



# Labor Market Analysis for Program Recommendation

## Cybersecurity Analyst Occupations

### Chabot College

Prepared by the Bay Region Center of Excellence for Labor Market Research

May 2025

#### Recommendation

Based on all available data, there appears to be an “undersupply” of Cybersecurity Analyst workers compared to the demand for this cluster of occupations in the Bay Region and in the East Bay Sub-Region (Alameda, Contra Costa counties). There is a projected annual gap of about 1,598 students in the Bay Region and 100 students in the East Bay Sub-Region.

#### Introduction

This report provides student outcomes data on employment and earnings for TOP 0708.00 - Computer Infrastructure and Support programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Chabot College and in the region.

This report profiles Cybersecurity Analyst Occupations in the 12 county Bay Region and in the East Bay Sub-Region for New certificate or degree development (for credit) at Chabot College. Information Security Analysts (15-1212) is a middle-skill occupation.

- **Information Security Analysts (15-1212):** Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.  
Typical Entry-Level Educational: Bachelor’s degree  
Typical On-the-Job Training: None  
Percentage of individuals 25+ with an associate degree, certificate, or some postsecondary coursework as their highest level of education attainment: 26%

#### Occupational Demand

Table 1. Employment Outlook for Cybersecurity Analyst Occupations in the Bay Region

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Wage	Median Hourly Wage
Information Security Analysts	17,963	20,730	2,767	15%	8,415	1,683	\$48	\$64
<b>Total</b>	<b>17,963</b>	<b>20,730</b>	<b>2,767</b>	<b>15%</b>	<b>8,415</b>	<b>1,683</b>	<b>\$48</b>	<b>\$64</b>

Source: Lightcast 2025.1

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The Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Cybersecurity Analyst Occupations in the East Bay Sub-Region**

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Wage	Median Hourly Wage
Information Security Analysts	1,492	1,596	104	7%	555	111	\$54	\$69
<b>Total</b>	<b>1,492</b>	<b>1,596</b>	<b>104</b>	<b>7%</b>	<b>555</b>	<b>111</b>	<b>\$54</b>	<b>\$69</b>

Source: Lightcast 2025.1

East Bay Sub-Region includes: Alameda, Contra Costa Counties

### Job Postings in the Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for the latest 12 months**

Occupation	Bay Region	East Bay
Information Security Analysts	933	229

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

**Table 4a. Top Job Titles in Job Postings for Cybersecurity Analyst Occupations in the Bay Region**

Title	Bay	Title	Bay
Field Service Engineers	307	Information Security Officers	13
Information Security Analysts	68	Information Security Specialists	12
Cybersecurity Analysts	38	Incident Responders	11
Cybersecurity Incident Response Analysts	24	Incident Response Managers	11
Information Systems Security Officers	23	Security Specialists	11
Security Analysts	19	Assurance Interns	10
IT Auditors	18	Incident Response Consultants	10
Cybersecurity Specialists	15	Incident Managers	9
Lead Field Service Engineers	15	Semiconductor Engineers	9

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

**Table 4b. Top Job Titles in Job Posting for Cybersecurity Analyst Occupations in the East Bay Sub-Region**

Title	East Bay	Title	East Bay
Field Service Engineers	90	Incident Responders	4
Information Security Analysts	16	Assurance Interns	3
Cybersecurity Analysts	10	Imaging Field Service Engineers	3
Lead Field Service Engineers	6	Information Security Officers	3
Security Analysts	6	Information Security Risk Analysts	3
Cyber Threat Analysts	5	Semiconductor Engineers	3
Information Systems Security Officers	5	Soc Engineers	3
Cybersecurity Specialists	4	Technology Audit Managers	3
IT Auditors	4	Bioprocess Engineers	2

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

## Industry Concentration

**Table 5. Industries Hiring for Cybersecurity Analyst Occupations in the Bay Region**

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2023)	Jobs in Industry (2028)	% Change (2023-28)	% Occupation Group in Industry (2023)
Custom Computer Programming Services	1,438	1,763	23%	18%
Computer Systems Design Services	615	751	22%	9%
Corporate, Subsidiary, and Regional Managing Offices	363	557	53%	6%
Data Processing, Hosting, and Related Services	473	595	26%	6%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	392	479	22%	5%
Web Search Portals and All Other Information Services	350	403	15%	5%
Software Publishers	373	420	13%	5%
Research and Development in Biotechnology (except Nanobiotechnology)	245	303	24%	3%
Commercial Banking	181	177	-2%	2%
Offices of Certified Public Accountants	163	173	7%	2%

