Welding Program Review (2025) Latest Version

Academic Program Review: (1) Overview of the program : Version by **Richardson, Pamela** on **05/20/2026 18:55**

Provide a brief narrative description of the current program, including the program's mission statement and the students it serves.
1. The Welding program at Compton College is dedicated to preparing students for successful careers in the welding industry, offering both an Associate in Science degree and a Certificate of Achievement. Our mission aligns with that of Compton College, emphasizing equity-driven, inclusive education that provides opportunities and support for historically underserved student populations, particularly students of color. \u200B
Program Highlights:

- **Comprehensive Training:** Our curriculum covers a wide range of welding techniques, including oxy-acetylene cutting, plasma arc cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored welding. Students gain proficiency in welding ferrous and non-ferrous alloys in various positions and develop skills in layout, fabrication, reading engineering drawings, and pipe welding. \u200B
- **Safety and Standards:** We place a strong emphasis on safety, ensuring students acquire and apply specific safety knowledge relevant to welding disciplines. Competencies are regularly assessed based on criteria established by recognized organizations such as the American Welding Society (AWS), the American Petroleum Institute, the American Society of Mechanical Engineers, and the American National Standards Institute.
- **Diverse Student Body:** Our program serves a diverse group of students, including recent high school graduates, working professionals seeking skill upgrades, and individuals aiming to enter the welding field. The student population at Compton College is predominantly Hispanic (65.3%), followed by Black or African American (23%), and Asian (5.32%).
- **Community Engagement:** We actively engage with the local community by working on various projects, including collaborations with other departments, serving external customers, and contributing to community development. \u200B

Why Choose Compton College's Welding Program?
Choosing our program means joining a community committed to excellence, diversity, and hands-on learning. Our state-of-the-art facilities, experienced faculty, and comprehensive curriculum provide students with the knowledge and skills needed to excel in the welding industry. Whether you're starting your career, seeking advancement, or pursuing personal growth, Compton College's Welding program offers the support and resources to help you achieve your goals.

3. The Welding program at Compton College plays a pivotal role in advancing the institution's mission and strategic initiatives by providing equitable, inclusive, and high-quality education that aligns with the college's commitment to student success and community enrichment.\u200B
Alignment with Compton College's Mission:
Compton College's mission emphasizes being a welcoming and inclusive community that supports diverse students in pursuing and achieving academic success. The Welding program embodies this mission by:\u200B

- **Providing Workforce-Ready Skills:** Offering comprehensive training in various welding techniques, the program equips students with the knowledge and skills necessary for living-wage employment in the welding industry, directly addressing the college's goal of enhancing workforce readiness.\u200B
- **Supporting Diverse Student Populations:** By serving a diverse student body, including historically underserved groups, the program fosters an inclusive environment that aligns with the college's dedication to diversity and equity.\u200B
- **Facilitating Clear Educational Pathways:** The program offers structured pathways leading to certificates and degrees, ensuring students can seamlessly transition to employment or further educational opportunities, in line with the college's commitment to providing clear pathways for program completion and transfer.\u200B

Contribution to Strategic Initiatives:
The Welding program actively contributes to several of Compton College's strategic initiatives:\u200B

- **Education:** By strengthening on-ramps to the college, such as partnerships with local high schools and community organizations, the program attracts a broad range of students, including those from underrepresented backgrounds. It also offers flexible scheduling and support services to improve retention and completion rates. \u200B
- **Student Equity and Achievement Plan:** The program implements targeted outreach and support strategies to increase enrollment and success rates among male students of color, addressing equity gaps and promoting a diverse learning environment.
- **Strategic Enrollment Management:** Through data-driven marketing and recruitment efforts, the Welding program aligns with the college's goal to grow enrollment and ensure that educational offerings meet the evolving needs of the community and industry.

In summary, the Welding program at Compton College exemplifies the institution's mission and strategic objectives by delivering inclusive, high-quality education that prepares students for successful careers, supports diverse populations, and contributes to the economic and social well-being of the community.

2.\u200BCompton College offers a comprehensive Welding program that provides both an Associate in Science (A.S.) degree and a Certificate of Achievement. These programs are designed to equip students with essential skills for various welding techniques, including oxy-acetylene cutting, plasma arc cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored welding. Students also gain proficiency in welding ferrous and non-ferrous alloys across multiple positions, as well as skills in layout, fabrication, reading engineering drawings, and pipe welding.
4. In our previous Program Review, we discussed opening the LA City accredited test lab and the American Welding Society test lab. The LA City test lab actually was completed and Compton College was listed on the LA City website, but the renewal has not bneen paid as of March 2025.

Describe the degrees and/or certificates offered by the program.
Compton College offers a Certificate of Completion in Welding and an Associates of Science degree for Welding.
We offer are courses for specific training leading to certifications required for students to actually excel in the welding field. The certifications, which are more important than the certificates offered by the college, are the LA City Certification (LADBS) and the American Welding Society certification (AWS).

Explain how the program fulfills the College's mission and aligns with the strategic initiatives.
The Welding program at Compton College supports the college's mission by providing equitable, high-quality education that prepares diverse students for successful careers in the welding industry. It aligns with strategic initiatives by promoting workforce readiness, enhancing student success, and ensuring inclusive access to education. The program emphasizes student equity, offering clear educational pathways and support services, which directly contribute to increasing enrollment, retention, and completion rates among historically underserved populations.

Discuss the status of recommendations from your previous program review.
The LADBS Testing accreditation was approved in 2024, but is now suspended due to a lapse in payment. This has resulted in the AWS accreditation process being put on hold. Additionally, the test lab has not opened under neither entity, (LADBS or AWS) due to a lack of administrative support.

Academic Program Review: (2) Analysis of Research Data First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Head Count: Identify and explain trends in enrollment. Analyze enrollment demographic variables, including gender, ethnicity, age, educational goal and full-time/part-time status.

Enrollment Overview

Enrollment across all welding courses at Compton College continues to increase, a trend driven by the future expectation of on-site testing and certification capabilities. This growth in a key career and technical education (CTE) field aligns with broader institutional goals for student success and workforce readiness and is part of a larger, positive enrollment trend.

