



# CTE Update

## PALO VERDE COLLEGE

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### BUILDING CONSTRUCTION TECHNOLOGY 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 purpose of the program and its mission.**

The Building Construction Technology program is designed to provide students with the necessary skills to work in an ever-expanding field. The BCT program provides students with basic, entry-level skills, professional development opportunities for working trades, Certificate and Degree programs. The BCT department also works collaboratively with the Palo Verde High school to offer courses in the BCT field to qualified high school students during their traditional school day through concurrent enrollment.

The Mission of the program is to promote rigorous curriculum and instruction, focusing on building construction technologies. The Palo Verde Community College Building Construction Technology program is committed to excellence in teaching; empowering students to

be knowledgeable, skilled, qualified, employable graduates, prepared for productive and meaningful careers in the construction industry.

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 BCT program has undergone some improvements, we have developed and added a new course BCT 205 Forklift Operator. This course will ensure they acquire the necessary skills to operate a forklift and seek employment in numerous industries. This course will be available when the Full time BCT instructor returns to work with no limitations due to a work injury. The program developed 3 new Certificates of Career Preparation, 1. Fundamentals of Construction 2. Introduction to Building Trades 3. Woodworking Cabinetry Certificate. The certificates were developed to create an easier pathway for students to reach their goals. The program has implemented a more hands-on approach to learning to ensure they are prepared if they wish to pursue a career in the construction industry.

The Program has also done the following:

- Purchased new equipment to replace old and broken equipment.
- Purchased 3 Forklift for the approved Equipment Operation Program.
- 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 on 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.
- Due to an injury to the BCT instructor in late spring of 2023, the instructor has been working on a Modified work schedule that started early Fall of 2024. Substitutes took over the class daily instruction while the instructor does curriculum and office work.

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

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

The demand for construction workers is currently high and expected to continue growing due to the large number of retiring workers. There is consistent enrollment of students in the community and concurrently enrolled high school students. The demand for the BCT programs is also evidenced through the Advisory Committee Group membership, attendance, feedback, and input provided each year.

Enrollment has always been good for BCT, but after Covid, we found that it took a while before our traditional college students returned to our programs. In addition, we found that our enrollment was strong when we had a stable employee working as our dedicated CTE advisor. Unfortunately, this position has changed hands many times in the past. Each time, students fall through the cracks. Each time a new CTE Advisor enters the position, there is a gap between when they are onboarded and begin the duties of their position and when enrollment of high school students takes place. This gap often leaves the high school counselor and high school students without support from Palo Verde College. The CTE instructors do their best but are not available to travel to the high school and advise students prior to registration, assist them through the CCCAPPLY process, and coordinate with the high school counselor which students have expressed interest in and qualify for these courses.

Overall job prospects for carpenters, electricians, and plumbers should be good over the coming decade as construction activity continues to grow.

Occupations in the construction industry are subject to periods of unemployment as building construction slows during cold months. Additionally, the number of job openings is expected to vary regionally, because different areas of the country are experiencing more development than others.

#### Employment projections data for carpenters, 2018-28

Occupational Title	SOC Code	Employment, 2018	Projected Employment, 2028	Change, 2018-28	
				Percent	Numeric
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program					
Carpenters	47-2031	1,006,500	1,086,600	8	80,100

#### Employment projections data for electricians, 2018-28

Occupational Title	SOC Code	Employment, 2018	Projected Employment, 2028	Change, 2018-28	
				Percent	Numeric
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program					
Electricians	47-2111	715,400	789,500	10	74,100

#### Employment projections data for plumbers, pipefitters, and steamfitters, 2018-28

Occupational Title	SOC Code	Employment, 2018	Projected Employment, 2028	Change, 2018-28	
				Percent	Numeric
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program					

### Employment projections data for plumbers, pipefitters, and steamfitters, 2018-28

Occupational Title	SOC Code	Employment, 2018	Projected Employment, 2028	Change, 2018-28	
				Percent	Numeric
Plumbers, pipefitters, and steamfitters	47-2152	500,300	568,600	14	68,200

