

# CTE Update

PALO VERDE COLLEGE

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## COMPUTER INFORMATION SYSTEMS REPORTING FALL 2022 TO SPRING 2024

### 1. PURPOSE OF THE PROGRAM

“Palo Verde College provides opportunities for personal and professional growth to a diverse community of learners in an academic environment committed to student success and equity by supporting student achievement of basic skills, certificate, degree, university transfer, and career goals.” PVC Mission Statement

**a. Describe the program, its mission, and target population.**

The CIS program at Palo Verde College is a comprehensive program designed to prepare students for continued higher education opportunities and entry into the world of work. The CIS program offers an AS degree in CIS, and six-certificates. Each of these certificates are designed to integrate into the AS degree so that a student pursuing the AS degree will exit the college with one or more certificates along with their Associate’s Degree. These programs have been developed so that they are latticed and stackable, leading to completion and pursuit of numerous certificates as they work toward their AS Degree in CIS.

Program courses are available to students enrolled in CIS certificate programs, as well as other College programs and certificates. CIS courses are also available to others seeking to acquire or upgrade their computer literacy skills for personal and career reasons. The CIS department also works collaboratively with the Palo Verde Unified School District to offer courses in the CIS field to qualified high school students during their traditional school day.

The mission of the program is to promote rigorous curriculum and instruction, focusing on the technological software, hardware, and planning expected of a graduate and potential employee.

The CIS program serves students of all ages and demographics. There are traditional college students enrolled in the program as well as concurrently enrolled high school students and adult learners. Each of these populations require different support and instruction methods.

- b. **How has the program changed in the last two years? In major ways, minor, or no real changes to speak of? Explain.**

During the past two years, the CIS program has:

- Received software donation from a Computer Animation company (Maxon). This donation is both for the students to use in class and home for free. We are the only school in North America that still is given the software for free. We receive it still because our Computer Animation Program at Palo Verde College was the first to adopt their software. The cost of this software would be roughly \$4500 per computer license.
- Upgraded the 3D printers in the lab. Now the lab has over 35 3D printers. Each student in the class now has access to their own 3D printer during class, so they no longer have to take turns on the 3D printers.
- Secured SWP funding to update and enhance the technology in the FA 128 classroom for the CIS program. \$50,000 was ear-marked for this project.
- The Professional Technologies division pleaded for a replacement for the CTE advisor position. After the previous advisor left, no one was hired to replace this position. Enrollment dropped in our courses because we did not have someone registering students. Now it appears that we have the support of this position and things are now back on track.
- The CIS department has purchased equipment through the use of SWP and other funds to create curriculum for the CTE promotional trailer. There is still laptops that were not ordered, even though they were approved in Spring 2024. There was a transition in PVC leadership and this might have fallen through the cracks.

## **2. DEMAND FOR THE PROGRAM**

Is the demand high, adequate demand for our students, or low demand? Support your answer with labor market data, advisory input, etc.

Demand for the CIS programs is evidenced through the consistent enrollment of students through face-to-face enrollment of community and concurrently enrolled high school students, and correspondence and distance education modalities. The demand for the CIS programs is also evidenced through the Advisory Committee Group membership, attendance, feedback, and input provided each year.

### **EMPLOYMENT AND WAGES BY OCCUPATION (OES) – COMPUTER INFORMATION SYSTEMS**

Area Type	Area Name	Year	Occupational Title	Wage Type	# Employed	Mean Wage
Metropolitan Area	Riverside	2018	CIS Managers	Hourly wage	1,120	66.32
Metropolitan Area	Riverside	2018	CIS Managers	Annual wage	1,120	137,946.00
Metropolitan Area	Riverside	2019	CIS Managers	Hourly wage	1,320	72.65
Metropolitan Area	Riverside	2019	CIS Managers	Annual wage	1,320	151,122.21
Metropolitan Area	Riverside	2020	CIS Managers	Annual wage	1,730	144,065.26
Metropolitan Area	Riverside	2020	CIS Managers	Hourly wage	1,730	69.26
Metropolitan Area	Riverside	2021	CIS Managers	Annual wage	1,780	141,243.67
Metropolitan Area	Riverside	2021	CIS Managers	Hourly wage	1,780	67.9
Metropolitan Area	Riverside	2022	CIS Managers	Annual wage	2,030	156,797.20
Metropolitan Area	Riverside	2022	CIS Managers	Hourly wage	2,030	75.38