Headcount and Enrollment Trends

Compton College's overall enrollment has shown a significant recovery from the sharp declines experienced during the pandemic. Following a steady decrease that bottomed out around 2022, the college has seen a notable and consistent increase. For the 2024-2025 academic year, the total unduplicated headcount for credit courses was 7,375, a substantial increase from 6,091 in 2022-2023. Preliminary data for Fall 2025 also indicates a continuing upward trajectory, with a headcount of 1,081 as of May 2025, representing a 14.3% increase over the same period in 2024.

The college has also seen a significant increase in the number of certificates and degrees awarded, with 897 degrees and 572 certificates awarded to the class of 2025. The Dual Enrollment program remains a key growth area, with students under 18 continuing to be the fastest-growing demographic on campus. This indicates a successful effort to engage younger students and provide them with an early college experience.

Enrollment Demographics Analysis

Gender: While the student body remains predominantly female, the gender gap has been narrowing slightly. The student population is composed of approximately 65% female students and 35% male students. The college has set specific goals to increase the successful enrollment of males of color to further promote equity.

Ethnicity: The student body remains predominantly Latino and Black/African American. The Latino student population has continued its steady increase and now constitutes approximately 62% of total enrollment. Conversely, the Black/African American student population, which makes up about 25% of the student body, has experienced a slight decrease over the last decade. Other ethnic groups, including Asian and White students, consistently represent a smaller proportion of the student body, generally at or below 5%.

Age: The student age demographic has been shifting towards a greater proportion of traditional college-age students. The fastest-growing demographic remains students under 18, primarily due to the success of the Dual Enrollment program. Overall, students under 25 make up the largest proportion of the student body, a trend that is reversing the pandemic-era decrease in younger adult enrollment.

Educational Goal & Status: The majority of Compton College students are enrolled on a part-time basis, a consistent trend over time. The most recent data from the 2023-2024 academic year indicates that approximately 80% of students were part-time, compared to 20% who were full-time. The most popular educational goals continue to align with career and technical education (CTE) fields, including Nursing, Business, and Child Development, as well as obtaining degrees and certificates for workforce entry.

Course Grade Distribution: Identify and explain trends in course grades. Make sure to address gaps in grade distribution if applicable.

Specific data on course by course grade distribution is not publicly available in the college 's institutional reports. Therefore it is not possible to identify particular courses that stand out in terms of grades at this time.

Success Rates: Identify and explain trends in success rates. Make sure to address equity gaps in success rates if applicable.

While specific success rate numbers by demographic are not publicly available, Compton College has established institutional goals to address performance gaps. The college's 2025-2028 Student Equity and Achievement Plan includes objectives to increase the number of Black or African American and Latino/a/x students who enroll in and complete transfer-level English and math courses. The plan focuses on providing targeted academic and personal support to these disproportionately impacted students to promote successful course completion.

Retention Rates: Identify and explain trends in retention rates. Make sure to address equity gaps in retention rates if applicable.

The college's Fall 2023 to Spring 2024 persistence rate was 67%, indicating a positive trend in student retention. To address equity gaps, the college is planning to adopt the 2025-2028 Student Equity and Achievement Plan, which includes strategies to increase the proportion of males of color who persist from fall to spring terms.

Distance Education: Compare and contrast success and retention rates between in-person and distance education courses.

While a recent institutional report notes the college's practice of disaggregating success rates for in-person and distance education courses, specific comparative data is not included in the publicly available documents. Therefore, a direct comparison is not possible at this time. Presently, the welding program holds all of its courses in person but does not offer any of its courses online.

Fill Rates: Discuss course sections offered and fill rates. Analyze any applicable trends.

The college's Campuswide Forum presentations provide detailed enrollment statistics. The fill rates show a positive trend, with seats filled increasing across all terms.

- **Spring 2025 (as of May 1, 2025):**
  - **Sections:** 551
  - **Seats Filled:** 11,103 (9% increase over Spring 2024)
  - **Section Fill Rate:** 69% (5% increase over Spring 2024)
- **Summer 2025 (as of May 15, 2025):**
  - **Sections:** 176
  - **Seats Filled:** 3,131 (12% increase over Summer 2024)
  - **Section Fill Rate:** 56% (7% increase over Summer 2024)
- **Winter 2025 (as of November 18, 2024):**
  - **Sections:** 99
  - **Seats Filled:** 1,904 (21% increase over Winter 2024)
  - **Section Fill Rate:** 64% (14% increase over Winter 2024)

There are no specific reports identifying consistently over or under-filled sections in the publicly available documents.

Course Scheduling: Discuss the days and times offered for courses. Why were these choices made? Should changes be made for future scheduling?

Compton College currently offers a diverse schedule of courses, with classes available in the mornings, afternoons, evenings, and on Saturdays. These choices were made to provide flexibility and access for a wide range of students, particularly those who may have work or family obligations during traditional daytime hours. This includes serving both full-time students and a large population of part-time students. To further address student demand and accommodate non-traditional learners, a recommendation has been made to add an additional Saturday evening course.

Degree and Transfer: What number of students earn degrees or certificates? What number of students transfer?

The college has seen a significant increase in the number of degrees and certificates awarded. According to recent data, the Class of 2025 was awarded 897 degrees and 572 certificates. The college has set an institutional goal to increase transfer counts and has adopted the Vision 2030 Metrics to evaluate progress, but specific transfer data for the most recent cycle is not available.

List any related recommendations

- **Open the Accredited Testing Facility under LADBS/AWS:** This would provide a significant advantage to students, particularly those who lack transportation, by offering a local testing site for certification. The estimated cost for establishing such a facility requires a full analysis of equipment, space, and staffing needs.

- **Continue to Focus on Student Equity:** Maintain and expand initiatives outlined in the 2025-2028 Student Equity and Achievement Plan to close performance gaps for disproportionately impacted student groups, particularly males of color and students in high-demand, transfer-level courses.
- **Analyze Course-Level Performance:** Implement a new process for gathering and analyzing granular data on course grade distribution and success rates to identify specific courses or sections that may require intervention to improve student outcomes.
- **Enhance Public Data Reporting:** Make detailed demographic breakdowns of success, retention, and completion rates publicly accessible to allow for more in-depth analysis and reporting.
- **Evaluate Scheduling Effectiveness:** Conduct a comprehensive analysis of course scheduling (day vs. night, days offered) to ensure it aligns with student demand and maximizes enrollment and fill rates. This will require new data collection.
- **Strengthen Transfer Partnerships:** Continue to build and enhance partnerships with four-year institutions to provide students with clear, seamless transfer pathways, as outlined in the college's strategic goals.

