

Institutional Program Review—2018-2019
Program Efficacy Phase: Instruction
DUE: Monday, March 18, 2019 by NOON

Purpose of Institutional Program Review: Welcome to the Program Efficacy phase of the San Bernardino Valley College Program Review process. Program Review is a systematic process for evaluating programs and services annually. The major goal of the Program Review Committee is to evaluate the effectiveness of programs and to make informed decisions about budget and other campus priorities.

For regular programmatic assessment on campus, the Program Review Committee examines and evaluates the resource needs and effectiveness of all instructional and service areas. These review processes occur on one-, two-, and four-year cycles as determined by the District, College, and other regulatory agencies. Program review is conducted by authorization of the SBVC Academic Senate.

The purpose of Program Review is to:

- Provide a full examination of how effectively programs and services are meeting departmental, divisional, and institutional goals
- Aid in short-range planning and decision-making
- Improve performance, services, and programs
- Contribute to long-range planning
- Contribute information and recommendations to other college processes, as appropriate
- Serve as the campus' conduit for decision-making by forwarding information to appropriate committees

Our Program Review process includes an annual campus-wide needs assessment each fall and an in-depth efficacy review of each program on a four-year cycle. All programs are now required to update their Educational Master Plan (EMP) narrative each fall. In addition, CTE programs have a mid-cycle update (2 years after full efficacy) in order to comply with Title 5 regulations.

Committee members are available to meet with you to carefully review and discuss your Program Efficacy document. You will receive detailed feedback regarding the degree to which your program is perceived to meet institutional goals. The rubric that the team will use to evaluate your program is embedded in the form. As you are writing your program evaluation, feel free to contact the efficacy team assigned to review your document or your division representatives for feedback and input.

Draft forms should be written early so that your review team can work with you at the **small-group workshops:**
Friday, February 22 from 9:30 to 11:00 a.m. in NH-222
Friday, March 1 from 9:30 to 11:00 a.m. in B-204

Final documents are due to the Committee co-chairs (Paula Ferri-Milligan at pferri@sbccd.cc.ca.us and Wallace Johnson at wjohnson@sbccd.cc.ca.us) by **NOON on Monday, March 18, 2019.**

SUBMISSION FORMAT:

- 1) Use this current efficacy form and attach as a MICROSOFT WORD DOCUMENT (do NOT convert to PDF)**
- 2) Do NOT change the file name**

It is the writer's responsibility to be sure the Committee receives the forms on time.

The efficacy process now incorporates the EMP sheet and SLO/SAO documentation, which you will need to insert. We have inserted the dialogue from the committee where your last efficacy document did not meet the rubric, the curriculum report (if applicable), and the SBVC demographic data. **If you have questions regarding the SBVC demographic data, contact Christie Gabriel, Research Analyst, at cgabriel@sbccd.cc.ca.us by February 25. If you have additional data requests, those requests must be submitted to Christie Gabriel by February 8.** Following is the link to Program Review Efficacy Resources, which will be useful as you complete your efficacy report:

<https://www.valleycollege.edu/about-sbvc/campus-committees/academic-senate/program-review/17-efficacy.php>

Program Efficacy

2018 – 2019

Program Being Evaluated

Welding

Name of Division

Applied Technology, Transportation, and Culinary Arts

Name of Person Preparing this Report

Joshua Milligan and Bryce Cacho

Extension

8503

Names of Department Members Consulted

Bryce Cacho, Alexander Plank, April Murphy, Christopher Barta, Nubil Butris, George Moreno, Ian Radcliffe, Rene Narvaez, Robert Moreno
--

Names of Reviewers

Melissa King, Todd Heibel, Kay Dee Yarbrough
--

Work Flow	Date Submitted
Initial meeting with department	3-4-19
Meeting with Program Review Team	2-22-19 and 3-1-19
Report submitted to Program Review co-chair(s) & Dean	by NOON on March 18

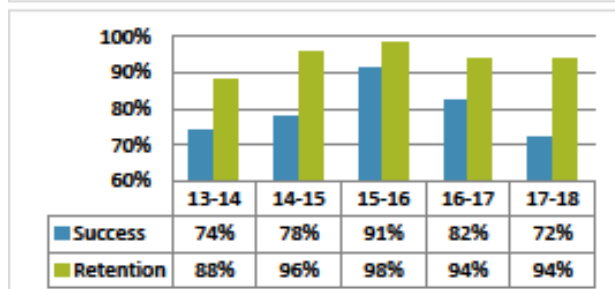
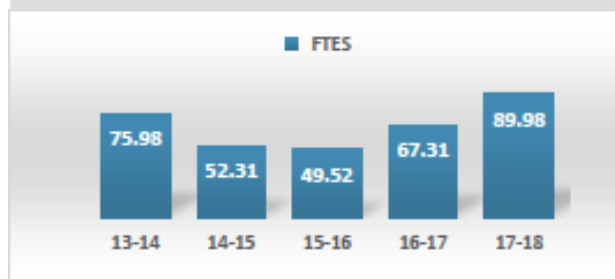
Staffing

List the number of full and part-time employees in your area.

Classification	Number Full-Time	Number Part-time, Contract	Number adjunct, short- term, hourly
Managers	0	0	0
Faculty	2	0	7
Classified Staff	0	2	0
Total	2	2	7

PROGRAM: PLEASE INSERT YOUR RECENT EMP FROM FALL 2018

Description: The Welding Technology program continues to keep in step with industry standards. This includes: Oxy-fuel processes, shielded metal arc welding, gas metal arc welding, flux-cored arc welding, gas tungsten arc welding, fabrication, thermal cutting, and welding inspection. Students in the program are being prepared to successfully meet the American Welding Society (AWS) standards and pass the Los Angeles City certification test for structural welders. The program provides the needed skills training for students to enter the welding profession and receive high paying jobs with opportunities for advancement.