### Building Trades:

Area Type	Area Name (County Names)	Period	Occupational Title	Base Year Employment Estimate	Projected Year Employment Estimate	Median Hourly Wage	Total Job Openings	Median Annual Wage
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Construction Managers	4,740	5,280	\$41.68	4,140	\$86,704.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Construction and Extraction Occupations	98,120	110,150	\$25.75	124,700	\$53,568.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Supervisors of Construction and Extraction Workers	6,350	7,130	\$0.00	7,790	\$0.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	First-Line Supervisors of Construction Trades and Extraction Workers	6,350	7,130	\$31.77	7,790	\$66,074.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Construction Trades Workers	85,290	95,790	\$0.00	107,500	\$0.00

Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Construction Laborers	17,180	19,050	\$20.64	22,020	\$42,926.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Operating Engineers and Other Construction Equipment Operators	3,760	4,030	\$41.31	4,760	\$85,914.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Painters, Construction and Maintenance	6,280	6,940	\$19.75	7,360	\$41,062.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Helpers, Construction Trades	2,220	2,510	\$0.00	3,480	\$0.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Helpers, Construction Trades, All Other	220	230	\$19.14	310	\$39,805.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Other Construction and Related Workers	3,450	3,850	\$0.00	4,760	\$0.00
Metropolitan Area	Riverside-San Bernardino-Ontario MSA	2018-2028	Construction and Building Inspectors	980	1,090	\$42.73	1,390	\$88,891.00

<https://www.labormarketinfo.edd.ca.gov/geography/riverside-county.html>

### 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.

The Building and Construction program demonstrates a high-quality in its delivery and student outcomes. The program reports a strong

enrollment, retention, and completion rates.

All courses are offered in a two-year cycle allowing all students to enter the program at any time and complete a degree in two years. All certificates can be completed in one year.

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

All BCT 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 BCT 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 BCT 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 BCT courses as well as for those students interested in learning more about Palo Verde College's BCT 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 BCT Department offers most of its BCT 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 80-90% 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 at the local high schools is vital to the success of this task. Transportation costs for transporting the high school students is paid for by Palo Verde College. Continued support for transportation will be needed.

Currently the Professional Technologies Division is operating under the 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 BCT program is funded through Perkins, Strong Workforce, and LOT funds. Perkins is used to purchase equipment to enhance the program. LOT funds are used to purchase the consumable supplies that support the BCT program. Strong Workforce funds have been used to purchase the forklifts for the Equipment operating Program. The BCT Program will continue to need funding from these sources. Unfortunately, budget adoption and development has not been a transparent process and often, 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.

BCT FTES Generated	
<u>Academic Year</u>	<u>FTES</u>
2022-2023	29.03
2023-2024	26.77

1 FTES=	\$7346
55.8 FTES=	\$409,906.80

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

*California Community Colleges 2023-2024 Advance Apportionment memo. July 21, 2023. <https://www.cccco.edu/-memo.pdf?la=en&hash=B75D7C0017BE6546CC3C3B4D50DD23AC66A4B5E9>*

- a. 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 with 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.

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

N/A

## **6. TWO YEAR PLAN**

List recommendations, project future trends, personnel and equipment need, 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 BCT 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 BCT field. The BCT department will seek funding for these positions on an ongoing basis.

The BCT Department also receives specialized funding such as Perkins I-C, CTE Transitions, Strong Workforce, Lottery, and General Budget. It is critical for CTE programs to have financial support as there are additional expenses associated with CTE programs. The BCT department will continue to be involved in Perkins funding.

The BCT Department will also continue pursuing high school enrollment. The CTE 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 BCT department will continue pursuing high school enrollment and encourage administration to support the transportation costs associated with this endeavor.