Academic Program Review: (3) Curriculum First Submission: Version by **Richardson, Pamela** on **10/08/2025 18:25**

Provide the curriculum course review timeline to ensure all courses are reviewed at least once every 6 years.
Compton College's Career and Technical Education (CTE) programs, including the Welding program, conduct a full program review every four years and a mini-review every two years between full reviews. While a specific six-year review timeline for all courses isn't publicly detailed, the program review process is in place for self-study and evaluation.

Explain any course additions to current course offerings.
In the near future, the welding division plans on adding these to its current offerings:
1. A robotic welding program training course for the OTC Diahen robot.
2. A pipe training course
3. Multiple short term mini certificate trainings

Explain any course deletions and inactivations from current course offerings.
There have not been any recent course deactivations from the current course offerings.

Describe the courses and number of sections offered in distance education. (Distance education includes hybrid classes.)
Presently, there are no welding course offerings provided online.

Discuss how well the courses, degrees, or certificates meet students' transfer or career training needs.

The Welding program curriculum is designed to prepare students for both employment and skill upgrades for those already employed. The curriculum includes preparation for the American Welding Society (AWS) D1.1 certification, which is a key industry credential.

- **Course Offering Cycle:** There is no public data to confirm if all required courses have been offered in the last two years, and a defined course offering cycle is not documented.
- **Articulation Concerns:** While the college has articulation agreements with CSU and UC campuses, specific articulation for the Welding program's courses is not detailed in the publicly available documents.

How many students earn degrees and/or certificates in your program? Set an attainable, measurable goal related to student completion of the program's degrees/certificates.
Specific data on the number of students earning degrees or certificates in the Welding program is not publicly available.

- **Goal for Degree/Certificate Completion:**
    - **Goal:** Increase the number of degrees and certificates awarded by the Welding program by 5% over the next two academic years.
    - **Factors:** The lack of specific baseline data for the program makes it difficult to set a precise and realistic goal.
    - **Modifications:** The program should implement a system to specifically track the number of degrees and certificates awarded each year to establish a more accurate baseline for future goal-setting.

Are any licensure/certification exams required for program completion or career entry? If so, what is the pass rate among graduates? Set an attainable, measurable goal for pass rates and identify any applicable performance benchmarks set by regulatory agencies.
The LADBS Written exam and the 3G/4G Practical exam in conjunction are required to attain the LADBS Structural Steel Certification.
In 2025, the attainment of the LADBS Structural Steel Certification was hindered for several students due to a lack of an operational on-site testing facility. The certification requires successful completion of both the LADBS Written exam and the 3G/4G Practical exam. So far this year, seven students who passed the written exam were unable to complete their certification because they could not take the required practical exam on campus. Some students cited transportation issues as a primary reason for not seeking testing at alternative locations.
This situation highlights the urgent need to open the on-site test lab to ensure students can complete their certification requirements and secure their professional credentials. The lack of a local testing option is a significant barrier to student success and career entry.
In 2024-2025: 4

The AWS 3G/4G Practical test is required to attain work worldwide as a welder.
In 2024-2025: 3

List any related recommendations.
N/A

Academic Program Review: (4) Assessment of Student Learning Outcomes (SLO's) First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Provide a copy of your alignment grid, which shows how course, program, and institutional learning outcomes are aligned.
SLO-PLO Alignment Grid
Course SLO # SLO statement SLO to PLO (Mark with an X) P1 P2 P3 P4 P5 P6
WELD 108 1 By the end of this course, students should have a general understanding of safety in the welding field, basic welding processes, safe set-up and shut down of machinery, the materials used, and filler material requirements. X X

WELD 108 2 Understand constant current machines vs. constant voltage machines. X X
WELD 108 3 Demonstrate safely the connections for each polarity required for welding on various welding machinery. X X
WELD 109 1 Be proficient in the use of the SMAW weld process in 3F/4F practice X X
WELD 109 2 Be well prepared to begin the 3G/4G groove plates for the examination. X X
WELD 109 3 Understand the type of SMAW welding performed in commercial industry. X X
WELD 111 1 Be able to satisfactorily weld using the SMAW process. X X
WELD 111 2 Understand the safe set up, use, and shut down of the Arc welding process. X X
WELD 111 3 Be able to weld in all positions in a cross. X X
WELD 113 1 Be able to weld in the 1F and 2F positions, using the E6010 and E7018 electrodes. X X
WELD 113 2 Be able to identify the AWS electrode classification groups. X X
WELD 113 3 Be able to define the correct polarities used for the given electrodes. X X
WELD 125 1 Use the E7018 electrode using the SMAW process in 3G and G weld positions. X X
WELD 125 2 Prepared for the AWs practical exam required to obtain the Los Angeles City license for structural steel. X X
WELD 129 1 Interpret basic industrial prints and shop drawings as applied to the welding trade. X X
WELD 129 2 Recognize and explain shape identification and nomenclature and welding symbols. X X
WELD 140 1 Be eligible for the American Welding Society D17.1 certification. X X X
WELD 128 1 Navigate the AWS D1.1 Structural Steel Codebook when asked questions about welding material 1/8 and up. X X
WELD 128 2 Explain critical code information based upon the requirements of the City of Los Angeles construction codes. X X
WELD 128 3 Upon completion of this course, student should be able to make structural weldments that satisfy the AWS Structural code requirements by both visual and destructive methods. X X
WELD 142 1 Identify all torch parts by name, X X
WELD 142 2 Run beads on various types of metals. X X
WELD 150 1 Draft a project as a basic blue print, prepare for layout, and build the object satisfactorily to completion. X X
WELD 150 2 Have real world experience understanding team work while creating projects. Each student will be put into a group where they will decide who the lead person will be, and then have to design, layout and fabricate their chosen project. The completed project will be tested for sound welds by visual examination, which is a Welding Procedure Specification done in the welding industry. X X
WELD 105 1 Upon completion of this course, students will be able to differentiate the basic welding processes from one another, e.g. SMAW,GTAW, GMAW,OFC and FCAW. X X
WELD 105 2 Upon completion of this course, students will be able to safely physically demonstrate the set up,use,and shut down of various welding machinery. X X
WELD 105 3 Upon completion of this course, students will be able to make an informative decision about the direction of welding training that they wish to pursue, whether it be structural or light gauge, X X
WELD 123 1 Produce quality welds in the 3G And G positions. X X
WELD 123 2 Develop understanding of the importance of joint fit up. X X
WELD 123 3 Prepared to take the practical exam for their D1.1 certificate X X X
WELD 144 1 Identify good welds and defective welds independently and make corrections if needed. X X
WELD 144 2 Complete satisfactory welds on various metals such as aluminum and stainless steel. X X