	13-14	14-15	15-16	16-17	17-18
Duplicated Enrollment	463	338	326	463	513
FTEF	7.84	7.82	7.06	7.96	9.39
WSCH per FTEF	291	201	210	254	287

	13-14	14-15	15-16	16-17	17-18
Sections	39	32	28	32	31
% of online enrollment	0%	0%	0%	0%	0%
Degrees awarded	1	0	1	8	2
Certificates awarded	1	6	3	5	5

Assessment:

- FTES increased by 33.68% from the 2016-17 year and is the highest it has been for the five years of data shown. This shows a significant improvement in the program as the FTES has increased by 81.7% from the 2015-16 year to the 2017-18 year.
- Duplicated enrollment is also showing a steady increase and is at the highest level for the last five years.
- FTEF is also up which is expected due to the significant increase in FTES.
- WSCH per FTEF has improved by 42.79% from the 2014-15 year to the 2017-18 year. The 2017-18 WSCH per FTEF of 287 is close to what it was for the 2013-14 year and demonstrates that the program is making strides towards improved efficiency.
- The student success was at a high of 91% for 2015-16 but then dropped to 82% for 2016-17 and then to 72% for 2017-18.
- Retention increased for the 2015-16 year and slightly dropped in 2016-17 and remained stable in 2017-18 year.
- Certificates awarded significantly increased for 2016-17; data for 2017-18 was not available when preparing this report.

Progress from Last Year's Action Plan:

- Because of extra work/time put in by the two full-time faculty, the program was granted funds through Proposition 39 and the Strong Workforce Program. These funds have been used to purchase some of the equipment needed to keep the program up to date with the industry.
- The program was given a one-time budget augmentation through the program review needs assessment process for instructional supplies but was not given an ongoing budget increase even though the cost of consumables have gone up and the program's FTES has significantly increased.
- The program was denied all funds requested for equipment repair for the 2017-18 year.
- The program is still requesting a full time lab assistant and an additional full-time faculty but these requests are consistently being denied.
- Some of the SLOs have been rewritten and approved for fall 2018. The remaining SLOs and the PLOs will be rewritten along with the content review of the curriculum and should be approved for fall 2019.

SAOs/SLOs/PLOs: The success of welding students revolves around industry recognized certifications and their ability to read drawings and successfully fabricate based on a drawing. Our PLOs and SLOs are being updated to better and more accurately reflect this. There are several PLOs that are already in place that meet the criteria: #1) entry into the welding field as a certified/licensed welder, #3) reading and interpreting welding symbols and blueprints, #4) layout and fitting of steel structures, and #5) performance standards that meet the American Welding Society's guidelines.

These show a fairly high percentage (between 90.83% and 95.49%) of students who have met the PLOs based on the curriculum we offer. The feedback from industry advisories has shown us that we need to more rigorously assess these PLOs. To do this, we have expanded some of the course offerings to more comprehensively cover and prepare students for industry required certifications. This in turn requires additional faculty, lab support, equipment, Supplies, etc., as the program's enrollment is increasing.

Departmental/Program Goals:

1. Hire an additional full-time faculty and lab assistant to improve student success and retention.
2. Increase class offerings to improve CTE certificates and increase student access to the program.
3. Improve and modernize equipment to improve student success.
4. Purchase instruction supplies to support student success even with increased enrollment
5. Revise the SLOs and PLOs to meet industry standards.
6. Increase the number of student completing the program certificates.
7. Increase the number of students completing industry recognized qualifications.

Challenges & Opportunities:

- The program has a shortage of instructors. The program is having trouble meeting the needs of current classes and as enrollment increases the program needs to offer more sections. An additional full-time instructor is desperately needed as qualified adjunct instructors are proving difficult, if not impossible to find.
- Having no full-time lab assistant is a serious safety issue that is effecting student success and retention. Instructors our doing the job that a lab assistant would do, as well as their own which takes away time from students.
- Outdated equipment.
- Strong Work Force grant is a possible opportunity for funding.
- Additional instructional supplies are needed to support the increased enrollment in the program.
- Updated SLOs/PLOs will enhance student success and job opportunities.

Action Plan:

Action Steps	Department Goal	Necessary Resources to Complete	Target Completion Date
Continue to advocate for a full-time faculty through program review	#1, Hire an additional full-time faculty and reduce faculty overload	Funding	NOW
Continue to advocate for a full time lab assistant through program review	#1, Hire a full-time lab assistant to improve Safety	Funding	NOW
Continue to apply for grant funds and advocate for funding through program review	#3, Purchase new equipment	Funding	Fall 2019
Continue to advocate for adequate instructional supply funds through the program review process	#4 purchase instructional supplies to support increased enrollment	Funding	Ongoing

Part I: Questions Related to Strategic Initiative: Increase Access

Goal: SBVC will improve the application, registration, and enrollment procedures for all students.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Demographics	The program <u>does not provide</u> an appropriate analysis regarding identified differences in the program's population compared to that of the general population.	The program <u>provides an analysis</u> of the demographic data and provides an interpretation in response to any identified variance. The program <u>discusses the plans or activities</u> that are in place to recruit and retain underserved populations as appropriate.	In addition to the meets criteria, the program's analysis and plan <u>demonstrates a need</u> for increased resources.
Pattern of Service	The program's pattern of service is <u>not related to the needs of students.</u>	The <u>program provides</u> evidence that the pattern of service or instruction meets student needs. The program <u>discusses the plans or activities</u> that are in place to meet a broad range of needs.	In addition to the meets criteria, the program <u>demonstrates that the pattern of service needs to be extended.</u>

Use the demographic data provided to describe how well you are providing access to your program by answering the questions below.

