

WELDING 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 program, its mission, and target population.

The WEL 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 WEL program offers an AS degree in WEL, and five 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 WEL.

Program courses are available to students enrolled in WEL certificate programs, as well as other College programs and certificates. The WEL department also works collaboratively with the Palo Verde Unified School District to offer courses in the WEL field to qualified high school students during their traditional school day.

The purpose of the Welding Technology program is to provide students with the necessary skills to work in an ever-expanding field. To this end, the Welding program provides students with entry-level skills, professional development opportunities for working technicians, and certification options.

The mission of the program is to promote rigorous curriculum and instruction, focusing on the technological components of welding systems as well as welding techniques, various welds, and welding platforms leading to certificate and degree completion and employment.

The WEL 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.

The target population for the welding program are concurrently enrolled High School students, traditional college students, students interested in the course subject areas, and students wanting to explore courses in the welding field. Based on our alternative CTE calendar, all programs and courses in our division are offered from 7:30am- 2:20pm to accommodate the concurrently enrolled students.

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 WEL program has:

- purchased Welders, equipment, electrical upgrades and lab certification through Strong Workforce funding.
- Adequate ventilation has been installed in 18 welding booths.
- 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. It has been crucial for our concurrently enrolled courses to have a dedicated advisor or counselor to assist with educational planning, petitions to graduate, organizing advisory meetings, career counseling, registration, transfer support, outreach activity events, and support the Professional Technology students.
- The WEL department has purchased virtual reality welders (VR), mobile workstations, and stools for students, using SWF funds for the CTE promotional trailer. The intention for this trailer is to promote our programs, promote Palo Verde College, highlight Strong Workforce program, support STEM to the local Unified School District, by providing education at each elementary school, at local events, at the Colorado river fair, and at community outreach events.

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 WEL 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 WEL programs is also evidenced through the Advisory Committee Group membership, attendance, feedback, and input provided each year.

Enrollment has always been solid in WEL, 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 and qualify for these courses

During the summer each year, we need the dedicated CTE counselor to work on enrolling students at the local high school. This includes having students complete the college registration process and complete a Special Admit form. Each time a new CTE Advisor is hired, they miss this window for registration. Each time this occurs, our enrollment declines, students are registered in programs they do not want to be in or are late completing all the requirements and must be removed from the program. This is evidenced by enrollment to capacity in most WEL courses, but enrollment drops by the end of registration because students were not placed into the correct courses or did not have space in their high school schedule due to course availability of required courses for high school graduation.

Each spring, the CTE advisor should work with the local high schools to identify students who want to pursue these programs the following academic year. The advisor should meet with these students at the local high schools making sure that they are in the correct pathways, meet the requirements of the high school for graduation, and start formulating a master list for the following academic year. We are now implementing the use of a Special Admit form, which is required of all concurrently enrolled students, covering the entire academic year instead of occurring each semester. We feel that this change will continue to increase retention while providing a pathway for the student to follow which results in a Certificate of Career Preparation at the end of the academic year.