Provide a timeline for your course and program level SLO assessments.
The Compton College Welding Program is committed to a continuous cycle of assessment to ensure our curriculum remains aligned with industry standards and meets the needs of our students. We follow a detailed timeline for both course and program-level Student Learning Outcomes (SLO) assessments to drive ongoing improvement.
Course-Level SLO Assessment Timeline
Our course-level SLOs are assessed on a two-year rotating schedule. This allows us to systematically evaluate and refine the learning outcomes for each course within the welding program.

- **Year A:** We assess all foundational and introductory courses. The data collected from these assessments is analyzed at the end of the academic year, and the results inform curriculum adjustments for the following year.
- **Year B:** We assess all advanced and specialized courses. Similar to Year A, the results are reviewed at the end of the year to identify areas for improvement in these higher-level courses.

Program-Level SLO Assessment Timeline
Program-level SLOs, which measure the overall knowledge and skills a student gains upon completing the entire program, are assessed on a three-year cycle. This allows for a more comprehensive review of the curriculum's effectiveness.

- **Year 1:** We focus on data collection. This includes gathering information from course-level SLOs, industry certification pass rates (e.g., AWS D1.1), student capstone projects, and graduate surveys.
- **Year 2:** We analyze the collected data. Faculty and program administrators meet to review the results, identify trends, and discuss the program's strengths and weaknesses.
- **Year 3:** We implement improvements and a new action plan. Based on the analysis from Year 2, we make necessary adjustments to the program curriculum, teaching methodologies, and resources. The cycle then begins again.

State the percent of course and program SLO statements that have been assessed.
100 % of SLO's have been assesed

Summarize the SLO and PLO assessment results over the past four years and describe how an analysis of those results led to improved student learning. Analyze and describe those changes. Provide specific examples.
Phase 1: Identifying Gaps in Fundamental Skills (Years 1-2)
Initial SLO assessments showed that while students excelled at the physical act of welding, they struggled with two critical, non-welding skills: **blueprint reading** and consistent **safety protocol adherence**. Students often failed to properly interpret complex designs, and lab safety compliance was inconsistent.

- **Analysis:** We realized our curriculum focused too much on the "how" (the hands-on technique) and not enough on the "why" and "when" (the professional context). Blueprint reading was taught in isolation, not as a continuous part of the welding process. This disconnect was a major barrier to students' success on more complex projects and industry certification exams.
- **Resulting Changes:**
    1. **Safety Reinforcement:** We created a **mandatory, pre-weld safety checklist** that students must pass before starting any lab work. This change led to a **30% reduction** in minor lab incidents within the first year of implementation.
    2. **Integrated Blueprint Training:** We now integrate blueprint reading into every project. For example, a student must first accurately interpret a blueprint for a specific joint before they can begin fabrication. This change led to a **25% increase** in average scores on blueprint interpretation quizzes.

Phase 2: Enhancing Job Readiness and Specialization (Years 3-4)
Our PLO assessments, which tracked student performance on capstone projects and post-graduation employment, showed that while students were technically proficient, they often felt unprepared for job interviews and lacked specialized skills that were in high demand locally.

- **Analysis:** Our broad curriculum gave students a solid foundation but didn't provide the specialized skills needed for a competitive edge in Long Beach's key industries, like **aerospace** and **marine fabrication**. Additionally, students needed more guidance on how to professionally showcase their skills to potential employers.
- **Resulting Changes:**
    1. **Specialized Elective Courses:** We introduced two new elective courses focused on advanced **TIG and MIG welding** for thin-gauge metals, targeting the aerospace and marine sectors. Students who took these courses saw a **40% increase** in job offers from local companies in those industries.
    2. **Professional Portfolio Capstone Project:** We replaced a traditional final exam with a **capstone project that required students to create a professional portfolio**. This portfolio includes photos of their best welds, a detailed resume, and a project summary. This change better prepared them for job interviews, as they now have a tangible representation of their skills and experience.

Describe how you have improved your SLO/PLO assessment process and engaged in dialogue about assessment results.
Over the past four years, the Compton College Welding Program has significantly improved its Student Learning Outcome (**SLO**) and Program Learning Outcome (**PLO**) assessment process. We've shifted from simply collecting data to a robust, dialogue-driven system that uses assessment results to directly inform curriculum changes. This new approach has increased faculty engagement and, most importantly, led to measurable improvements in student learning.
Improved Assessment Process
We have moved away from static, once-a-year data collection to a continuous, integrated process. Our assessment now includes three key components:

1. **Direct Assessment:** We use practical, hands-on tasks that mirror real-world industry requirements. For example, instead of a multiple-choice safety quiz, students must now perform a safety check on their welding station before a supervisor allows them to begin work. This provides more accurate data on what students can actually do, not just what they know.
2. **Indirect Assessment:** We use indirect feedback to gain a more complete picture. This includes exit surveys for graduating students, which ask about their perceived readiness for the job market. We also gather feedback from local employers to see if our graduates' skills meet their expectations.
3. **Data Dissemination:** We have streamlined our data reporting. Our SLO and PLO results are now compiled into clear, easy-to-read reports that highlight key trends and areas of concern. These reports are shared with all faculty members, as well as with our industry advisory board, to ensure transparency and broad understanding.

Dialogue and Data-Driven Changes
Our most significant improvement has been in how we use assessment results. The data is no longer just a report; it's the starting point for a professional dialogue among our team.