*\*Occupational Employment Statistics (OES) – Riverside-San Bernardino-Ontario MSA  
([labormarketinfo.edd.ca.gov/geography/riverside-county.html](http://labormarketinfo.edd.ca.gov/geography/riverside-county.html)) August 2022*

### **EMPLOYMENT PROJECTIONS BY INDUSTRY AND OCCUPATION – COMPUTER INFORMATION SYSTEMS**

Area Name	Period	Occupational Title	2019 Employment	2022 Employment	% Growth
Riverside	2018-2028	CIS Manager	1,320	2,030	34.9

*\*Long-Term Occupational Employment Projections – Riverside-San Bernardino-Ontario MSA  
([labormarketinfo.edd.ca.gov/geography/riverside-county.html](http://labormarketinfo.edd.ca.gov/geography/riverside-county.html)) August 2022*

### **EMPLOYMENT AND WAGES BY OCCUPATION (OES) – WEB DESIGN/DEVELOPERS**

Area Name	Year	Occupational Title	Wage Type	# Employed	Mean Wage
Riverside	2020	Web Developers	Annual wage	960	57,078.61
Riverside	2020	Web Developers	Hourly wage	960	27.44
Riverside	2021	Web Developers	Annual wage	1,020	69,379.71
Riverside	2021	Web Developers	Hourly wage	1,020	33.35
Riverside	2022	Web Designers	Annual wage	330	69,680.79
Riverside	2022	Web Designers	Hourly wage	330	33.5

*\*Occupational Employment Statistics (OES) – Riverside-San Bernardino-Ontario MSA  
([labormarketinfo.edd.ca.gov/geography/riverside-county.html](http://labormarketinfo.edd.ca.gov/geography/riverside-county.html)) August 2022*

### **EMPLOYMENT PROJECTIONS BY INDUSTRY AND OCCUPATION – WEB DESIGN/DEVELOPERS**

Area Name	Period	Occupational Title	2018 Employment	2022 Employment	% Growth
Riverside	2018-2028	Web Dev/Designers	1013	1475	31.3

*\*Occupational Employment Statistics (OES) – Riverside-San Bernardino-Ontario MSA  
([labormarketinfo.edd.ca.gov/geography/riverside-county.html](http://labormarketinfo.edd.ca.gov/geography/riverside-county.html)) August 2022*

### Regional Labor Market Data Assessment: Orange County Region 2022

SOC	SOC Title	Demand Annual Openings	Entry Level Wage	Median Wage
15-1232	Computer User Support Specialists	2,180	\$21.39	\$27.35
15-1299	Computer Occupations, All Other	588	\$27.19	\$38.70
15-1257	Web Developers and Designers	204	\$22.01	\$33.48
27-1024	Graphic Designers	361	\$19.13	\$27.84
27-4014	Special Effects Artists/Animators	79	\$15.19	\$30.51

*Centers of Excellence For Labor Market Research (OCSAP 2021-ICT & Digital Media Sector Brief (coecc.net/orange-county/2022/02/ocsap-2021-ict-and-digital-media-sector-brief/) August 2022*

#### Data Sources

Labor market and educational supply data compiled in this report covers the Inland Empire region. Data were drawn from external sources, including California Economic Development Department, the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor's Office Management Information Systems Data Mart, and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS).

### 3. QUALITY OF THIS PROGRAM

What is the quality of this program? Is it of the highest quality, adequately meeting student needs, or needing significant improvement? List core indicators, student learning outcomes, partnerships, certificates, degrees, articulation, faculty qualifications, diversity, grants, and equipment as evidence to support your answer.

Through analysis of the SLOs identified for the courses offered during this reporting period, students have demonstrated understanding, success, and application of the SLOs identified for these courses

All courses in the CIS Department have SLOs identified for each course and program. In addition, each course has its SLOs assessed on a regular basis as identified by Palo Verde College's Instruction Office. Regular meetings are held with each CTE funded program to discuss SLO data and its impact on student success.

The CIS Department has demonstrated success in all SLOs identified within the CIS program. Rigorous and relevant SLOs have been identified, developed, assessed, and implemented within the CIS Department. Continued emphasis will be placed on the collection, implementation, and assessment of SLOs within the CIS Department.

All CIS Course Learning Outcomes (CLO) are mapped to Program Learning Outcomes (PLO) which in turn are mapped to the Institutional Learning Outcomes (ILO).

The Palo Verde College CIS Department has met or exceeded all 34 Core Indicator areas addressed in Perkins I-C funding during the 2022-24 program review update cycle.