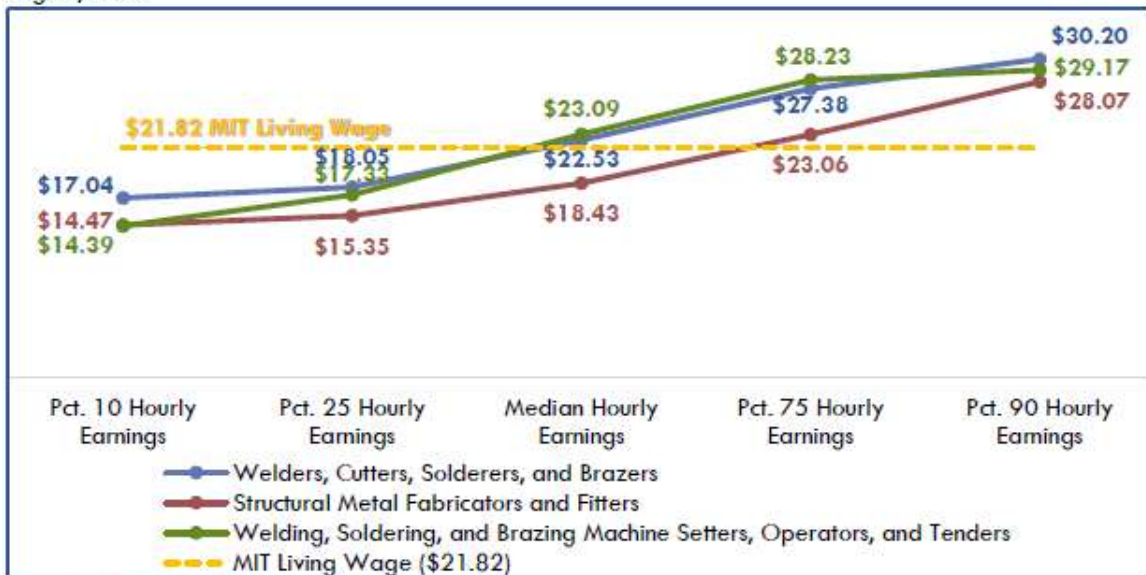
Each year we receive a list of interested high students and find that over half of the students do not make it into our program the following year. Having a dedicated CTE advisor who keeps records of each student's pathway and helps them meet their academic goals is critical to the success of our programs. We encourage students to register in our programs. We attend events at the local high school promoting our program, attend Career Day events at PVC and PVHS, highlight student work at the Colorado River Fair, create marketing materials for our programs, and now have begun finishing work on the CTE Mobile Trailer.

Currently we are on our 4th CTE advisor in 6 years. Having some consistency in this position is vital to the continued success of our programs.

As the Labor Market data demonstrates, there will be growth in welding employment, which is projected 5% increase.

If you compare enrollment of WEL courses offered through concurrent enrollment which led to certificates from (2022-2023) and (2023-2024) enrollment in some the courses increased as well as decreased. This is due to students enrolled at the Needle location. Enrollment declined in the WEL 250-253 courses during this same time period. This occurred because of the change of the CTE advisor.

Exhibit 2: Hourly earnings by percentile for the primary welding occupational group, Inland Empire/Desert Region, 2022



Source: Lightcast 2023.2

Exhibit 1: Five-year projections for the welding occupational group, Inland Empire/Desert Region, 2022-2027

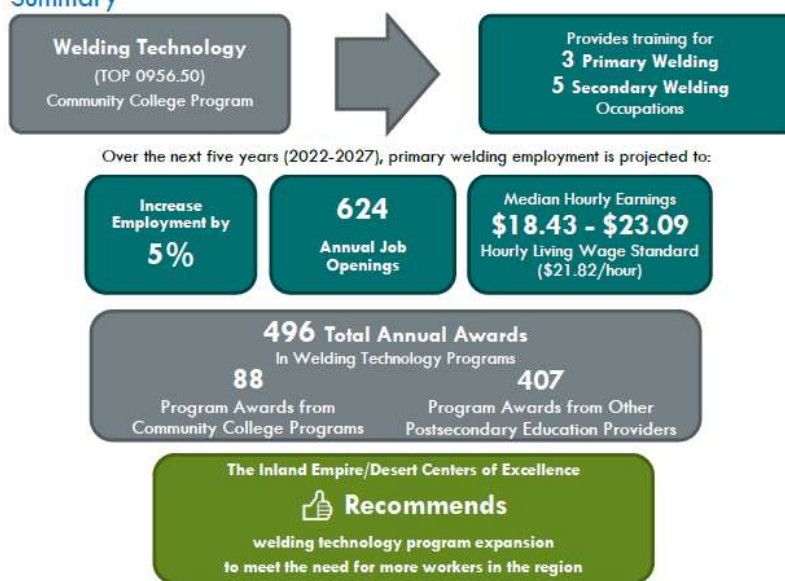
Occupation	2022 Jobs	2027 Jobs	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Primary Welding Occupations						
Welders, Cutters, Solderers, and Brazers	4,265	4,510	6%	2,644	529	21%
Structural Metal Fabricators and Fitters	673	669	(1%)	341	68	28%
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	242	239	(1%)	134	27	22%
Primary Welding Total	5,181	5,419	5%	3,118	624	22%
Secondary Welding Occupations						
Plumbers, Pipefitters, and Steamfitters	5,061	5,709	13%	3,369	674	21%
Industrial Machinery Mechanics	2,613	2,981	14%	1,580	316	31%
Structural Iron and Steel Workers	1,476	1,670	13%	996	199	20%
Sheet Metal Workers	1,306	1,460	12%	826	165	21%
Boilermakers	176	189	7%	92	18	18%
Secondary Welding Total	10,631	12,008	13%	6,863	1,373	23%
Total	15,812	17,427	10%	9,981	1,996	23%