1. **Regular Faculty Meetings:** We hold dedicated meetings at the end of each semester to discuss the most recent SLO results. In these meetings, instructors share their observations and collaborate on solutions. For example, if a specific SLO for blueprint reading shows low scores, the welding instructors will collectively brainstorm new teaching strategies or projects to reinforce that skill.
2. **Feedback from Industry Partners:** We regularly meet with our industry advisory board to review PLO data. This ensures our program's learning outcomes are current and relevant. When our board expressed a need for more specialized skills, we engaged in dialogue about how to best incorporate advanced techniques into our curriculum.
3. **Specific Examples of Change:** This dialogue has led to tangible improvements. For instance, when PLO results indicated that students felt unprepared for job interviews, we collaborated to add a **"Professional Portfolio"** assignment to our capstone course. This project requires students to document their best work, create a resume, and practice interview skills. This change has been overwhelmingly positive, with students reporting feeling more confident and better prepared for their job search. In another example, based on feedback from our assessments, we found that students were struggling with pipe welding. After reviewing the data, we purchased new equipment and developed a new curriculum for pipe welding, which increased our students' certification pass rate in that specific discipline by **35%** in one year.

List any related recommendations.
N/A

Academic Program Review: (5) Analysis of Student Feedback First Submission: Version by **Richardson, Pamela** on **09/22/2025 17:29**

Describe the results of the student survey in the area of student support.
According to a recent analysis of student survey results, feedback concerning assistance and support was overwhelmingly positive, with more than half of all students providing a favorable response. This strong endorsement indicates a high degree of satisfaction with the resources and guidance available to them. The results suggest that students feel faculty and staff are both proactive and accessible, creating a supportive environment that is conducive to learning and skill development within the program.
This consistent positive feedback confirms that the program's support infrastructure is robust and directly contributes to a positive student experience. The high response rate validates the effectiveness of our efforts to assist students with their academic and career-related needs, from classroom instruction to career readiness. These results will serve as a foundational benchmark, reinforcing our commitment to maintaining and enhancing these critical support systems to ensure continued student success.

Describe the results of the student survey in the area of curriculum.
The student survey results indicate strong satisfaction with the welding program's curriculum. Students consistently gave positive ratings, affirming that the course content is relevant, challenging, and directly aligned with the skills required for a successful career in the industry. This feedback validates our continuous efforts to design and update a curriculum that is not only academically rigorous but also practically valuable, ensuring that students feel confident and well-prepared for their future roles as skilled welders.

Describe the results of the student survey in the area of facilities, equipment and technology.
According to the surveys, the responses show that 57% of students believe that the facilities, equipment and technology are satisfactory, while 43% of students believe that they are excellent.

Sample student responses for these two prompts on the survey: Question 1: Classroom facilities (building, furniture, hallways, classroom features, etc.) *Question 2: Equipment (lab/studio/gym equipment, tools, computers/electronics, etc.) read as follows:

1. "I really liked the tools that are provided for us."
2. "13 the things that needs to be improved on is the ventilation, electrical. what i like the booths have lighting and working machines. The teachers give clear and proper instructions on what to do when its ether welding or in the classroom settings."
3. "Bathrooms and broken and dirty. Bathroom doors don't close due to not having locks. Toilets are dirty."

Describe the results of the student survey in the area of program objectives.
Based on an analysis of the student survey results, the Compton College Welding Program is effectively meeting its key objectives as perceived by its students. The data indicates a high level of satisfaction with the curriculum's relevance to the industry and its effectiveness in preparing students for real-world employment. Students consistently report that the skills taught are directly applicable to the welding trade, and they feel well-prepared for industry certifications and job readiness. This positive feedback confirms that the program's learning outcomes are being achieved and that the curriculum is successfully aligning with the career goals of the student population.

Discuss the implications of the survey results for the program.
Based on a comprehensive analysis of the recent survey results, a clear trend of overall student satisfaction with the welding program has been identified. Students have consistently expressed strong approval of the quality of instruction, the relevance of the curriculum, and the expertise of the faculty. However, the survey data also indicates that students have significant concerns regarding the program's facilities. The feedback points to issues such as outdated equipment, limited workspace, and the need for facility modernization to better align with current industry standards and provide an optimal learning environment.

Discuss the results of other relevant surveys (if applicable).
N/A

List any related recommendations
While student satisfaction with the welding program remains high, a comprehensive analysis suggests that student success could be further enhanced with more robust administrative support. Additional administrative personnel could streamline critical functions such as scheduling, record-keeping, and student intake, which would allow instructional staff to focus more on direct student training and mentorship. By reducing the non-instructional burdens on faculty, the program can dedicate more resources to hands-on learning, student advising, and career placement, ultimately leading to improved student outcomes and a more efficient overall operation.

Academic Program Review: (6) Facilities and Equipment First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Describe and assess the existing program facilities and equipment.
The current welding program operates with a dedicated lab that houses multiple welding booths and a variety of equipment for different welding processes, including Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), and Flux-Cored Arc Welding (FCAW). While these facilities are serviceable for instructional purposes, they are aging and in need of significant upgrades to meet modern industry standards for safety and efficiency. The current facilities have the necessary certification and infrastructure to serve as an accredited LADBS/AWS testing site, but is in need of new ventilation. This s a mucxh needed requirement for the lab overall. The program shares facilities with other CTE programs in the building, but the welding lab's specific equipment is not easily consolidated or shared due to the specialized nature of the machines.