Demographics – 2015-16 to 2017-18 Academic Years		
Demographic Measure	Program: Welding	Campus-wide
Asian	2.2%	4.8%
African-American	5.6%	12.4%
Hispanic	64.6%	65.3%
Native American	0.9%	0.2%
Pacific Islander	0.5%	0.2%
White	25.4%	13.2%
Unknown	0.7%	3.9%
Female	5.8%	57.5%

Male	94.0%	42.5%
Disability	2.7%	5.4%
Age 19 or Less	3.4%	22.5%
Age 20 to 24	37.9%	34.7%
Age 25 to 29	20.9%	17.7%
Age 30 to 34	15.8%	9.3%
Age 35 to 39	9.0%	5.5%
Age 40 to 49	7.6%	6.2%
Age 50+	5.4%	4.1%

Demographics:

Provide an **analysis** of how internal demographic data compare to the campus population. Alternatively, provide demographics relative to the program that are collected. If internal data is not collected, describe plans to implement collection of data.

It is clear in the available data above that the San Bernardino Valley College (SBVC) welding program represents a diverse student population. There are some differences from the campus average but this is not unusual for a lab intensive program providing blue collar training.

For the years reported, the program was very close to the campus average for Asians, Hispanics, Native Americans and Pacific Islanders.

There are several groups with a larger gap indicated. The most extreme is the small percentage of female students coming in at only 5.8% for the program while the campus average reported is 57.5%. While this is a large difference, this does not come as a surprise as the Bureau of Labor Statistics reported that the national percentage of female welders for 2018 was just 5.4%. In addition, the program primarily focuses on welding training for the Structural Iron and Steel Industry and the Bureau of Labor Statistics reports only 2.2% of female workers in this field for 2018. (Here is the link for the Bureau of Labor Statistics Data: <https://www.bls.gov/cps/cpsaat11.pdf>)

The reported percentage of female students for the program is 5.8%. This is 0.4% higher than the percentage reported by the Bureau of Labor Statistics for female workers in the welding, soldering, and brazing occupation and 3.6% higher than the percentage reported for the Structural Iron and Steel Industry Occupation.

Even though the program has a percentage of female students that slightly exceeds the national percentage of female workers in the industry, steps have already been taken to increase the number of female students. A female welding instructor was recently hired and curriculum was updated to include additional welding processes that expand the program to include more than just opportunities for jobs in the structural steel industry; these include welding training that can be applied to: fabrication, manufacturing, custom automotive and aerospace. The course numbers for these updates are: WELD-016, WELD-017, WELD-080, WELD-081 and WELD-082. The program will also continue to advocate for improved support from the SBVC marketing and public relations to ensure that all demographics are fairly represented when marketing and outreach is done.

White students is another group that shows a large difference from the campus average coming in at 25.4% compared to 13.2%. The report from the Bureau of Labor Statistics shows that the percentage of white workers

in the industry for the welding, soldering, and brazing occupation was 85.7% for 2018. This shows that program is doing well in attracting a diverse population in comparison to what is found in the industry.

The program also has 5.6% African-American students while the campus percentage is at 12.4%. The Bureau of Labor Statistics shows that the industry percentage for African Americans was 8.3% for welding and 6.3% for structural iron and steel workers. This shows that the program is close but still slightly under what is seen in the industry for African-American workers. The program will continue to advocate for improved support from the SBVC marketing and public relations so as to ensure that all demographics are fairly represented when marketing and outreach is done.

When looking at students with disabilities, the percentage for the program is slightly less than the campus average. The program had 2.7% and the campus had 5.4% disabled students for the years reported. While this is not a significant difference it is important to note that the program is fully supportive of students with disabilities and is ADA compliant. Each lab is equipped with work stations that are specially set up for disabled students. The welding industry is also a difficult place for someone with disabilities to get a job since it is typical to have requirements that include lifting at least fifty pounds, climbing ladders and working tight/confined spaces. This makes welding a less attractive career option for people with disabilities and explains the slight difference in percentage of students with disabilities compared with the campus percentage.

The percentage of students within the age groups represented is close to campus percentages with the exception of age 19 or less. The program percentage is at 3.4% and the campus percentage is 22.5%. This indicates a need for better marketing, outreach and recruitment with high schools. The program will continue to participate in high school outreach when possible and advocate for improved support from the SBVC marketing and public relations. There is already planning being done with the welding program at the Colton high school to provide regular visits to the program to help the high school students explore education and career options in the welding field. If this works with the Colton high school, the plan is to expand this to other high schools in the area.

The financial struggles of many of our students is not something that is addressed in the demographics provided. However, this has been an important factor for the industry recognized welding certification testing services that the program provides. Without these industry certifications, a welder won't be able to get a good job. The program received feedback from students explaining that they would like to be industry certified but can't afford the several hundred dollars for the test. What this ultimately means for the affected students, is no high paying job because they can't afford to take the test.

As a solution, the program developed a process that now allows students to take their practical/lab welding certification test as a part of their classes at no cost. The cost to program is the supplies required to administer the practical/lab welding certification tests. As the program is continuing to experience an enrollment/FTES increase, this could mean additional resources will be needed to cover these costs.

Pattern of Service:

Describe how the pattern of service and/or instruction provided by your department serve the needs of the community. Include, as appropriate, hours of operation/pattern of scheduling, alternate delivery methods, weekend instruction/service.