Having a dedicated CTE advisor has helped to support students enrolled in CIS courses. The advisor's active participation and attendance at the local high schools has led to high-quality advising services to those students enrolled in CIS courses as well as for those students interested in learning more about Palo Verde College's CIS course offerings.

## 4. EXTERNAL ISSUES

Cite relevant legislation, Chancellor's Office mandates, VTEA, Tech Prep, CalWORKs, WIA, BIG career ladders, etc. that are contributing positive or negative factors for the program. Explain each mitigating factor and the impact on the program.

The Palo Verde College CIS Department offers most of its CIS courses during the Palo Verde High School traditional school day. Students at PVHS can take college courses concurrently during their school day at no cost. These high school students typically make up 50-75% of the enrollment in these courses. For this reason, PVC will need to continue marketing their programs to PVHS students and parents through events such as Career Day, Transfer Day, Financial Aid events at PVHS Campus, and through other community events. Having a good working relationship with the Unified School District Administration and the local high schools is vital to the success of this task. Transportation costs for transporting the high school students is paid by Palo Verde College. Continued support for transportation will be needed.

Currently the Professional Technologies Division is operating under a modified academic calendar. The purpose of this alternate calendar is to more closely align our academic calendar to the local Unified School District, since such a large portion of our students are concurrently enrolled high school students.

Having a dedicated full-time CTE advisor has been vital to the success of these tasks. Continued funding of this dedicated position is vital to all CTE programs offering concurrent instruction to local high school students. Because of this CTE Advisor position, all CTE funding has been cut from all CTE Programs. Without this funding, equipment cannot be replaced, upgraded, or purchased. Having someone whose sole focus is on the registration, retention, success, and job/career training for these students is vital to the goals of each department in the Professional Technologies Division. We are hoping the college will begin funding the CTE Advisor position from another funding source.

The CIS program is funded through Perkins, Strong Workforce, and LOT funds. Perkins is used to purchase equipment to enhance the CIS program. LOT funds are used to purchase the consumable supplies that support the CIS program. Strong Workforce funds have been used to revamp and modernize the technology in the CIS program. The CIS Program will continue to need funding from these sources. Unfortunately, budget adoption and development has not been a transparent process and often times, the departments are unable to purchase supplies because the person overseeing the budget lets these orders fall through the cracks. In addition, it is very hard to project what items will be needed each year, only to find that the budget was not funded.

## 5. REVENUE AND EXPENSES

- a. State the revenue of the program (using FTE data, grants, and anything else) for the preceding two academic years.

CIS FTES Generated	
Academic Year	FTES
2023-2024	26.4
2022-2023	28.27

1 FTES=	\$7346
54.67 FTES=	\$401,605.82

### **Special Admit Credit FTES 2023-2024 \$7346**

California Community Colleges 2023-2024 Advance Apportionment Memo. July 21, 2023. <https://www.cccco.edu/-/media/CCCCO-Website/docs/apportionment/2023-24-ad-memo.pdf?la=en&hash=B75D7C0017BE6546CC3C3B4D50DD23AC66A4B5E9>

- b. State the expenses of the program (salaries, equipment purchases, contracts, and supplies) for the preceding two academic years.

We had requested this data numerous times and were not provided it. We were informed that we should just complete the program review and note that we were not provided with the data for this from the business office in a timely manner.

- c. State the dollar value of in-kind contributions of time and/or resources the preceding two academic years.

The full-time CIS Instructor secured a donation from Maxon Cinema 4D for software for its 3D Computer Animation program. 23 licenses were donated to Palo Verde College. The licenses if purchased would cost over \$6000 each. In addition, 12 month licenses were also donated to the students from Maxon so that students could use the software at home. This equals roughly \$276,000 of software donations by Maxon.

## 6. TWO YEAR PLAN

List recommendations, project future trends, personnel and equipment needs, as well as continuing and new goals. Describe activities to achieve these goals, timelines to complete these goals, and measures for evaluating success in achieving them.

The CIS department will continue to need student workers to support the program. It is important to have the assistance of these positions as well as offering critical job experience opportunities for students pursuing degrees and certificates in the CIS field. The CIS department will seek funding for these positions on an ongoing basis.

The CIS Department also receives specialized funding such as Perkins I-C, CTE Transitions, as well as other CTE related support. It is critical for CTE programs to have financial support as there are additional expenses associated with CTE programs. With the recent addition of a 3D printing certificate program

and four new courses in 3D printing, materials and supplies will be needed on an ongoing basis to support the goals of this program. The CIS department will continue being involved in Perkins funding.