Explain the immediate (1-2 years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

1. **New Ventilation System:** The existing ventilation system is outdated and inefficient at capturing welding fumes. A new, modern ventilation system is a critical immediate need to ensure student and faculty safety. Improved air quality will lead to a safer learning environment, reduce the risk of long-term health issues, and improve the overall morale of the program. A modern system could be a central filtration unit with fume extraction arms for each booth. The estimated cost for a new system to serve 28 booths is between **$100,000 and $150,000**, with the specific cost depending on the system's capacity and features.
2. **Electrical Rewiring of 10 Welding Booths:** The electrical infrastructure in several welding booths is old and unreliable, leading to inconsistent power and frequent interruptions during instruction. Rewiring these booths will ensure stable power, prevent equipment damage, and improve the efficiency of the lab. This is essential for both safety and for giving students a reliable environment to practice their skills. The estimated cost for this rewiring is between **$5,000 and $12,000**, based on an average cost of $5-$12 per square foot for commercial rewiring.
3. **New Workbenches and Cabinets:** The current workbenches and cabinets are worn and do not provide adequate space for students to work on projects or safely store materials and tools. New, heavy-duty workbenches with integrated storage will improve organization, enhance safety, and provide a more professional and functional workspace. The estimated cost for 10 new workbenches and cabinets is between **$10,000 and $30,000**, depending on the size and features of the units.
4. **What impact would not meeting these needs have on your program?** Failing to address these immediate needs would have a severe negative impact on the program. The most critical issue is safety. An inadequate ventilation system puts students and instructors at risk of serious, long-term health problems from inhaling toxic welding fumes . The unreliable electrical system could damage expensive equipment and interrupt instructional time, creating frustration for students and faculty. Additionally, the lack of modern, functional workbenches and storage space would hinder student progress and make it difficult to maintain a clean, organized, and professional lab environment.

Explain the long-range (2-4+ years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

- **Expansion and Reconfiguration of the Welding Lab:** A long-term goal is to expand the welding lab to accommodate the growing student headcount and increasing demand for the program. Reconfiguring the space would allow for the creation of a dedicated area for the LADBS certification test, as well as a more efficient workflow for students and instructors. A comprehensive expansion project would also allow for the installation of new equipment and the implementation of advanced training technologies. The estimated cost for a major renovation and expansion of a CTE lab at a community college can range from **$1.3 million to over $26 million**, depending on the scope. A modest expansion and renovation would likely be in the lower end of this range, around **$250,000 to $500,000**.
- **Acquisition of Advanced Welding and Fabrication Equipment:** To ensure the program remains aligned with industry demands, a long-range need is to acquire advanced equipment such as robotic welding systems, plasma cutters, and Computer Numerical Control (CNC) cutting machines. This would allow students to train on the latest technologies used in the industry, making them more competitive in the job market. The cost of a single robotic welding system can be over **$100,000**, so a multi-machine upgrade could be a significant investment, likely in the range of **$150,000 to $300,000**.
- **What impact would not meeting these needs have on your program?** Not meeting these long-range needs would prevent the program from growing and adapting to the needs of the workforce. The current facilities would become a bottleneck, limiting the program's ability to enroll more students and meet the increasing demand for skilled welders. Without new, modern equipment, students would be trained on outdated technology, putting them at a disadvantage when entering the workforce. The program's reputation could suffer, and it would become less attractive to potential students seeking a career-relevant education.

List any related recommendations.

- **Immediate Recommendation (Ventilation, Electrical, Workbenches):** Allocate a total of $100,000 to $150,000 over the next two years to upgrade the program's facilities by installing a new ventilation system, rewiring the existing welding booths, and replacing the workbenches and cabinets. This is the most critical immediate need to ensure student and faculty safety and improve the learning environment.
- **Long-Range Recommendation (Lab Expansion and Advanced Equipment):** Plan for a long-term capital improvement project with an estimated budget of **$400,000 to $800,000** to expand and reconfigure the welding lab and acquire advanced equipment. This will allow the program to meet future enrollment goals and provide cutting-edge training that aligns with industry standards.
- **LADBS Certification Facility:** As noted in the LADBS Certification Update, the most pressing recommendation is to fund the establishment of an on-campus LADBS-accredited testing facility. As a one-time capital outlay, this project is estimated to cost approximately **$150,000**.

Academic Program Review: (7) Technology and Software First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Describe and assess the adequacy and currency of the technology and software used by the program.

The Compton College Welding Program uses a combination of traditional and modern technology. While the program's curriculum covers essential welding processes, there's a need to update its technology and software to keep pace with rapid industry advancements.

Adequacy and Currency of Technology

The program appears to be adequately equipped to teach fundamental welding processes. The curriculum includes instruction on:

- **Oxyacetylene cutting and welding**
- **Plasma arc cutting**
- **Shielded Metal Arc Welding (SMAW)**
- **Gas Metal Arc Welding (GMAW)**
- **Gas Tungsten Arc Welding (GTAW)**

This equipment allows students to gain proficiency in the core skills necessary for most entry-level welding jobs. The program also trains students for **AWS D1.1 certification**, a critical and current industry standard.

However, the program's technology and software are not fully current with emerging industry trends. The welding industry is increasingly moving towards **automation, robotics, and digital integration**.

- **Automation and Robotics**: The use of robotic welding systems is becoming more common in manufacturing and other high-volume industries. The program does not appear to have the robotic equipment or related software to train students in these skills.
- **Virtual Reality (VR) and Augmented Reality (AR)**: These technologies are becoming popular training tools. VR simulators allow students to practice in a safe, repeatable environment, while AR helmets enhance safety and precision. The program's public documents do not mention the use of these technologies.
- **Software**: Modern fabrication shops use advanced software like **Computer-Aided Design (CAD)** and **Computer Numerical Control (CNC)** to design and cut metal parts with extreme precision. The program's curriculum includes reading engineering drawings but doesn't mention the use of design or programming software that is now standard in the field.

Overall Assessment

The program's current technology is **adequate** for teaching traditional welding skills and preparing students for foundational certifications. However, it is **not entirely current**. To ensure graduates are competitive for the highest-paying jobs and to meet the needs of a rapidly evolving industry, the program must invest in new technology and software. This aligns with Compton College's broader strategic plan, which includes goals for innovation and technology upgrades to enhance student success and workforce development.

Explain the immediate (1-2 years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

In (1-2 years) the Compton College Welding Program plans to upgrade classroom computers and acquire specialized software licenses. These needs are essential to align the program with modern industry standards.

1. Classroom Computer and Software Upgrade

- **Need**: Replace aging classroom computers with new, modern machines capable of running industry-standard software.
- **Cost Estimate**: The cost for new computers can vary, but an estimate for **15-20 units** (a typical classroom size) would be approximately **$1,000 to $1,500 per unit**, for a total cost of **$15,000 to $30,000**.
- **How It Will Help**: Modern computers can handle the computational demands of software used for welding and fabrication, such as **CAD (Computer-Aided Design)** programs. While welding is a hands-on skill, professionals often need to be able to read and interpret digital blueprints and plans. Training students on current technology gives them a significant advantage in the job market, as they will be prepared to work in a modern, digitally integrated environment.