- Purchase new equipment to replace outdated and broken.
  - Pursue the purchase of an Exhaust System for the shop.
  - Continue evaluating degrees and certificates in the BCT department for rigor, need, and applicability.
  - Continue evaluating and assessing data collected from SLO analysis
  - Begin teaching the operating Forklift Program.
  - Purchase all necessary equipment and Fueling station for Forklift Program.
- 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 BCT program is aligned to both the institutional goals and objectives stated in the current Integrated Strategic Plan. The BCT program has CLOs, PLOs, and ILOs developed and implemented for each of its courses, programs, certificates, and degree. The BCT department is will

continue working with the curriculum committee and instruction office to stay current and ensure its goals align with the goals of the College mission.

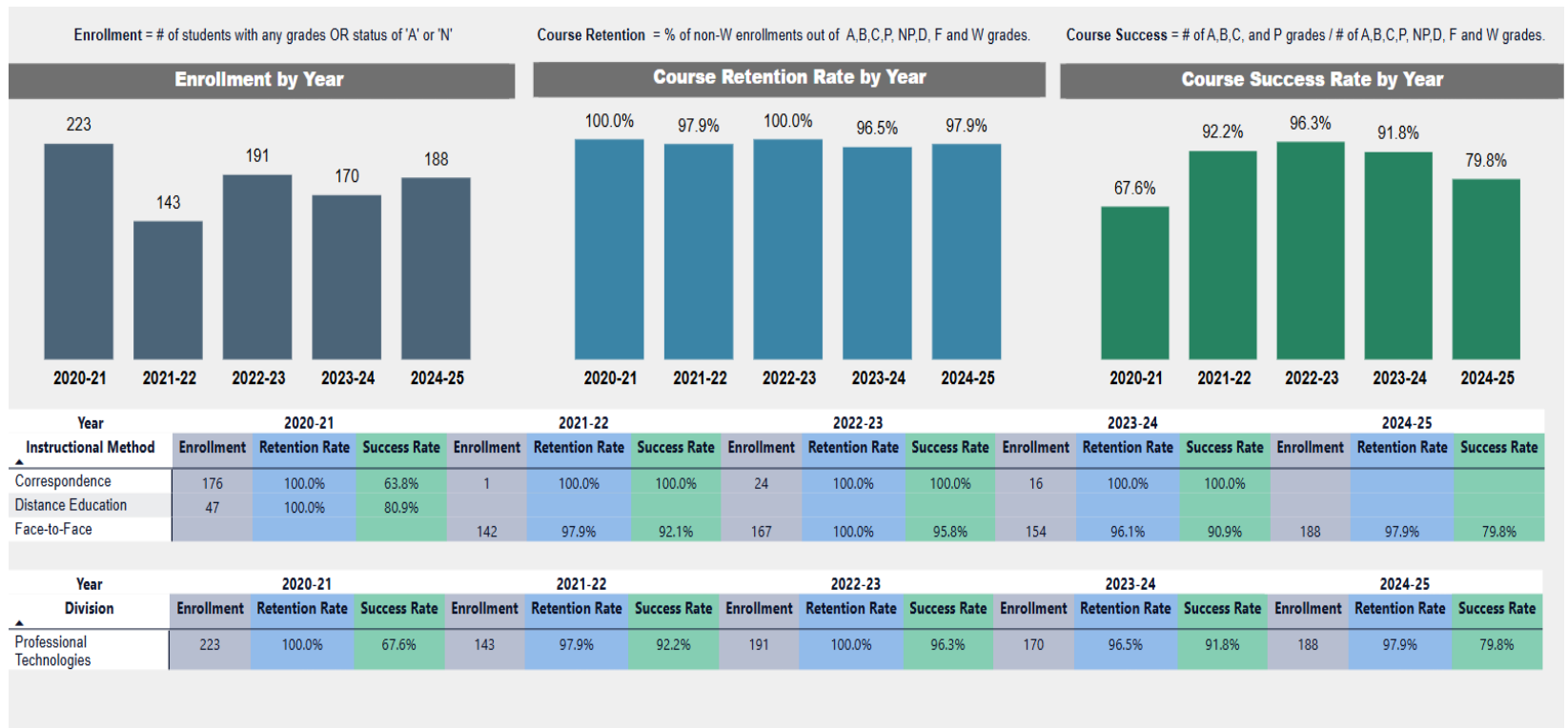
The BCT Department offers courses face-to-face during the hours of the local high school to meet the concurrent enrollment needs of our community. This has been taking place since 2009. High school students make up most of the enrollment in the Professional Technologies Division. For this reason, my division has aligned our teaching schedule and academic calendar to closely match the local Unified School District's academic calendar. It is also written into our Collective Bargaining Agreement.