The SBVC welding program strives to offer courses in a way that serves the needs of the community and allows access to as many students as possible. This is a difficult task since students' schedules are as diverse as the students themselves. Because of this, the program offers classes in three major formats which are day, evening and weekend. We try to offer each class in both day(morning/afternoon), evening and weekend, and if not possible

due to lack of instructors, we will alternate the times they are offered each semester. When possible, the program also offers classes during the summer to help meet the needs of the community.

The department has also been successful in securing funding from several grant sources (Perkins, Prop 39, and Strong Workforce) which have been put to work purchasing new equipment to increase the number of students who have access to each class. This equipment includes: Gas Tungsten Arc Welding (GTAW) machines, Gas Metal Arc Welding (GMAW) machines, multiprocess arc welding machines, Computer Numerical Controlled (CNC) Plasma Arc Cutting (PAC) machine, and fabrication equipment. To support this updated equipment and increased enrollment, there has been lab improvements/modifications done including electrical and plumbing. These improvements will allow for increased class offerings to continue and improve at meeting the needs of students. The first modification was adding Gas Metal Arc Welding (GMAW) machines and fabrication equipment to the welding lab T112B that was originally only set up for offering training with the Gas Tungsten Arc Welding (GTAW) machines. This is allowing the program to offer additional classes that were previously not available to the community. The results so far, WELD-016 was offered for the first time Fall 2018 and again Spring 2019, WELD-015 has expanded the number of usable stations from 15 to 18 per section Spring 2019, and WELD-080 is being offered for the first time Spring 2019. The program is also exploring the possibility of upgrading an additional lab to include multi-process welding machines to better utilize space and continue to improve/expand course offerings to the community. This lab is currently only used for one of the welding processes/courses offered by the program. Upgrading would open up an additional 26 multi-process welding stations to the program and ultimately benefit the community. Since this lab is only currently utilized for only 2 days out of the week for just half of each semester, the addition of the multi-process machines could mean 4 days of expanded course offerings extending instruction to even more students.

Part II: Questions Related to Strategic Initiative: Promote Student Success

Goal: SBVC will increase course success, program success, access to employment, and transfer rates by enhancing student learning.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Data/Analysis demonstrating achievement of instructional or service success	Program <u>does not provide an adequate analysis</u> of the data provided with respect to relevant program data.	Program <u>provides an analysis</u> of the data which indicates progress on departmental goals.	In addition to the meets criteria, the program <u>uses the achievement data</u> in concrete planning and <u>demonstrates</u> that it is prepared for growth.
Service Area Outcomes and/or Student Learning Outcomes and/or Program Level Outcomes	Program <u>has not demonstrated</u> that it is continuously assessing Service Area Outcomes (SAOs) and/or Student Learning Outcomes (SLOs) and/or Program Level Outcomes (PLOs) based on the plans of	Program <u>has demonstrated</u> that it has fully evaluated within a four-year cycle and is continuously assessing <u>all</u> Service Area Outcomes (SAOs) and/or Student Learning Outcomes (SLOs) and/or Program Level Outcomes (PLOs).	In addition to the meets criteria, the program <u>demonstrates that it has fully incorporated Service Area Outcomes (SAOs) and/or Student Learning Outcomes (SLOs) and/or Program Level Outcomes (PLOs) into its planning, made appropriate</u>

	<p>the program since their last program efficacy.</p> <p>Evidence of data collection, evaluation, and reflection/feedback, and/or connection to area services is missing or incomplete.</p>		<p><u>adjustments, and is prepared for growth.</u></p>
--	--	--	---

Student Success:

Provide an analysis of the data and narrative from the program’s EMP Summary and discuss what it reveals about your program. (Use data from the Charts that address Success & Retention and Degrees and Certificates Awarded”)

The success for the welding program is within an acceptable range fluctuating with a high of 91% and a low of 72% for the years of data shown in the latest EMP. This is an increase in success when duplicated enrollment is low and a decrease in success when the enrollment goes up. This trend is to be expected since higher enrollment means more enrollment for each section with the same number of faculty contact hours. Since the duplicated enrollment for the program is at its highest it has been for the past five years, 513 duplicated enrollments for the 2017-2018 year, this translates to less instructor time per students and ultimately means lower success rates, 72% for the 2017-2018 year, caused by the increased WSCH per FTEF. As the program is continuing to experience an increase in enrollment, it can also be expected that the success will continue to go down if adequate support is not provided to the program.

Full-time lab technicians/professional experts could help maintain a high success rate but the welding program does not have any. This has a negative effect on services to our students which directly affects the student success. Faculty duties/responsibilities for welding include large amounts of classified work which takes faculty time away from instruction including: 1. sets up and prepares class demonstrations and experiments 2. Inventories, orders, receives, and stocks materials, supplies, and equipment for laboratory use. 3. Issues and maintains records on materials loaned to students, instructors, and other departments; issues and maintains records on lockers. 4. Demonstrates and provides instruction to students in proper use and care of laboratory materials and equipment; assists in maintaining security of laboratories, laboratory equipment, supplies, and materials. 5. Cleans up after each lab session by scrapping metal, organize tools, equipment, and restocking supplies. 6. Calibrates and maintains equipment and supplies. 7. Monitors production of, collects, and processes hazardous waste materials and toxic chemical materials resulting from lab classes; collects and properly stores hazardous waste. 8. Evaluates chemicals and equipment for suitability, cost, availability, and other factors. 9 May maintain expenditure records and provide data for budget estimates. 10. Performs related duties as required.

Most departments have a lab Technician to help with all these responsibilities. This means that welding faculty have less instruction time with their students since they are required to perform classified work.