The CIS Department will also continue pursuing high school enrollment. The lead CIS faculty knows the importance of offering these courses to local high school students. Continued funding for transportation of these students will be needed. The CTE faculty in CIS, AUT, WEL, and BCT offer courses 5 days a week to students. This is not the traditional college faculty work schedule. The instructors in these departments know the value of offering these courses to these students as many of them attend Palo Verde College upon graduation from high school with a Certificate or more already completed. The CIS department will continue pursuing high school enrollment and encourage administration to support the transportation costs associated with this endeavor.

Purchase additional 3D printing related technologies to adapt to changes and improvements in the 3D Printing field of study.

Continue evaluating degrees and certificates in the CIS department for rigor, need, and applicability.

Continue evaluating and assessing data collected from SLO analysis.

Look into feasibility of designing courses in Robotics as mentioned in the last two annual Advisory Committee Meetings and other emerging technology programs.

- a. Describe the alignment between continuing and new program goals and institutional goals and objectives stated in the current Integrated Strategic Plan, which can be found on the college website.

The CIS program is aligned to both the institutional goals and objectives stated in the current Integrated Strategic Plan. The CIS program has CLOs, PLOs, and ILOs developed and implemented for each of its courses, programs, certificates, and degree. The CIS department is constantly working with the curriculum committee and instruction office so as to stay current and make sure its goals are aligned with the goals and outcomes of the College mission.

## ADDITIONAL DATA

### STUDENT SUCCESSFUL COMPLETION & RETENTION

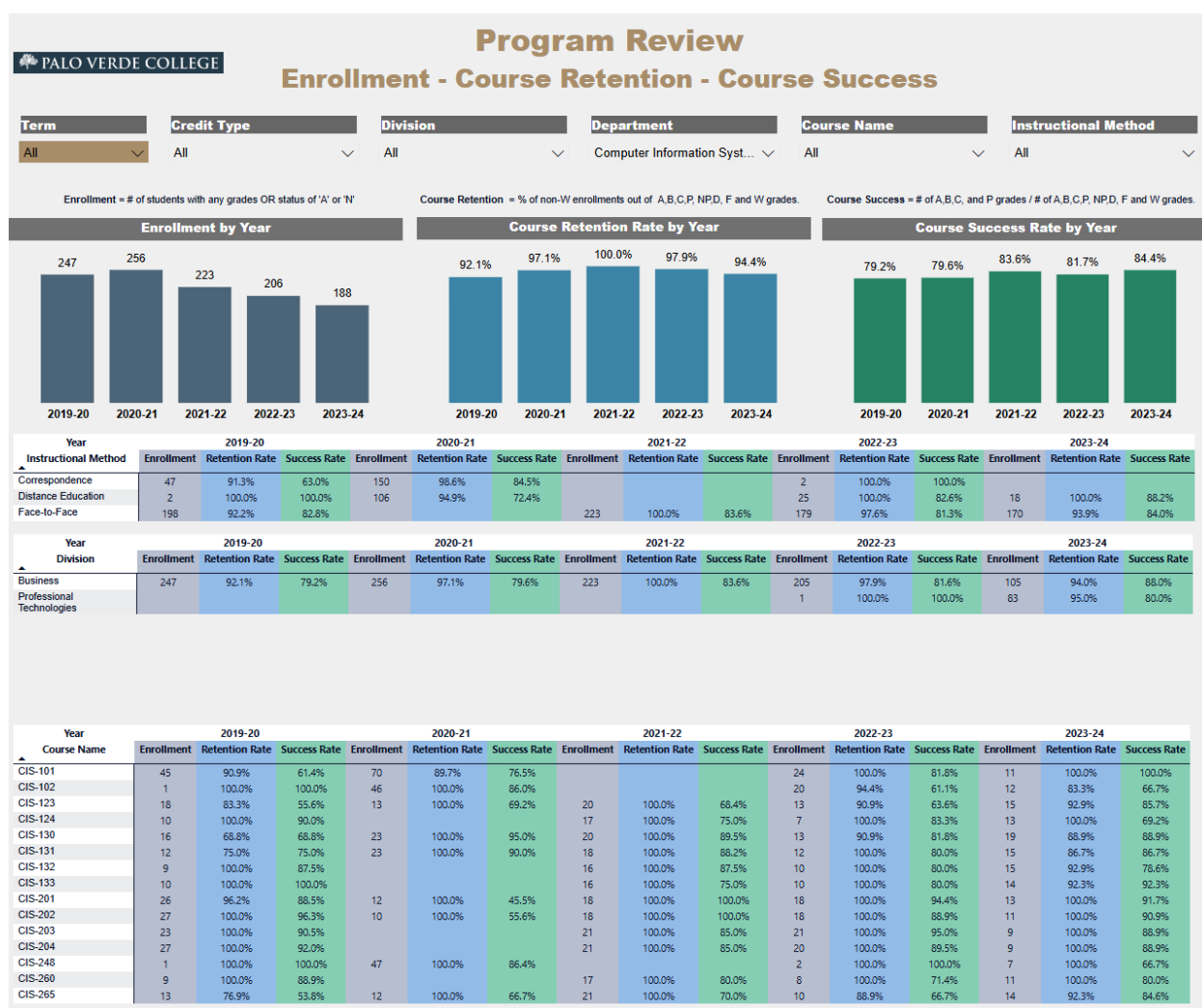
Completion/Success		
Course	2022-2023	2023-2024
CIS 101	81.8%	100%
CIS 102	61.1%	66.7%
CIS 123	63.6%	85.7%
CIS 124	83.3%	69.2%
CIS 130	81.8%	88.9%
CIS 131	80%	86.7%
CIS 132	80%	78.6%
CIS 133	80%	92.3%
CIS 201	94.4%	91.7%
CIS 202	88.9%	90.9%
CIS 203	95%	88.9%
CIS 204	89.5%	88.9%
CIS 248	100%	66.7%
CIS 260	71.4%	80%
CIS 265	66.7%	84.6%
<b>**AVG COMPLETION**</b>	<b>81.17%</b>	<b>78.06%</b>