## **7. ADDITIONAL DATA**

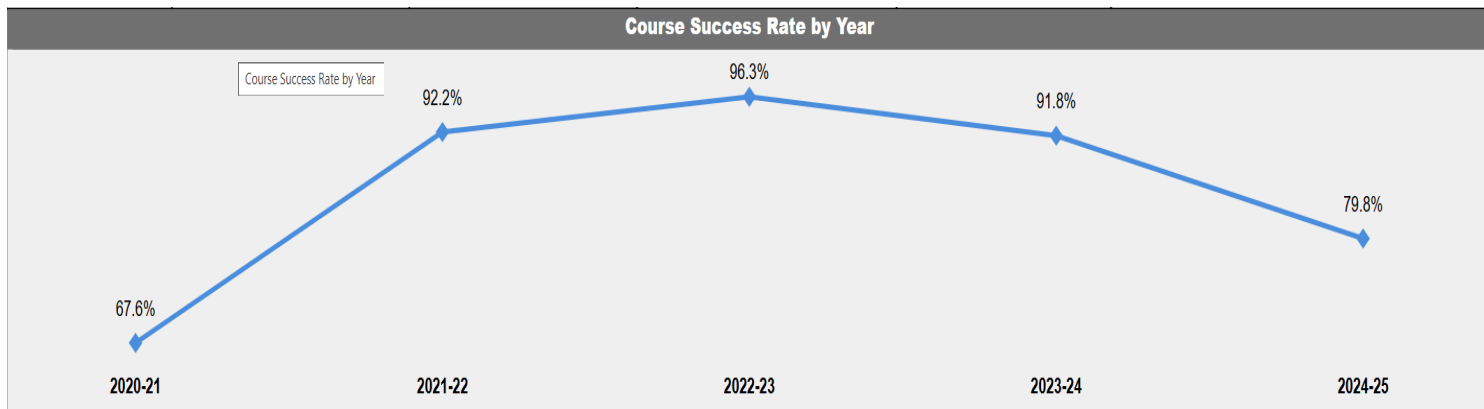
### **STUDENT SUCCESSFUL COMPLETION & RETENTION**

The Building and Construction program demonstrates a high-quality in its delivery and student outcomes. The program reports strong enrollment, retention, and completion rates.