The program continues to advocate every chance possible for lab assistants and additional faculty to provide better support for the students. Program review needs assessments are submitted every year requesting full time faculty and full-time lab assistants. The welding program has even submitted a request for funding through the local share of Strong Workforce to cover the cost for a full-time faculty.

The retention shows a similar trend as the success. When the enrollment was at the lowest for the last five years during the 15-16 year, the retention, like the success, was at its highest point for the same

years. This put the retention at 98% for the 15-16 year and then slightly down to 94% for the 16-17 year. For the 17-18 year it remained at the same 94% of the previous year indicating that, although the time that each student spends with the faculty has decreased because of the increasing enrollment, the faculty are providing an excellent experience for the students.

For degrees and certificates awarded, the program shows, overall, low numbers. There was a significant improvement for the 2016-2017 year with 5 certificates and 8 degrees awarded. For the 2017-2018 year there was again 5 certificates awarded but just 2 degrees.

The welding students often achieve industry recognized credentials before they are able to complete the Welding Technology Certificate and/or degree. Once students are able/qualified to get jobs they typically do. This means that the program is successful in helping students achieve a goal of getting a job, in fact, the SBVC Welding program was recently awarded a Strong Workforce Program Bronze Star for our students experiencing an increase in earnings by 53%.

However, this also means that there is a low number of students sticking around to finish their academic goals of completing a certificate and/or degree. To address this, the program created several small certificates, Flux Cored Arc Welding (FCAW) Certificate, Gas Metal Arc Welding (GMAW) Certificate, Gas Tungsten Arc Welding (GTAW) Certificate, and Pipe Welding Certificate, that were approved for the first time Fall 2018. The idea is that these smaller certificates align with industry skill sets providing students comprehensive job training in one of the welding processes while also allowing the students to graduate with a certificate. It is still too early to see if this will be successful in increasing the number of completions but we should be able to see next year if this has been successful.

The state also recently reduced the number of units required for a certificate to receive state recognition down to 8 units. In response, the program plans to evaluate the completion data for the program during the next curriculum content review to see if units on the small certificates could/should be reduced to continue and increase program completions.

Supplemental Data:

Provide any additional information, such as job market indicators, standards in the field or licensure rates that would help the committee to better understand how your program contributes to the success of your students.

The SBVC welding program is a licensed testing agency for the City of Los Angeles Department of Building and Safety; this in combination with the two full time faculty who are both licensed as Certified Welding Inspectors (CWI), allows the program to perform testing that, if passed, certifies the students for high paying industry jobs. These jobs include welding and welding related tasks with labor unions including the Iron Workers Union, Plumbers and Pipefitters Union, Boilermakers Union and Operating Engineers Union. Students certified by the program also go to work at local companies including California Steel Industries, Herrick Corporation and Lynam Inc.

There was just one problem with these certification tests. The cost to the students. This has been an important factor for these industry recognized welding certification testing services that the program provides. Without these industry certifications, a welder won't be able to get a good job. The program received feedback from students explaining that they would like to be industry certified but can't afford the several hundred dollars for the test. What this ultimately means for the affected students, is no high paying job because they can't afford to take the test.

As a solution, the program developed a process that now allows students to take their practical/lab welding certification test as a part of their classes at no cost. This improved the equity of the program by eliminating a factor that was keeping some students from achieving their goals. Industry certifications are now a reality for all of our students who work hard and can pass the required tests.

The industry demand for welding training and certification is also very strong. The data tools available for the Strong Workforce Program shows that there are an estimated 2,689 welding/welding related jobs annually available in the Riverside and San Bernardino Counties for the years 2017-2022. The number of students graduating from community colleges in the area is only 75 students per year. This indicates a strong need for the program.

The SBVC Welding program was also recently awarded a Strong Workforce Program Bronze Star for an increase in earnings by 53% for students who were last enrolled in 2015-16 year.

(INSERT SLO and/or SAO and PLO DATA as appropriate FROM CURRENT REPORT. INSERT COURSE MAP IF AVAILABLE. Refer to prior reports as needed for the analysis.) (Contact Dr. Celia Huston, Co-Chair, Accreditation Committee, at chuston@valley.edu if you need assistance.) **NOTE: Do NOT include the summaries of the outcomes in this document.**

Student Learning Outcomes:

Course SLOs/SAOs. Demonstrate that your program is continuously assessing Course Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs). Include evidence of data collection, evaluation, and reflection/feedback, and describe how the SLOs/SAOs are being used to improve student learning (e.g., faculty discussions, SLO revisions, assessments, etc.). Generate reports from the Cloud as necessary. Include analysis of SLO/SAO Cloud reports and data from summary reports. This section is required for all programs.

The SLOs for the welding program have been completely rewritten/updated to meet industry standards for the training and certification of welders. These changes are being implemented Fall 2019. For this reason, the course map and data that reflect the updates are not yet available.

Industry requirements for Welding training fundamentally revolve around Safety and Certifications/Licenses to perform work to a code or standard and successfully fabricate based on a drawing. Many of the old SLOs for the program did not clearly meet these industry and national standards set by the American Welding Society (AWS). The SBVC Welding Department Industry Advisory met on November 16th, 2018 to discuss the program's SLOs and the members overwhelmingly approved and agreed to the proposed update of the SLOs.

A few examples of the SLOs that are being replaced Fall 2019: "How a welder can eliminate contamination of filler wire", Students will demonstrate the ability to identify the tungsten electrode used to weld an aluminum butt joint assuring it has a rounded end and the butt joint after welding has 100% penetration", Students will be able to identify joint assembly of T, Y and K connections and proper electrodes used for welding procedures. Students will take a 100 point exam offered by the Department of Building and Safety and must pass with a score of 80% or higher". These are just a few examples. They were not well written and the last one is impossible for an instructor to assess since the exam is administered by the City of Los Angeles and the test happens after the class is over and the results are not released to the program.