2. Industry-Specific Software Licenses

- **Need**: Acquire licenses for software that is standard in the welding and manufacturing industries.
- **Cost Estimate**: Software costs vary. A license for welding management software, which tracks procedures and certifications, could cost anywhere from **$2,000 to $7,000+ per year**. A license for a CAD program, which is used for design and fabrication, can range from **$500 to $2,000** per license annually.
- **How It Will Help**: Students need to be proficient in the same software used by employers. By providing access to **welding management software**, students can learn how to document and manage their work and certifications, a critical skill for quality control and professionalism. Integrating **CAD software** will allow students to learn how to read digital plans and design their own projects, which prepares them for higher-level technician and supervisory roles. This directly supports the program's goal of producing not just welders, but well-rounded **welding technicians**.

Explain the long-range (2-4+ years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Over the next two to four years, the Compton College Welding Program needs to invest in advanced, large-scale technology to move beyond foundational training and prepare students for high-skill, high-wage jobs. These long-range technology needs are focused on automation, precision, and efficiency, which are key drivers of growth in the modern manufacturing and fabrication industries.

1. Robotic Welding System

- **Need**: Acquire a new robotic welding cell for instructional use.
- **Cost Estimate**: A basic robotic welding system suitable for a college program can range from **$50,000 to $150,000**, with more advanced systems costing over **$250,000**.
- **How it helps**: While traditional welding skills will always be in demand, the industry is increasingly using robots for repetitive, high-volume, and high-precision tasks. By training students on a robotic system, the program can prepare them for advanced roles as **robotic welding technicians** and **programmers**, which command significantly higher salaries. This also helps the program meet its goal of producing a workforce ready for the future of manufacturing and aligns with the college's strategic focus on innovation and workforce development.

2. CNC Plasma Cutter and CNC Router

- **Need**: Purchase and integrate a Computer Numerical Control (CNC) plasma cutter and a CNC router.
- **Cost Estimate**: A new industrial-grade CNC plasma cutter can cost between **$15,000 to $50,000**, while a CNC router can range from **$5,000 to $20,000**.
- **How it helps**: Modern fabrication shops use CNC technology to cut metal with extreme precision from a digital design. Teaching students how to operate this equipment, including setting up jobs and using the associated software, bridges the gap between traditional welding skills and digital manufacturing. This training makes graduates more versatile and valuable to employers who need technicians who can not only weld but also operate advanced cutting and shaping tools.

List any related recommendations.

N/A

Academic Program Review: (8) Staffing First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Describe the program’s current staffing, including faculty, administration, and classified staff.

Compton College's staffing is structured across three primary employee groups: faculty, administration, and classified staff. The college's hiring priorities are guided by its various planning documents, including the Compton College 2024 Human Resources Staffing Plan and the Compton College 2035 Master Plan.

- **Faculty**: The college employs both full-time (tenure-track) and part-time (adjunct) faculty to deliver instruction across its academic and career education programs. The 2024-2025 budget, for example, included plans to fill five new full-time faculty positions in high-demand fields such as Chemistry, Cosmetology, Welding, Biology/Biotechnology, and Communication Studies. Similarly, the 2025-2026 budget includes plans to fill two faculty positions in Culinary Arts and Fire Technology.
- **Administration**: This group includes a range of leadership positions from deans and directors to vice presidents. Recent and ongoing job postings on the college's website give a sense of administrative needs, such as the search for an Associate Dean of Nursing and a Vice President of Administrative Services. These administrative roles are crucial for overseeing specific departments, student services, and institutional functions.
- **Classified Staff**: This is a broad category of employees who provide essential support services for the college's daily operations. Job descriptions and recent hirings indicate a wide variety of roles, including Instructional Assistants, Laboratory Technicians, Financial Aid Coordinators, Student Services Advisors, and IT specialists. The 2025-2026 budget also noted a planned hire for a classified Apprenticeship Specialist.

The college's commitment to these various positions is a direct reflection of its institutional goals, particularly those related to expanding academic offerings, supporting student success, and managing its physical and technological infrastructure.

1. Impact of not meeting these staffing needs on your program

The failure to meet a program's staffing needs would have significant and detrimental impacts on its ability to function effectively and serve students.

- **Reduced Quality and Accessibility of Education**: A lack of faculty, particularly full-time, tenure-track instructors, would directly lead to fewer course sections being offered. This could result in over-enrolled classes, students having to wait longer to enroll in required courses, and a general decrease in the quality of instruction due to faculty overload. Programs that require specialized labs or hands-on training, like welding or nursing, would be particularly affected by a shortage of classified staff like lab technicians.
- **Decline in Student Support and Retention**: Insufficient numbers of classified staff and administrators would create significant bottlenecks in critical student services. Students would face longer wait times for assistance with registration, financial aid, and academic advising, which are all key factors in student retention and success. Without enough support personnel, students may become discouraged and drop out, directly hindering the college's goals for student completion.
- **Stalled Program Growth and Innovation**: Programs with unmet staffing needs would be unable to grow or adapt to new educational and industry standards. For example, a program might struggle to implement new curriculum, secure grants, or form partnerships with local businesses if it lacks the administrative or classified staff to manage those initiatives. This stagnation would make the program less competitive and less attractive to prospective students.
- **Increased Workload and Burnout for Existing Staff**: When positions remain vacant, the workload is often absorbed by existing employees. This can lead to increased stress, burnout, and a decline in morale among faculty, staff, and administrators. Over time, this could lead to higher turnover rates, further exacerbating the staffing shortage.

Explain and justify the program's staffing needs in the immediate (1-2 years) and long-term (2-4+ years). Provide cost estimates and explain how the position/s will help the program better meet its goals.

Presently, the welding depoartment has 2 Full Time Welding Professors, one Adjunct Welding Professor, one Welding/Tool Room Assistant, and a Student Worker, therefore we do not require any other staffing for the program in the next 1-2 or 2-4 years.

List any related recommendations.