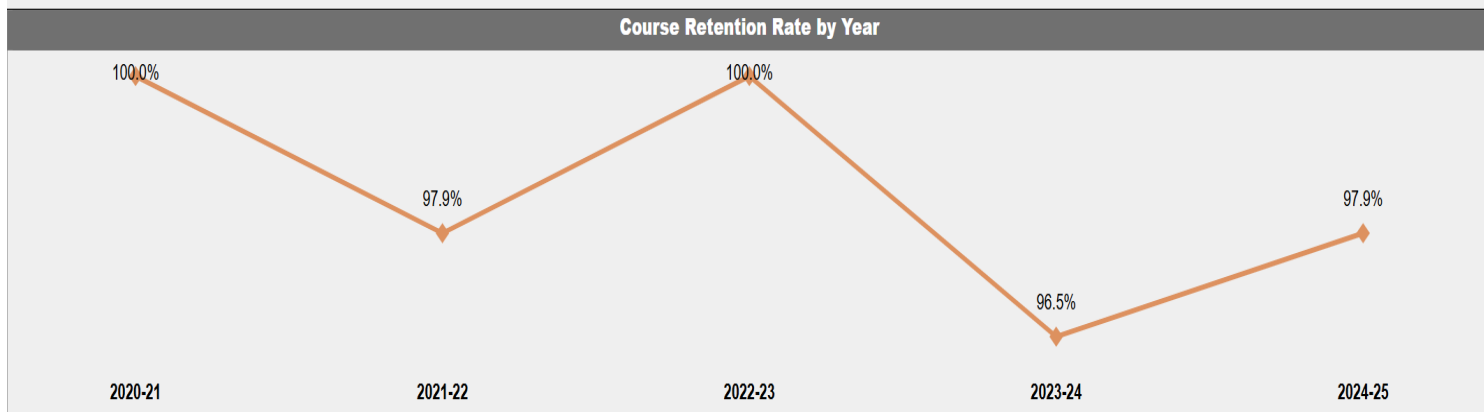
All courses are offered in a two-year cycle allowing all students to enter the program at any time and complete a degree in two years. All certificates can be completed in one year.