Retention		
Course	2022-2023	2023-2024
CIS 101	100%	100%
CIS 102	94.4%	83.3%
CIS 123	90.9%	92.9%
CIS 124	100%	100%
CIS 130	90.9%	88.9%
CIS 131	100%	86.7%
CIS 132	100%	92.9%
CIS 133	100%	92.3%
CIS 201	100%	100%
CIS 202	100%	100%
CIS 203	100%	100%
CIS 204	100%	100%
CIS 248	100%	100%
CIS 260	100%	100%
CIS 265	88.9%	92.3%



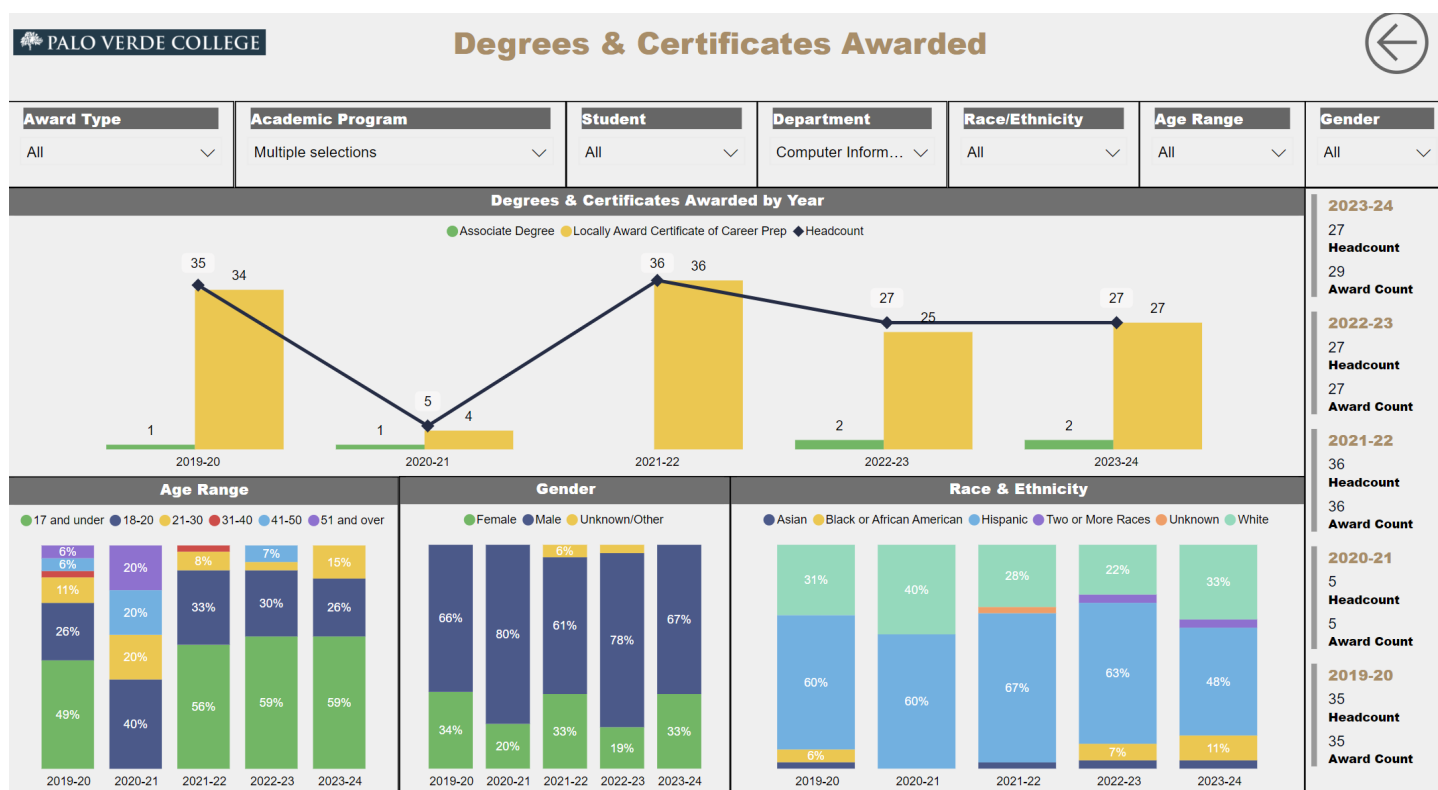
## ENROLLMENT TRENDS

ENROLLMENT		
Course	2022-2023	2023-2024
CIS 101	24	11
CIS 102	20	12
CIS 123	13	15
CIS 124	7	13
CIS 130	13	19
CIS 131	12	15
CIS 132	10	15
CIS 133	10	14
CIS 201	18	13
CIS 202	18	11
CIS 203	21	9
CIS 204	20	9
CIS 248	2	7
CIS 260	8	11
CIS 265	10	14



## PROGRAM AWARDS

Name of Award	2022-23	2023-24
Computer Information Systems Associate of Science	2	2