The new SLOs for each course include an added safety component. For example: WELD-010-SLO1: "Show an understanding of the safety for welding, cutting, and allied processes and demonstrate the importance of safety in welding", WELD-015-SLO1: "Show an understanding of the safety precautions for gas tungsten arc welding and demonstrate an awareness of the importance of safety in welding". Each course will now have a

variation of this and will help in tying all of the SLOs together to support the corresponding PLO: "Show an understanding of the safety precautions for working in a welding lab and demonstrate an awareness of the importance of safety in welding".

The other major trend for the updated SLOs is the focus on industry certifications. For example: WELD-045-SLO2: "Perform and meet the standards of acceptability to pass an American Welding Society structural welding performance test with a backing strip in 3G", and for the same class SLO3: "Perform and meet the standards of acceptability to pass an American Welding Society structural welding performance test with a backing strip in 4G", WELD-080-SLO3: "Perform and meet the standards of acceptability to pass a GMAW spray transfer welder performance qualification test on carbon steel". These also connect the courses together to best compliment the corresponding PLO: Demonstrate the ability to pass a Welder Performance Qualification Test that meets the standard of acceptability to a National Standard".

By updating the SLOs the program's goal is to produce data that allows for better analysis for the health of the program by aligning with the industry requirements that need to be met in order for our students to get jobs. This will also provide a clear picture of where the program is at in regard to quality of instruction, student success, supplies, equipment etc. . . and a better platform for determining department goals and areas of focus when requesting additional resources.

Program Level Outcomes:

If your program offers a degree or certificate, describe how the program level outcomes are being used to improve student learning at the program level (e.g., faculty discussions, SLO revisions, assessments, etc.). **Describe** how this set of data is being evaluated or is planned to be evaluated. Generate reports from the SLO Cloud as necessary. Include analysis of SLO Cloud reports and data from 4-year summary reports. If your program does not offer a degree or certificate, this section is optional (but encouraged).

The PLOs for the welding program have been completely rewritten/updated to meet industry standards for the training and certification of welders. These changes are being implemented Fall 2019. For this reason, the data that reflects the updates is not yet available.

Industry requirements for Welding training fundamentally revolve around Safety and Certifications/Licenses to perform work to a code or standard and successfully fabricate based on a drawing. Many of the old PLOs for the program did not clearly meet these industry and national standards set by the American Welding Society (AWS). The SBVC Welding Department Industry Advisory met on November 16th, 2018 to discuss the program's PLOs and the members overwhelmingly approved and agreed to the proposed update of the PLOs.

The data from the updated PLOs will be used to assess the success of the program in training students for jobs in the industry since the PLOs accurately reflect industry requirements.

Part III: Questions Related to Strategic Initiative: Improve Communication, Culture &

Climate

Goal: SBVC will promote a collegial campus culture with open line of communication between all stakeholder groups on and off-campus.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Communication	The program <u>does not identify</u> data that demonstrates communication with college and community.	The program <u>identifies</u> data that demonstrates communication with college and community.	In addition to the meets criteria, the program <u>demonstrates</u> the ability to communicate more widely and effectively, <u>describes</u> plans for extending communication, and provides data or research that <u>demonstrates</u> the need for additional resources.
Culture & Climate	The program <u>does not identify</u> its impact on culture and climate or the plans are not supported by the data and information provided.	The program <u>identifies and describes</u> its impact on culture and climate. Program <u>addresses</u> how this impacts planning.	In addition to the meets criteria, the program provides data or research that <u>demonstrates</u> the need for additional resources.

Communication, Culture & Climate:

Describe how your program communicates its services, goals, and achievements to the campus and to the Community (outreach, events, website, campus emails, flyers, etc.).

The program is very open to communicating with the campus and community. Representatives from the program attend many events including: Taste and Tour, STEMAPALOOZA, AWS local chapter job fair/welding competition, Skills USA, and have also visited local high schools and middle schools. We have even hosted Regional Skills USA competitions, and are planning on holding an AWS local chapter job fair/competition. We have built a relationship with KVCR that led to KVCR making a short video for the program. The welding program, via the welding club, recently competed in the ESAB Weld It Forward national fabrication contest with a voting component that was communicated to the campus, the Desert Region Consortia, and the industry advisers for the program. This was a successful tool to communicate with the campus and community about the program's goals and achievements. The program also reached out to many other programs on campus to participate in the project to make it a success and to build partnerships with those programs willing to participate. This led to the creation of the "Shout Your Dreams Build Your Dreams" Megaphone that is now displayed in the middle of the college. The welding club (SBVC Welding Wolverines) plays an important part in the program's outreach and communication clearly illustrated with the successful completion of the "Shout Your Dreams Build Your Dreams" Megaphone. The industry advisory committee for the welding program is also active and is a strong link for communicating with the community. This is a forum we use to hear from the community and see if our goals need to be adjusted. This communication has been key to the creation of the many new classes we now offer and the complete update of the program's SLOs and PLOs. The updating of our SLO's and PLOs has also started conversations with several close colleges. This communication allows us to collaborate on curriculum, ideas and program alignment.

Describe how your program seeks to enhance the culture and climate of the college.

The SBVC welding program enhances the culture and climate of the college by actively participating in campus functions and supporting the vision of the SBVC college president Diana Rodriguez. For the 2017/2018 academic year Diana selected "Shout Your Dreams" as the theme for the year and the welding program built a giant megaphone that was revealed during the Spring 2019 opening day. We have also worked with KVCR and they made a video for the megaphone project that made it possible to communicate our support for Diana's theme and in turn support the culture and climate of the college by demonstrating teamwork and campus partnerships.