Source: Lightcast 2025.1

**Table 6. Top Employers Posting Cybersecurity Analyst Occupations in the Bay Region and the East Bay Sub-Region**

Employer	Bay	Employer	East Bay
Thermo Fisher Scientific	63	Thermo Fisher Scientific	24
Danaher	17	GPAC	9
CrowdStrike	15	Lawrence Livermore National Laboratory	8
GPAC	14	NavitsPartners	7
NavitsPartners	14	Carl Zeiss Vision	4
CBRE	12	Clorox	4

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

## Educational Supply

There are six community colleges in the Bay Region issuing 85 awards on average annually (last 3 years ending 2023-24) on TOP 0708.00 - Computer Infrastructure and Support. In the East Bay Sub-Region, there is one community college that issued 11 awards on average annually (last 3 years) on this TOP code.

There are no other CTE educational institutions in the Bay Region issuing 173 awards on average annually (last 3 years ending 2022-23) on CIP 11.1003- Computer and Information Systems Security/Auditing/Information Assurance.

**Table 7. Community College Awards on TOP 0708.00 - Computer Infrastructure and Support in the Bay Region**

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Noncredit award	Total
Cabrillo	SC-Monterey	3	0	3	15	21
Foothill	Silicon Valley	0	0	9	0	9
Hartnell	SC-Monterey	0	1	0	0	1
Los Medanos	East Bay	8	1	2	0	11
San Francisco	Mid-Peninsula	0	0	18	0	18
Santa Rosa	North Bay	0	0	25	0	25
<b>Total</b>	<b>-</b>	<b>11</b>	<b>2</b>	<b>57</b>	<b>15</b>	<b>85</b>

Source: Data Mart

Note: The annual average for awards is 2021-22 to 2023-24.

## Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay Region with 1,683 annual openings for the Cybersecurity Analyst occupational cluster and 85 annual (3-year average) awards for an annual undersupply of 1,598 students. In the East Bay Sub-Region, there is also a gap with 111 annual openings and 11 annual (3-year average) awards for an annual undersupply of 100 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0708.00 - Computer Infrastructure and Support**

Metric Outcomes	Bay All CTE Program	Chabot College All CTE Program	State 0708.00	Bay 0708.00	East Bay 0708.00	Chabot College0708.00
Students with a Job Closely Related to Their Field of Study	74%	75%	71%	71%	67%	NA
Median Annual Earnings for SWP Exiting Students	\$53,090	\$48,800	\$52,790	\$65,192	\$51,465	NA
Median Change in Earnings for SWP Exiting Students	24%	34%	17%	16%	24%	NA
Exiting Students Who Attained the Living Wage	54%	56%	64%	61%	63%	NA

Source: Launchboard Strong Workforce Program Median of 2018 to 2021.

## Skills, Certifications and Education

**Table 9. Top Skills in Job Postings for Cybersecurity Analyst Occupations in the Bay Region**

Skill	Posting	Skill	Posting
Field Service Management	405	Technical Support	120
Cyber Security	308	Cyber Threat Intelligence	116
Incident Response	263	Automation	112
Computer Science	255	Risk Analysis	111
Auditing	177	Linux	106
Vulnerability	168	Security Controls	100
Security Information And Event Management (SIEM)	136	Information Systems	99
Electronics	135	Project Management	95
Operating Systems	133	Workflow Management	89
Firewall	127	Security Tools	88

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

**Table 10. Certifications in Job Postings for Cybersecurity Analyst Occupations in the Bay Region**

Certification	Posting	Certification	Posting
GIAC Certifications	94	GIAC Security Essentials Certification (GSEC)	25

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

**Table 11. Education Requirements for Cybersecurity Analyst Occupations in the Bay Region**

Education Level	Job Postings	% of Total
High school or GED	105	12%
Associate degree	167	19%
Bachelor's degree & higher	617	69%

Source: Lightcast 2025.1; "Job Posting Analytics." May. 2024 - Apr. 2025

Note: 33% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

## Methodology

Occupations for this report were identified by use of job descriptions and skills listed in O\*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCCO Data Mart and CTE Launchboard.

## Sources

O\*Net Online

Lightcast

CTE LaunchBoard [www.calpassplus.org](http://www.calpassplus.org)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

CCCCCO Data Mart

## Contacts

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