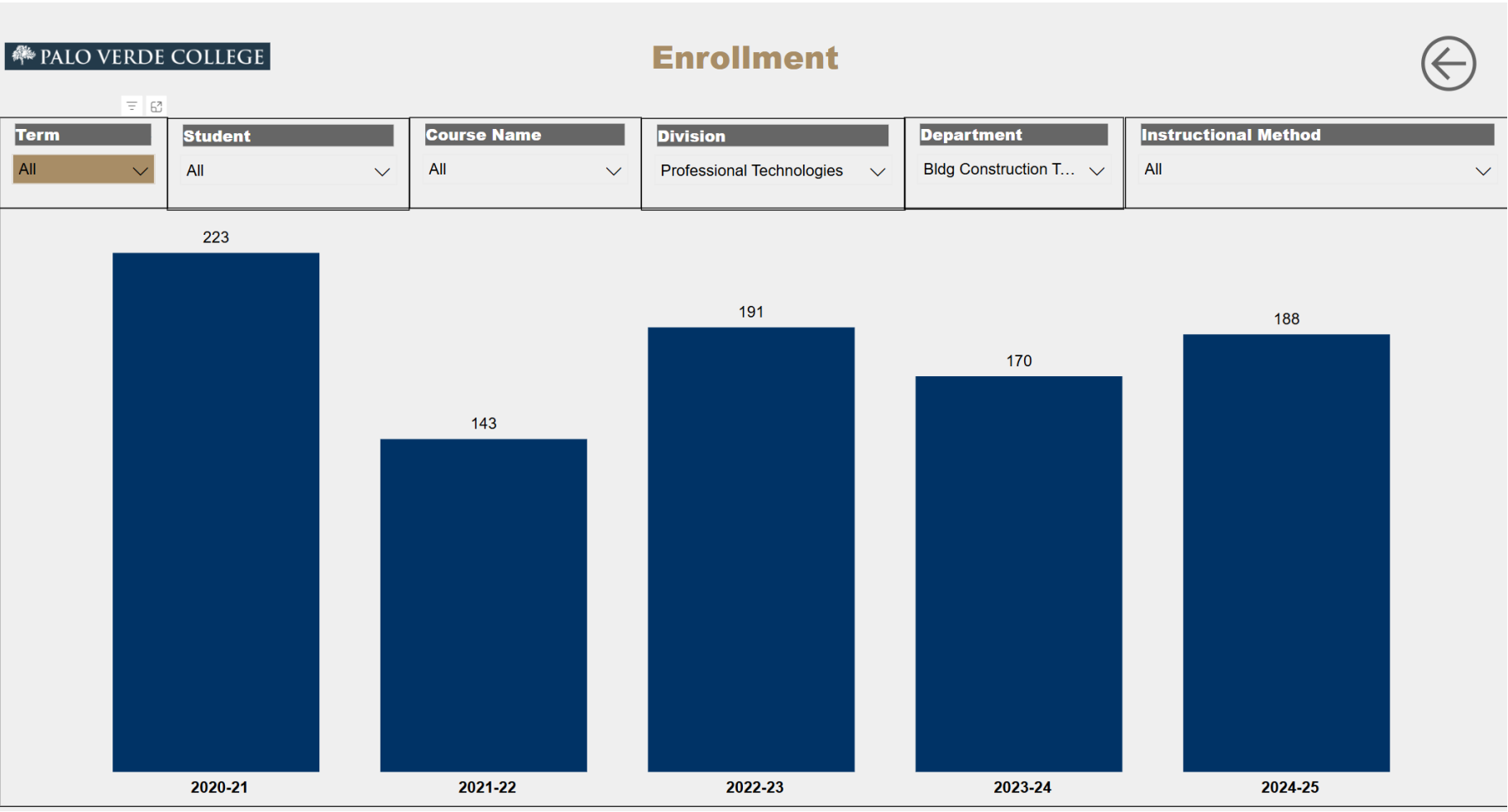


Year Course Name	2020-21			2021-22			2022-23			2023-24			2024-25		
	Enrollment	Retention Rate	Success Rate	Enrollment	Retention Rate	Success Rate	Enrollment	Retention Rate	Success Rate	Enrollment	Retention Rate	Success Rate	Enrollment	Retention Rate	Success Rate
BCT-100				16	100.0%	86.7%	15	100.0%	92.9%	29	96.6%	89.7%	16	100.0%	68.8%
BCT-101				12	91.7%	75.0%	13	100.0%	100.0%	15	100.0%	100.0%	18		
BCT-102							19	100.0%	100.0%	12	100.0%	100.0%	28	92.3%	92.3%
BCT-110	11	100.0%	81.8%	9	100.0%	100.0%	26	100.0%	92.3%	13	92.3%	92.3%	18	100.0%	66.7%
BCT-112				14	92.9%	92.9%	21	100.0%	95.2%	19	94.7%	78.9%	17	100.0%	87.5%
BCT-113	8	100.0%	100.0%	14	100.0%	100.0%	10	100.0%	100.0%	10	100.0%	100.0%	15		
BCT-116	66	100.0%	74.6%				11	100.0%	100.0%	7	100.0%	100.0%			
BCT-117	55	100.0%	25.5%				11	100.0%	100.0%	9	100.0%	100.0%			
BCT-200				27	100.0%	92.3%	23	100.0%	95.5%	25	92.0%	88.0%	16	100.0%	86.7%
BCT-201	5	100.0%	60.0%	19	94.7%	84.2%	16	100.0%	100.0%	10	100.0%	90.0%	16	93.8%	81.3%
BCT-202	10	100.0%	80.0%	17	100.0%	100.0%	12	100.0%	83.3%	12	91.7%	83.3%	14		
BCT-203	55	100.0%	84.9%												
BCT-210	13	100.0%	76.9%	15	100.0%	100.0%	14	100.0%	100.0%	9	100.0%	100.0%	15		
BCT-212													15		



Course Success = # of A,B,C, and P grades / # of A,B,C,P, NPD, F and W grades.