3D Computer Animation Certificate of Career Preparation	6	11
3D Printing & Rapid Prototyping Cert of Career Prep	12	9
Computer Applications Certificate of Career Preparation	1	2
Computer Management Info Systems Cert of Career Prep	1	2
Graphic Design & Web Content Cert of Career Prep	4	5
<i>Information Tech Literacy Cert of Career Preparation</i>	<i>0</i>	<i>1</i>
<b>Total Certificates and Degrees Earned</b>	<b>27</b>	<b>30</b>



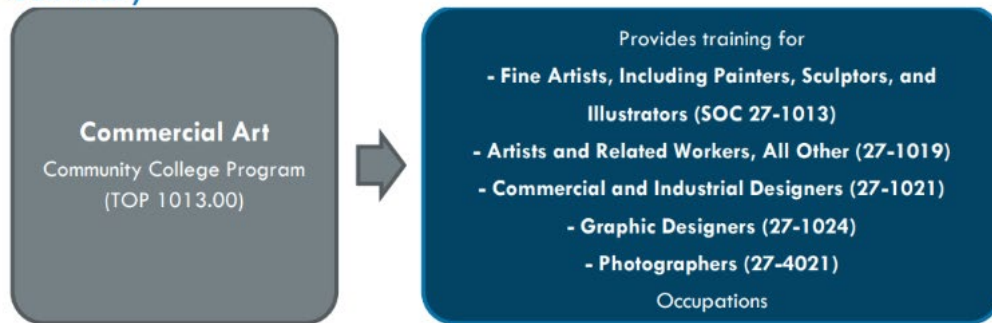
## ADDITIONAL LABOR MARKET DATA:



### Artists and Related Workers

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

#### Summary



Over the next five years (2022-2027), employment for the artists and related workers occupational group is projected to:



The Inland Empire/Desert Centers of Excellence

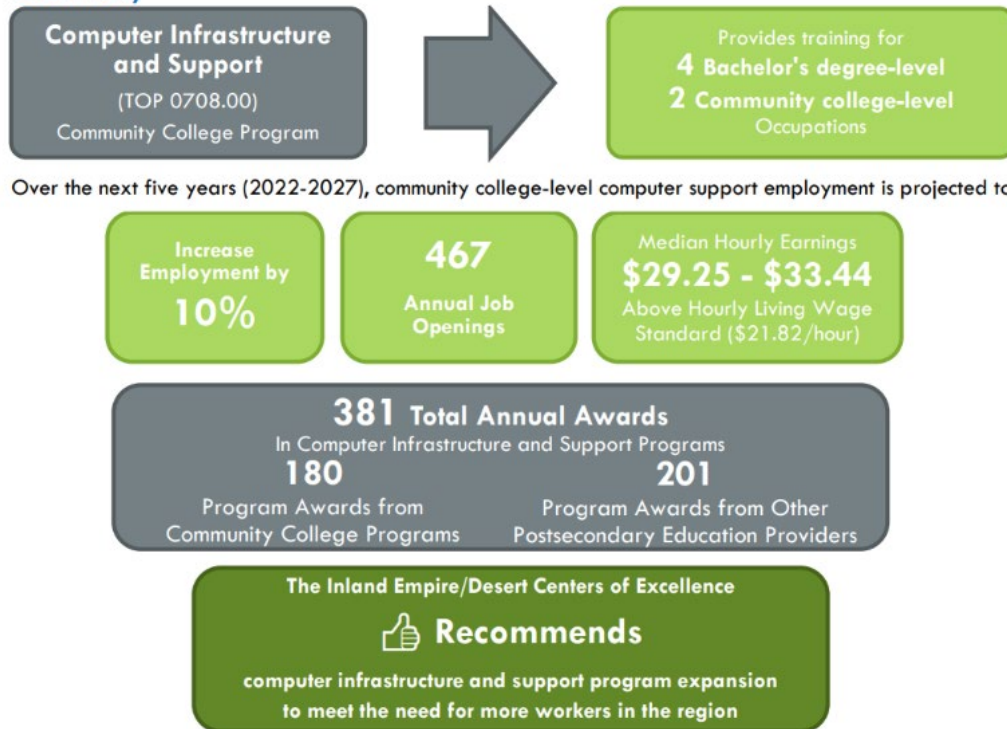
 **Recommends**

commercial art program  
to meet the need for more workers in the region

# Computer Infrastructure and Support

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

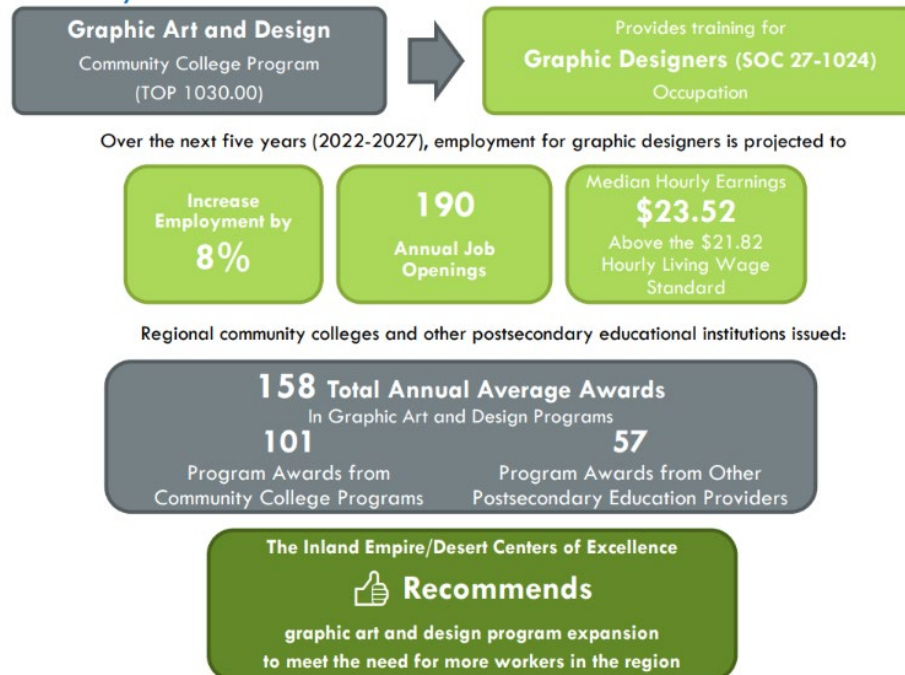
## Summary



# Graphic Design

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

## Summary

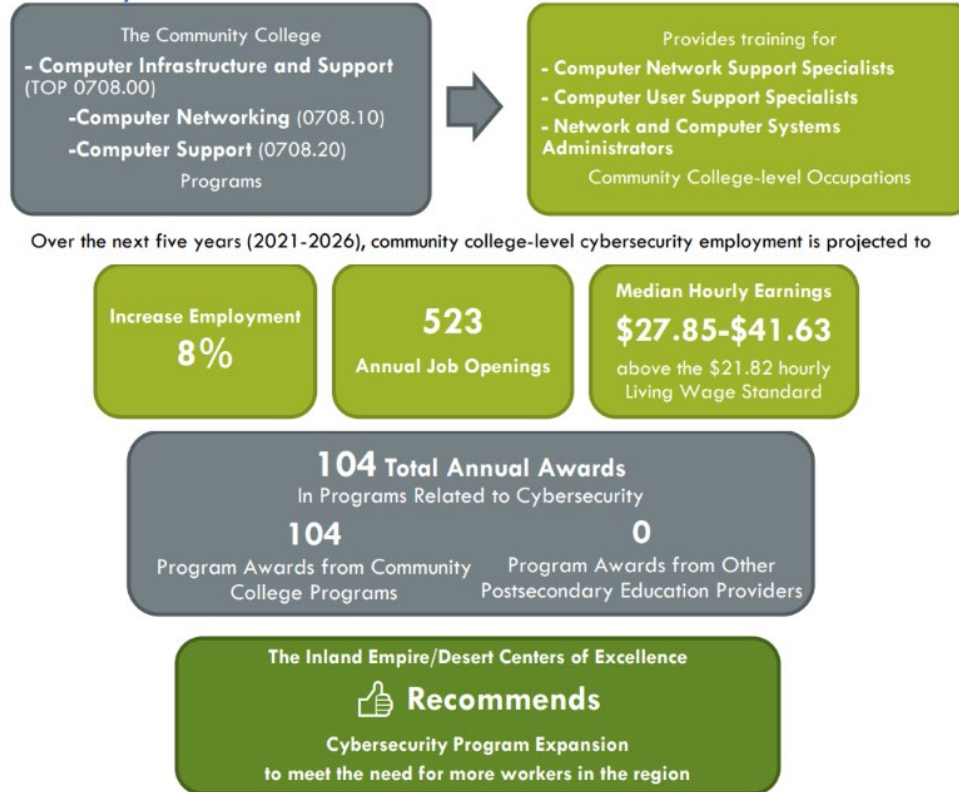


# Cybersecurity

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