The program looks forward to continuing these types of projects and partnerships and, in turn, continue to enhance the culture and climate of the college.

Describe one or more external/internal partnerships.

Our strong partnerships with the community are what helps support the program. Lynam Industries donates thousands of pounds of metal a semester. A partnership with California Steel Industries lets us exchange our used metal scrap for new metal. Another great partnership is San Bernardino Steel which also donates thousands of pounds of steel each year. These external partnerships are a lifeline to the welding program. The program has almost doubled the hours of training it provides from 3 years ago and has not received a budget increase. Without these strong industry partnerships, our program would not be able to grow at the rate at which it is. We have also built great partnerships with other programs within the college. Working with auto and collision, machine technology, and art department we were able to build the megaphone for the school. We have also built internal partnerships with other department by building pieces of equipment or fixing teaching aids. These would be: Cafeteria, the baseball team, M&O, Diesel, Auto, Auto Collision, Machine technology, Art department, Culinary, HVAC, Aero, and Electrical to mention a few.

What plans does your program have to further implement any of these initiatives?

We will continue to communicate with other programs and offices around the campus to find ways to help one another. Several local high schools have also asked for us to present program information, job opportunities, and certification processes to their welding classes. This would be a great way of improving and expanding some of our external partnerships. We would also like to add some videos and content/resources to our webpage that would improve how the program communicates its goals to the campus and community. We plan on hosting an AWS local chapter job fair and welding competition at our campus in addition to events such as "Women Who Weld".

IV: Questions Related to Strategic Initiative: Maintain Leadership & Promote Professional Development

Goal: SBVC will maintain capable leadership and provide professional development to a staff that will need skills to function effectively in an evolving educational environment.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Professional Development	The program <u>does not identify</u> currency in professional development activities.	Program <u>identifies current avenues</u> for professional development.	In addition to the meets criteria, the program shows that professional development has <u>impacted/expanded</u> the program and <u>demonstrates</u> that the program is positioning itself for growth.

Professional Development:

1. Discuss the ways that members of your department maintain currency in their field (conferences, workshops, technical trainings, etc.).

Attending American Welding Society (AWS) section meetings, holding department meetings, attending instructor's seminars put on by Miller Electric, and staying up to date with industry technology by studying the research published monthly in the AWS journal are a few of the ways that members of the welding program maintain currency in their field.

One of our faculty also recently attended and AWS Certified Welder Inspection (CWI) Seminar and helped proctor the exam for the CWI certification.

2. Identify the professional organizations that your department and/or department members belong to and how those organizations meet professional development parameters.

The professional organization that most of our department members belong to is the American Welding Society (AWS). This organization sets the standards and codes for the majority of the welding done in the United States and around the World. Most of our department members have some type of welding qualification through the AWS. These qualifications require the member to not have a lapse from welding with the process in which he/she is certified in for a period longer than six months. In addition, some of our department members are Nationally Certified Welding Inspectors (CWI) through the AWS. This also requires renewal every three years with proof of continued practice/professional development. In addition, also through the AWS, several of our department members are Certified Welding Educators (CWE). This qualification has a renewal processes of every four years with proof of continued practice/professional development.

Some of the program members are also certified welders through the City of Los Angeles Department of Building and Safety and the City of San Bernardino. These have the same renewal requirements as the AWS.

Since the department members/faculty are required to regularly renew their industry certifications through the professional organization that they are members of, along with proof of continued practice/professional development, these professional organizations clearly help ensure that the program members have sufficient professional development.

3. Discuss specific ways faculty and staff engage in professional growth (i.e. attend or present at conferences, establish training opportunities with other community colleges). Include future opportunities that are planned by faculty and staff. Discuss how professional development has impacted/expanded the program.

The faculty are required by the American Welding Society (AWS) to stay current in their field. Several ways this is done is by attending AWS section meetings, holding department meetings, attending instructor's seminars put on by Miller Electric, and staying up to date with industry technology by studying the research published monthly in the AWS journal.

As the faculty have continued to meet and review up to date technology, this has led to the update of over half of the program's equipment and recently adding several new welding processes including Metal Cored Arc Welding (MCAW) and Gas Metal Arc Welding Spray for both steel and aluminum into our curriculum.

Our faculty chair also attended a welding instructors conference put on by Miller Electric this past summer and learned of a new free resource that is available from Miller that can be used to replace expensive textbooks in several of our classes. This has resulted in a combined savings for our students in over \$9,000 by using this resource for just one course (WELD-010).

There are other training opportunities that the faculty are wanting to participate in but the cost is larger than the available budget for professional development. As a possible solution, a request was submitted as part of the Local Strong Workforce Program to cover the cost of this additional training.

V: Questions Related to Strategic Initiative: Effective Evaluation & Accountability

Goal: SBVC will improve institutional effectiveness through a process of evaluation and continuous improvement.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Mission/ Statement of Purpose	The program does not have a mission/ statement of purpose, or it does not clearly link with the institutional mission.	The program has a mission/statement of purpose, and it links clearly with the institutional mission.	
Productivity	The data does not show an acceptable level of productivity for the program, or the issue of productivity is not adequately addressed.	The data shows the program is productive at an acceptable level.	The program functions at a highly productive level and has planned for growth as appropriate.
Relevance, Currency, Articulation	The program does not provide evidence that it is relevant, current, and that courses articulate with CSU/UC, if appropriate. <u>Out of date course(s) that were not launched into Curricunet by Oct. 1, 2017 may result in an overall recommendation no higher than Conditional.</u>	The program provides evidence that the curriculum review process is up to date. Courses are relevant and current to the mission of the program. Appropriate courses have been articulated or transfer with UC/CSU, or plans are in place to articulate appropriate courses.	In addition to the meets criteria, the program discusses plans to enhance current course offerings that link to student/community needs and positions the program for improved student outcomes.
Challenges	The program does not incorporate weaknesses and challenges into planning.	The program incorporates weaknesses and challenges into planning.	The program incorporates weaknesses and challenges into planning that demonstrate the need for expansion.

