

## Memorandum

To: Melissa Fish, Interim CAI Director, American River College

From: Ebony J. Benzing, Research Manager, North/Far North Center of Excellence

Date: Thursday, November 12, 2020

CC: John McCormack, Interim Associate Dean Apprenticeship, American River College

Re: Program Placement Council LMI for American River Cybersecurity programs

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## Background

American River College requested labor market information from the North/Far North Center of Excellence (COE) for submission to the Los Rios Community College District Program Placement Council (PPC). Showing demand for jobs through labor market data is now the first step in developing career education programs in the district. This process is intended to encourage investments in programs that lead to gainful employment for our students while placing labor market information at the forefront of the decision-making process.

This memo uses the Strong Workforce Program labor market information template (Exhibit 1), developed for the Los Rios Community College District, to summarize occupational demand and educational program supply for a new certificate or degree program. The findings below summarize the data shown in Exhibit 1.

## Findings

- North (Greater Sacramento) post-secondary training providers conferred an average of 198 awards per year in cybersecurity-related programs. Community colleges conferred an average of 188 certificates and degrees in TOP codes 0708.00 - Computer Infrastructure and Support and 0708.10 - Computer Networking.<sup>1</sup>
- There are 404 projected annual openings over the next five years in the related cybersecurity occupations: information security analysts, database administrators, network and computer systems administrators, computer network architects, and computer network support specialists.<sup>2</sup>
- According to a U.S. survey, 20-41% of incumbent workers in the studied occupations have education attainment levels consistent with community college offerings (some college or associate degrees). Between 37% and 47% of incumbent workers in these occupations have a bachelor's degree.<sup>3</sup>
- Based on a simple occupational demand versus educational supply analysis, there appears to be an undersupply of trained workers to meet regional demand for cybersecurity jobs.

Please contact Ebony Benzing, COE Research Manager, for further information at [Ebony.Benzing@losrios.edu](mailto:Ebony.Benzing@losrios.edu) or 916-563-3215.

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<sup>1</sup> COE Supply Tables, California Community Colleges Chancellor's Office DataMart, and Integrated Postsecondary Education Data System (IPEDS).

<sup>2</sup> Emsi 2020.4; QCEW Employees, Non-QCEW Employees and Self-Employed.

<sup>3</sup> U.S. Department of Labor, Bureau of Labor Statistics, Educational attainment for workers 25 years and older by detailed occupation, 2018, <https://www.bls.gov/emp/tables/educational-attainment.htm>

**Exhibit 1. LMI for Cybersecurity programs in Greater Sacramento**

Top6	Top6_Title	SOC Code	SOC Title	Typical Education
0708.00	Computer Infrastructure and Support	15-1122	Information Security Analysts	Bachelor's degree
0708.10	Computer Networking	15-1141	Database Administrators	Bachelor's degree
		15-1142	Network and Computer Systems Administrators	Bachelor's degree
		15-1143	Computer Network Architects	Bachelor's degree
		15-1152	Computer Network Support Specialists	Associate's degree

Geography - The program identified specifically targets the labor market need for trained workers in...				
- Select a region/subregion or single county geography using the drop-down lists embedded in the green or blue cell.		<b>Region/Subregion list</b>		<b>County list</b>
		- Greater Sacramento		n/a
<b>Demand</b> - the program(s) prepare students to work in the following occupations...			<b>Supply</b> - On average, how many awards (certificates and degrees) area conferred by community colleges and other post-secondary institutions in the region/county identified?	
SOC Code	Occupational Title	Annual Openings	Institution Type	# of Awards Conferred (Annual Average)
15-1122	Information Security Analysts	50	Community Colleges	188
15-1141	Database Administrators	55	Other Post-secondary Institutions	10
15-1142	Network and Computer Systems Administrators	142		
15-1143	Computer Network Architects	53		
15-1152	Computer Network Support Specialists	104		
			<b>Summary of Data Entered:</b>	
			Demand	404
			Supply	198
			<b>Analysis:</b>	
			<b>It's a go! Undersupply indicated</b>	

Community colleges with the same TOP program:		Other ed programs with corresponding CIP programs:	
TOP6 - Top Title		CIP - CIP Title	
School	3-Year Annual Average Awards	School	3-Year Annual Average Awards
0708.00 - Computer Infrastructure and Support		11.1003 - Computer and Information Systems Security/Information Assurance	
ARC	19	Asher	3
CRC	6		
SCC	20		
Sierra	40		
0708.00 - Computer Infrastructure and Support		11.0901 - Computer Systems Networking and Telecommunications	
ARC	22	Charles A Jones Career and Education Center	7
CRC	8		
SCC	40		
Sierra	33		
Yuba	0		