Source: Lightcast 2023.2

Welding Technology

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

Summary



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

All WEL 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 WEL Department has met or exceeded all 34 Core Indicator areas addressed in Perkins I-C funding during the 2022-24 program review update cycle.

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

Having a dedicated CTE advisor has helped to support students enrolled in WEL 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 WEL courses as well as for those students interested in learning more about Palo Verde College's WEL 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 WEL Department offers most of its 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 70-80% 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 WEL program is funded through Perkins, Strong Workforce, and LOT funds. Perkins is used to purchase equipment to enhance the WEL program. LOT funds are used to purchase the consumable supplies that support the WEL program. Strong Workforce funds have been used to revamp and modernize the technology in the WEL program. The WEL 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.

WEL FTES Generated	
Academic Year	FTES
2023-2024	32.37
2022-2023	38.83

1 FTES=	\$7346
71.20 FTES=	\$523,035.20

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.

N/A

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 WEL 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 WEL field. The WEL department will seek funding for these positions on an ongoing basis.

The WEL 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 WEL department will continue being involved in Perkins funding.

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

- Purchase additional Plasma Arc Cutting Equipment.
 - Purchase down draft tables to help reduce metal particles in the air.
 - Continue evaluating degrees and certificates in the WEL department for rigor, need, and applicability.
 - Continue evaluating and assessing data collected from SLO analysis.
- 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 WEL program is aligned to both the institutional goals and objectives stated in the current Integrated Strategic Plan. The WEL program has CLOs, PLOs, and ILOs developed and implemented for each of its courses, programs, certificates, and degree. The WEL department is constantly working with the curriculum committee and instruction office to stay current and make sure its goals are aligned with the goals and outcomes of the College mission.

The WEL Department offers face-to-face courses 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 District's academic calendar. It is also written into our Collective Bargaining Agreement.

ADDITIONAL DATA

STUDENT SUCCESSFUL COMPLETION & RETENTION

Completion/Success		
Course	2022-2023	2023-2024
WEL 100	88.9%	83.3%
WEL 101	83.3%	77.8%
WEL102	80.0%	73.1%
WEL 103	73.7%	89.3%
WEL 200	92.9%	81.3%
WEL 201	95.5%	46.7%
WEL 202	66.7%	85.7%
WEL 203	88.9%	72.7%
WEL 250	89.5%	89.5%
WEL 251	78.9%	75%
WEL 252	100%	88.9%
WEL 253	100%	42.9%
WEL 120	N/A	83.3%
WEL 121	N/A	85.7%
WEL 122	N/A	N/A
AVG COMPLETION	86.53%	70.99%