*This workforce demand report uses state and federal job projection data 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

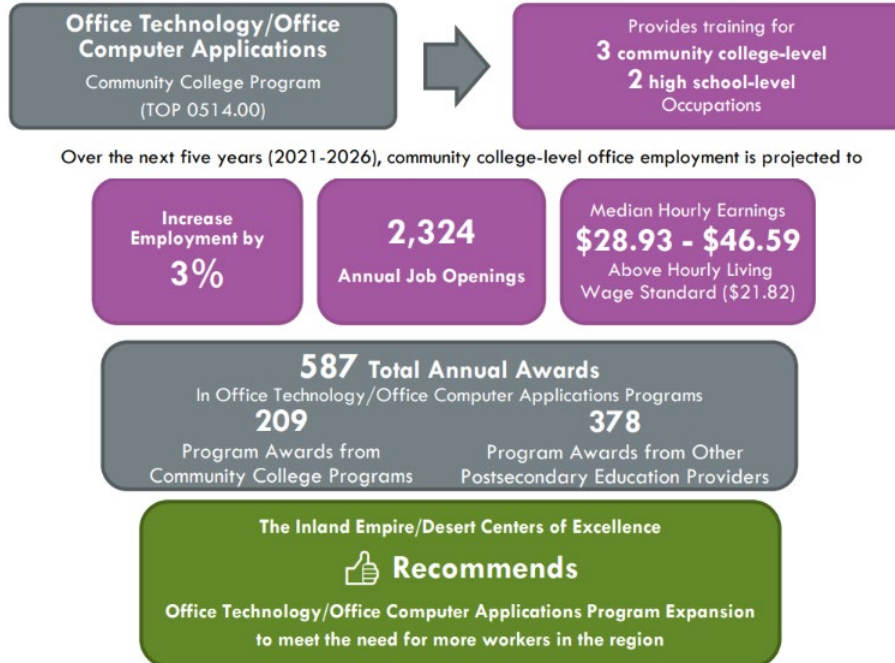




## Office Technology/Office Computer Applications

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

### Summary



## Web Design

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

### Summary



## Website Design and Development

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

### Summary



Over the next five years (2021-2026), employment for the website design and development occupational group is projected to