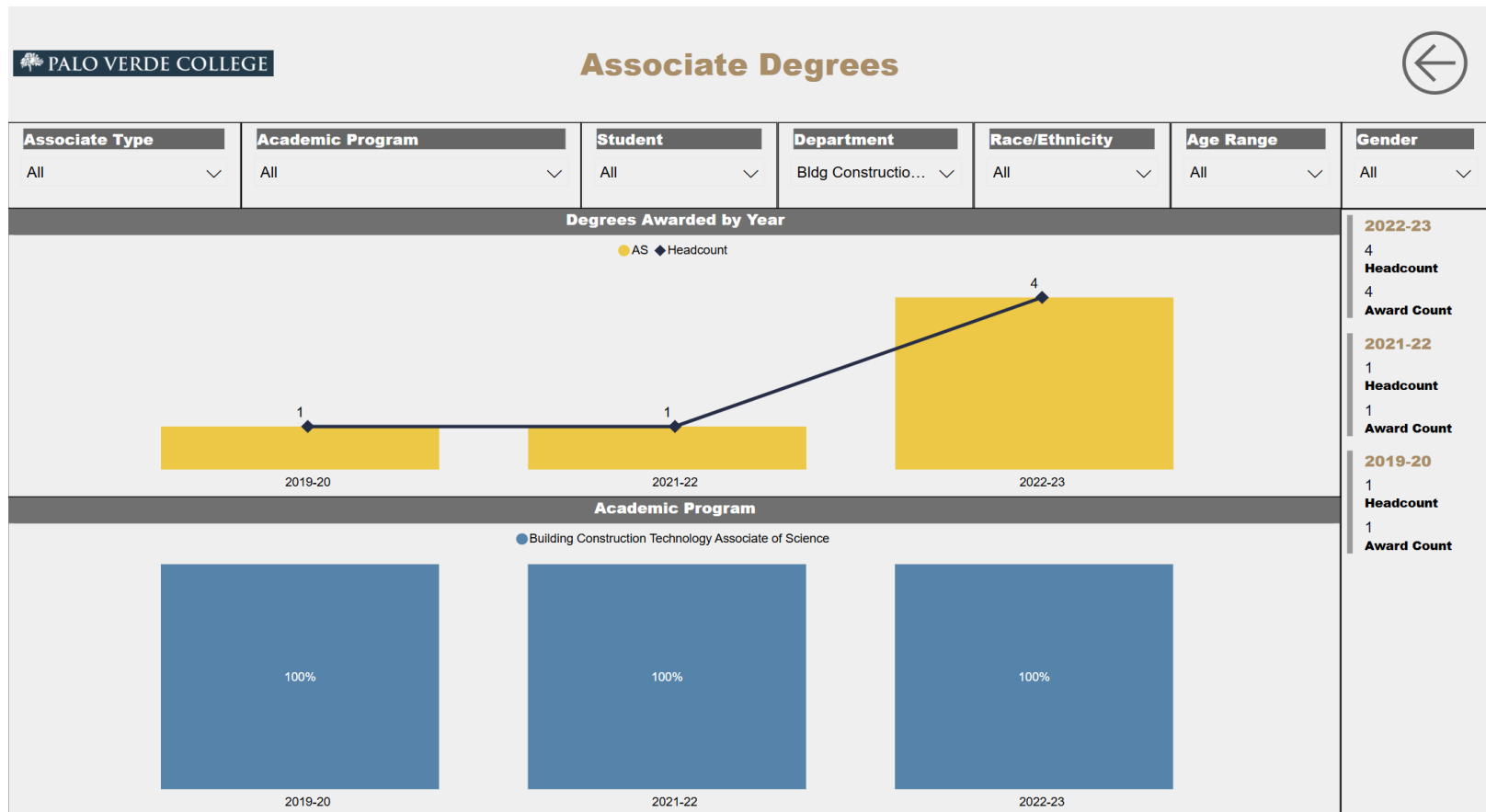




## Certificate and Degrees

The BCT Program has made some changes and developed 3 new certificates which started in 2024. Students will now have an opportunity to receive a certificate after one year of enrollment and a degree after two years. These changes gave students an easier pathway to achieve their goals.





### PROGRAM AWARDS

Name of Award	2022-23	2023-24		
Building Construction Technology AS	4	2		
Building Construction Technology COA	3	2		
Building Construction Technology CCP				
Solar Technician COA				