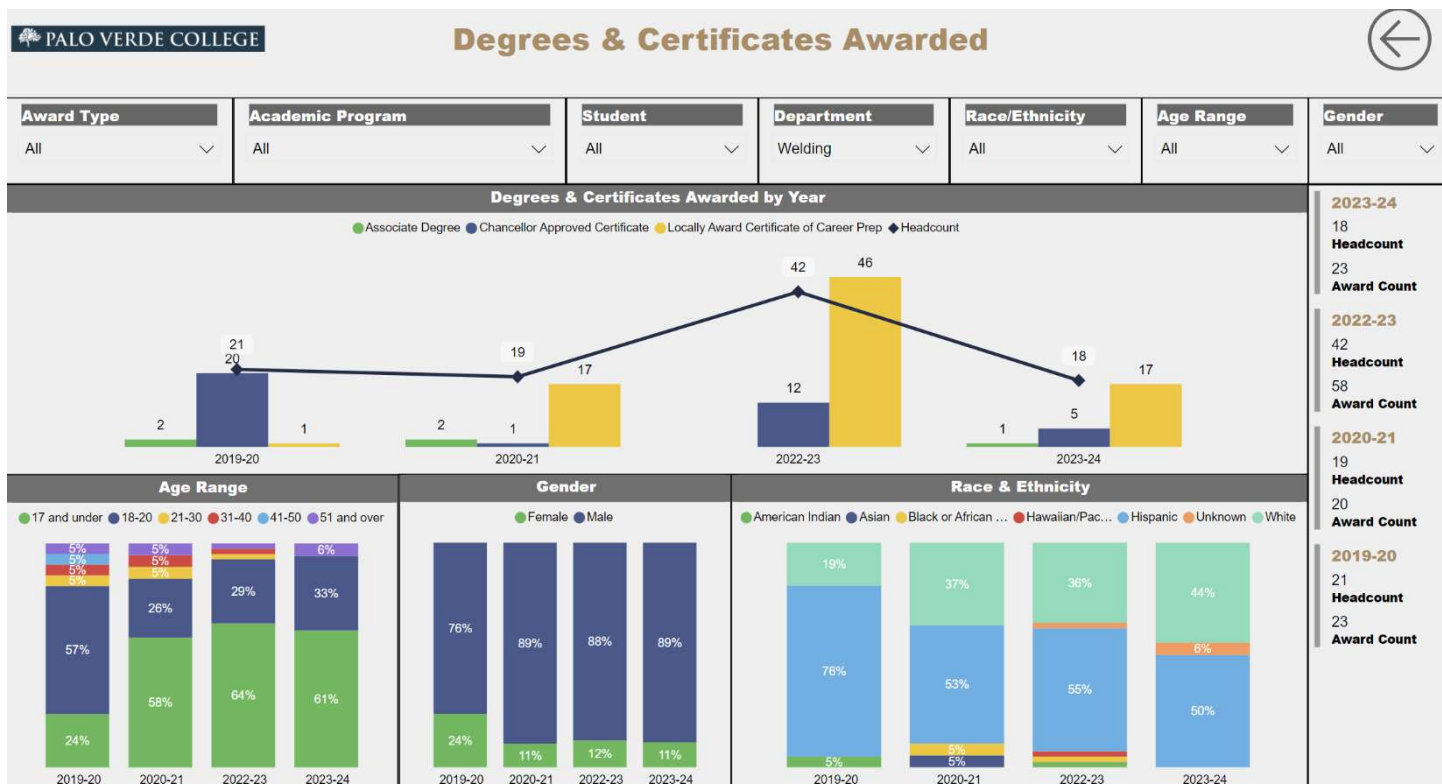
Retention		
Course	2022-2023	2023-2024
WEL 100	100%	94.4%
WEL 101	96.7%	94.4%
WEL102	95.0%	96.2%
WEL 103	94.7%	96.4%
WEL 200	100%	100%
WEL 201	100%	100%
WEL 202	100%	100%
WEL 203	100%	100%
WEL 250	100%	100%
WEL 251	100%	100%
WEL 252	100%	100%
WEL 253	100%	71.4%
WEL 120	N/A	100%
WEL 121	N/A	100%
WEL 122	N/A	N/A

ENROLLMENT TRENDS

ENROLLMENT		
Course	2022-2023	2023-2024
WEL 100	28	18
WEL 101	31	18
WEL102	21	26
WEL 103	20	29
WEL 200	14	17
WEL 201	26	15
WEL 202	16	14
WEL 203	28	12
WEL 250	20	19
WEL 251	19	12
WEL 252	18	10
WEL 253	18	14
WEL 120	N/A	12
WEL 121	N/A	8
WEL 122	N/A	N/A

PROGRAM AWARDS

Name of Award	2022-23	2023-24
AS, Welding Technology	0	1
Welding Technology, Certificate of Achievement	12	5
Welding Fundamentals Certificate of Career Preparation	24	8
Welding Applications, Certificate of Career Preparation	8	5
Industrial Steel Welding, Certificate of Career Preparation	14	4
Welding Technology, Certificate of Career Preparation	0	0



ADDITIONAL LABOR MARKET DATA:

Welding Technology

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

Summary