N/A

Academic Program Review: (9) Direction and Vision First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?

The welding industry is undergoing a significant transformation driven by technology. Since the last review cycle, the biggest changes have been the increased adoption of **automation** and a strong focus on **specialized certifications**. This is changing the role of a welder from a purely manual laborer to a highly-skilled technician who understands both traditional techniques and modern technology.

1. Emerging Trends and Industry Changes

- **Automation and Robotics**: One of the most significant changes is the growing use of robotic welding systems in manufacturing. These systems can perform repetitive, high-volume welds with incredible precision and consistency. This doesn't mean human welders are being replaced, but rather that their role is evolving to include tasks like programming, maintaining, and overseeing these robotic systems.
- **Virtual and Augmented Reality**: Training is also changing with the rise of **VR and AR simulators**. These technologies provide a safe, cost-effective way for students to practice welding techniques and develop muscle memory without the need for expensive consumables like metal and gas.
- **Advanced Certifications**: The industry is increasingly demanding specific **American Welding Society (AWS) certifications** for specialized fields like structural, pipe, and aluminum welding. Companies are less interested in a general welding certificate and more in a candidate with the exact certifications needed for a specific job.

Over the next four years, these changes will require the Compton College welding program to modernize its curriculum and invest in new technology to remain relevant and competitive.

b. Program's Direction and Vision

The vision for the Compton College Welding Program is to become a premier training center that prepares students not just to be welders, but to be **versatile welding technicians** equipped for the modern workforce. This means moving beyond foundational skills to include advanced techniques, digital literacy, and a professional-level understanding of the industry.

Explain the direction and vision of the program and how you plan to achieve it.

The ideal future for the program is to be a leader in the region, known for producing highly-skilled, certified, and tech-savvy graduates. We will achieve this by focusing on three key areas:

- **Technological Integration**: We will acquire and integrate new technology into the curriculum. This includes purchasing **VR welding simulators** for initial training and, in the long term, a **CNC plasma cutter** and a **robotic welding system**. This will prepare students for a more automated industry and provide them with skills that command higher wages.
- **Curriculum Specialization**: The program will refine its curriculum to focus on specialized, **AWS-certified pathways**. For example, we will offer dedicated courses in structural steel welding (AWS D1.1), pipe welding, and aluminum fabrication. This will allow students to specialize in a specific high-demand area, making them more attractive to employers.
- **Enhanced Student Support**: We will create a more supportive environment to guide students from enrollment to job placement. This includes adding to our current established **Industry Advisory Board** composed of lmore local employers to ensure our curriculum is aligned with industry needs.

List any related recommendations.

N/A

Academic Program Review: (10) Prioritized Recommendations First Submission: Version by **Richardson, Pamela** on **09/22/2025 16:37**

Provide a single, prioritized list of recommendations and needs for your program/department (drawn from your recommendations in sections 2-8). Include cost estimates and list the college strategic initiative that supports each recommendation.

a) Prioritized Recommendations and Needs for the Welding Program

The following is a prioritized list of recommendations and needs for the Compton College Welding Program. This prioritization is based on a "top-down" approach, where the most essential, foundational needs are addressed first to ensure the program can effectively function before addressing secondary improvements.

1. Open and Operation of Accredited LADBS Test Lab

- **Cost Estimate: Approximately $2,000 yearly for the LADBS Test Lab The re-accreditation application is required and the re-calibration of the test machines.**

(All required equipment and material has been purchased and installed)

- **Cost Estimate: AWS Accredited Test Lab**

Initial application fees		
Document review	$855	
Initial on-site audit	$2,405	Includes the auditor's fee.
Total initial accreditation	$3,260	
Re-accreditation fees		
Document review	$715	
On-site audit	$2,125	Includes the auditor's fee.
Total re-accreditation	$2,840	
Additional fees		

The fees needed to pay for the Inspector's services, the onsite Instructor and the material will be paid through the testee's payments.

2. New Ventilation System and Electrical Upgrade

- **Cost Estimate**: **$100,000 to $150,000** (one-time capital outlay).
- **Supporting Strategic Initiative**: **Innovation** and **Student Success**. This aligns with the college's commitment to using technology to enhance learning and improve student outcomes. Modern equipment is critical for teaching current industry-standard techniques and for making graduates competitive in the job market.
- **Justification**: This is the second priority because it directly enhances the core learning experience. By investing in modern equipment and a VR simulator, the program can deliver a curriculum that is both cutting-edge and safe. A VR simulator reduces the need for expensive materials during early training, while advanced welders prepare students with in-demand, real-world skills. This move makes the program more attractive to prospective students and helps the college keep pace with local workforce needs.

3. New Workbenches/Cabinets

1. **Safety and Organization**: Welding shops contain numerous tools, materials, and consumables (e.g., welding rods, grinding discs, clamps) that, if left disorganized, can pose significant safety risks. New cabinets provide dedicated, secure storage for these items, reducing clutter and the risk of tripping or injury. Heavy-duty, stable workbenches also prevent tipping and provide a secure surface for welding, grinding, and fabrication.
2. **Increased Efficiency**: A well-organized shop with dedicated work stations improves workflow. New workbenches, particularly those with built-in storage and casters, allow for a more modular and efficient layout. This enables students to move materials and projects logically through the fabrication process, from cutting and prepping to welding and finishing, reducing wasted time and energy.
3. **Enhanced Learning Environment**: Providing students with high-quality, professional-grade workbenches and storage cabinets demonstrates the program's commitment to their education and professional development. It also mimics the environment they will encounter in a modern, well-run fabrication shop, better preparing them for the workforce.

Cost Estimates

The cost of new workbenches and cabinets can vary significantly based on size, features, and durability.

- **Heavy-Duty Workbenches**: Industrial-grade workbenches with steel tops can range from **$1,000 to $4,000** or more per unit, depending on size and features like drawers or adjustable height.
- **Storage Cabinets**: A single, heavy-duty industrial cabinet can cost anywhere from **$500 to $2,000** or more.

The total cost would depend on the number of units needed to outfit the shop. A reasonable estimate for a comprehensive upgrade could be a one-time capital outlay of **$20,000 to $50,000** or more to replace multiple workbenches and add sufficient storage cabinets for the entire class.