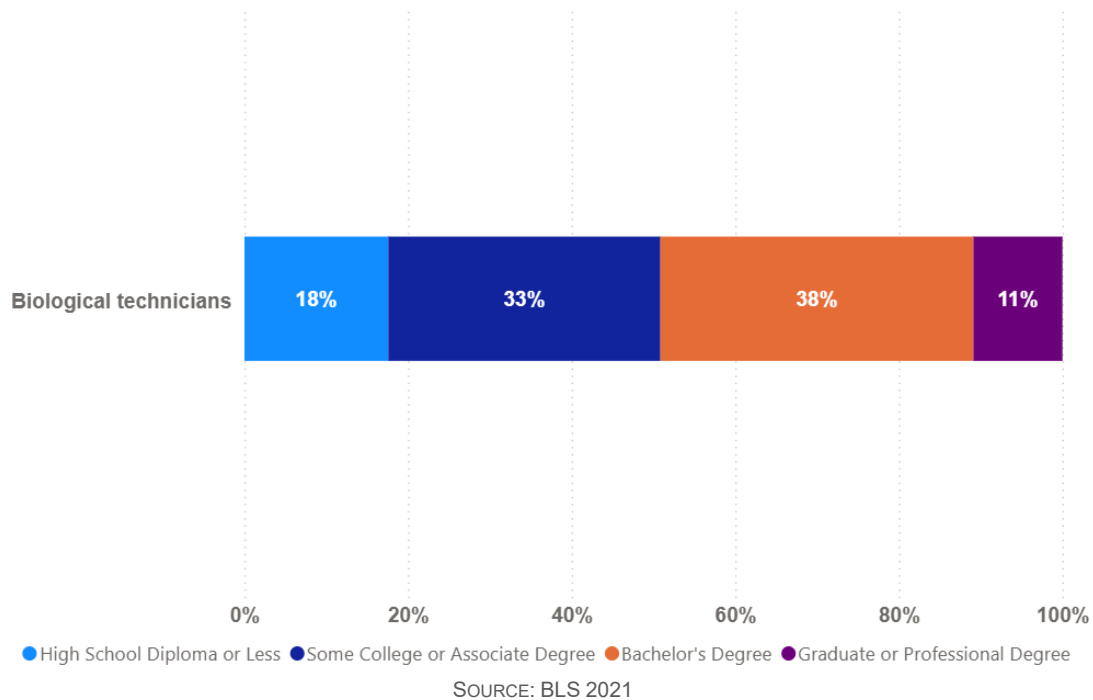
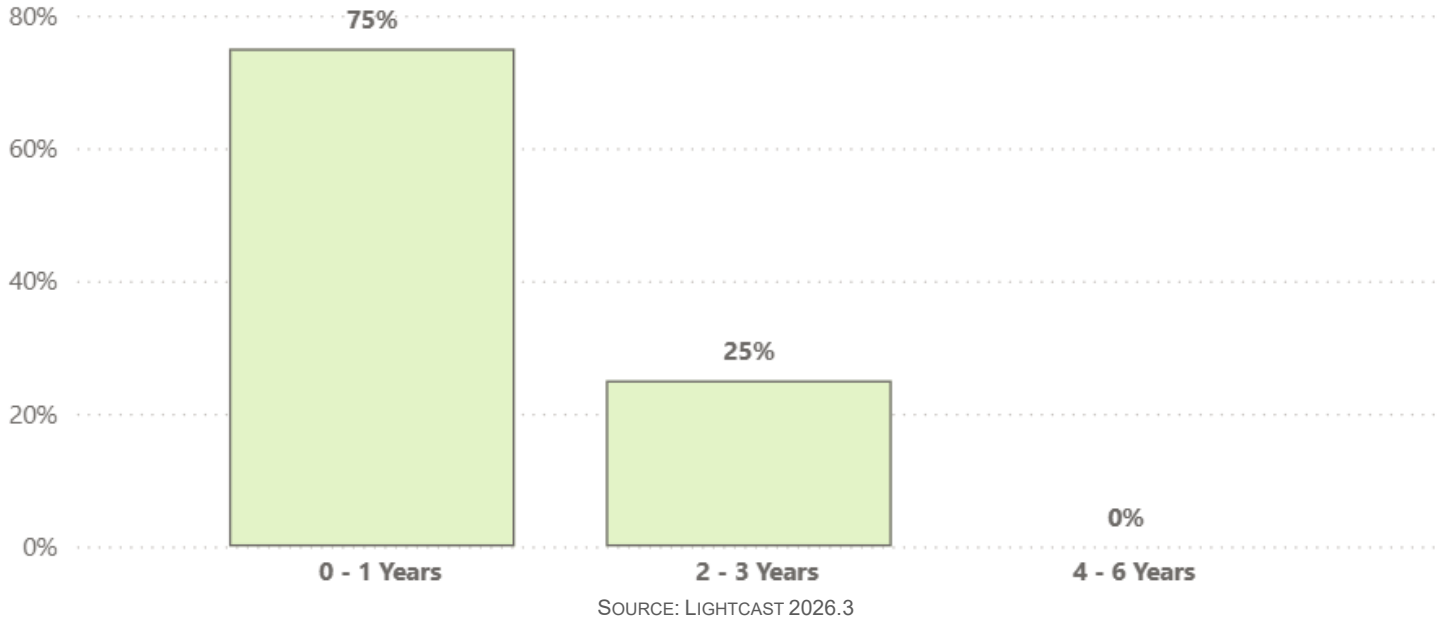


Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (75%) of employers listing minimum experience requirements sought candidates with 0-1 years of previous work experience.

**Exhibit 10 Work experience requirements,
IE/D Region, July 2025 – June 2026**



Student Completions and Program Outcomes

No student completions for the Biotechnology and Biomedical Technology (TOP 0430.00) programs were found over the last three academic years (2022-2025). Based on the lack of data, it appears that in the previous three academic years, 0 regional community colleges issued an average of 0 awards in relevant programs.

Non-Community College Supply

Student award completion data was not found in the IE/D for other related non-community college programs: Computational Biology (CIP 26.1104), Biomedical Technology/Technician (CIP 15.0401), Biology/Biotechnology Technology/Technician (CIP 41.0101).

In the previous three academic years, 0 regional non-community college institutions issued an average of 0 awards in relevant programs.

Strong Workforce Program Outcomes

California SWP 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 11.

Exhibit 11 Biotechnology and Biomedical Technology strong workforce program outcomes, IE/D & California, AY 2023-24

Program Metric Title	Inland Empire	Statewide
Students	-	2,646
Earned 9+ Career Education Units	-	23%
Completed Noncredit Workforce Preparation Milestone	-	67%
Earned an Award: Degree or Cert or Attained Appren. Journey Level Status	-	17%
Transferred to a Four-Year Institution: Four-Year Postsecondary Institution	-	11%
Median Annual Earnings	-	\$50,448
Median Change in Earnings	-	36%
Attained Living Wage	-	45%

SOURCE: DATAVISTA

Appendix: Methodology

Community college student outcome information is from DataVista 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 DataVista's Strong Workforce Program Metrics Data Element Dictionary in the Resources section (DataVista, 2025).

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 (UW)	Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. http://www.selfsufficiencystandard.org/California . The COE refers to the Self-Sufficiency Wage as a "living wage." This calculation 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. The living wage for one adult in San Bernardino County is \$20.07 per hour (\$57,408 annually). The living wage for one adult in Riverside County is \$20.76 per hour (\$43,854 annually). The average of the two, \$20.42 per hour (\$42,474 annually), is used to represent the Inland Empire/Desert living wage.
Living Wage (MIT)	<i>Living wage data sourced from the Living Wage Institute via https://livingwage.mit.edu/counties/06065; https://livingwage.mit.edu/counties/06071, Accessed on June 6, 2026.</i> 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 \$27.60 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$28.84 per hour (\$59,987 annually). The higher of the two, \$28.84 per hour (\$59,987 annually), is used to represent the Inland Empire/Desert living wage.
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 CCCCO 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	DataVista aims to provide up-to-date and useful information on students within the California Community Colleges and its Adult Education partners. DataVista is a modernization of the supporting architecture and visualization of metrics previously available on the LaunchBoard. DataVista is a collaboration between the California Community Colleges Chancellor's Office and WestEd, see: https://datavista.cccco.edu/data_views/swp_report