Mission and Purpose:

San Bernardino Valley College maintains a culture of continuous improvement and a commitment to provide high-quality education, innovative instruction, and services to a diverse community of learners. Its mission is to prepare

students for transfer to four-year universities, to enter the workforce by earning applied degrees and certificates, to foster economic growth and global competitiveness through workforce development, and to improve the quality of life in the Inland Empire and beyond.

What is the mission statement or purpose of the program?

San Bernardino Valley College Welding Technology Program provides quality industry recognized welding training and certifications to a diverse community of learners. Its mission is to prepare students to enter the workforce by earning applied degrees, certificates, and industry certifications, to foster economic growth and global competitiveness through workforce development, and to improve the quality of life in the Inland Empire and beyond.

How does this mission or purpose relate to the college mission?

The San Bernardino Valley College Welding Technology Program is fully supportive of the college mission and is continually seeking ways to improve the program to reach and support a diverse community of learners. The program provides certificate and/or associate of science degree options for students who plan on entering the workforce upon graduation. The program provides stable employment opportunities within a culture of continuous improvement with a focus of improving the quality of life in the Inland Empire and, by preparing students for high paying jobs and providing industry recognized certification as a part of the courses, the program is also fostering economic growth and global competitiveness.

Productivity:

Provide additional **analysis and explanation** of the productivity data and narrative in the EMP summary if needed. Use data from charts (FTEs; Enrollment; FTFE and WSCH per FTFE). Explain any unique aspects of the program that impact productivity data, for example, Federal Guidelines, Perkins, number of workstations, licenses, etc.

The FTES was on a downward trend for the 2013-2014 through the 2015-2016 years. The update for the previous full 4 year efficacy submitted February 2016 explained that the program was stabilized since a downsizing caused by a renovation project and once again positioned for growth. This has proven to be a correct analysis as the FTES, Duplicated Enrollment, and WSCH per FTEF have all significantly improved.

Since the last full 4 year efficacy review, the welding technology program has experienced significant improvements in productivity. In fact, the FTES for the 2017-2018 year was 89.98. The highest it has been for all of the years represented in the most recent EMP. The FTES went from 49.52 to 89.98 in just 2 years. This is a 33.68% increase from the 2016-2017 year to the 2017-2018 year and a 81.7% increase in FTES from the 2015-2016 to the 2017-2018 year.

As could also be expected, the duplicated enrollment shows a remarkable improvement from the low of 326 during the 2015-2016 year and is now at the highest recorded for the years represented on the most recent EMP coming in at 513 duplicated enrollments.

The FTEF has increased a small amount to the highest level for the years represented and was 9.39 for the 2017-2018 year. This is not of significance however since the WSCH per FTEF is up to 287 showing improvement for the fourth year in a row.

The efficiency (WSCH per FTEF), even with the improvement, is still not where it should be because of the specialized nature of the program. The welding classes are heavy on the lab requiring specialized equipment which results in lower enrollment in each course. This is amplified by small facilities that restrict the enrollment cap in some classes to as low as just 15. The program is continuing to apply for grant funds to improve the facilities and equipment to continue the increase in efficiency.

Relevance and Currency, Articulation of Curriculum:

The Content Review Summary from Curricunet indicates the program's current curriculum status. If curriculum is out of date, explain the circumstances and plans to remedy the discrepancy. (NOTE: If the report is inaccurate, contact Mary Copeland, Co-Chair, Curriculum Committee, (mcopel@valleycollege.edu) or Kay Dee Yarbrough, Administrative Curriculum Coordinator, (kyarbrough@sbccd.cc.ca.us) for updated information.

Applied Technology, Transportation & Culinary Arts				
Welding Technology				
	Course	Status	Last Content Review	Next Review Date
	WELD 010 Introduction to Welding	Active	12/10/2018	12/10/2024
	WELD 012 Oxy-Fuel Welding	Active	12/10/2018	12/10/2024
	WELD 015 Gas Tungsten Arc Welding-Beginning	Active	12/10/2018	12/10/2024
	WELD 016 Gas Tungsten Arc Welding-Intermediate	Active	12/10/2018	12/10/2024
	WELD 017 Gas Tungsten Arc Welding-Advanced	Active	12/10/2018	12/10/2024
	WELD 027 Inspection of Welds: Destructive Testing	Active	12/10/2018	12/10/2024
	WELD 028 Inspection of Welds: Non-Destructive Examination	Active	12/10/2018	12/10/2024
	WELD 045 Shielded Metal Arc Welding-Beginning	Active	12/10/2018	12/10/2024
	WELD 046 Shielded Metal Arc Welding-Intermediate	Active	12/10/2018	12/10/2024
	WELD 047 Preparation for Shielded Metal Arc Welding (SMAW) Pipe	Active	12/10/2018	12/10/2024
	WELD 048 Shielded Metal Arc Welding (SMAW) - Pipe	Active	12/10/2018	12/10/2024
	WELD 060 Fabrication and Layout-Beginning	Active	12/10/2018	12/10/2024
	WELD 061 Layout Fitter II	Active	04/13/2015	04/13/2021
	WELD 065 Welding Inspection Visual-AWS-CWI	Active	12/10/2018	12/10/2024
	WELD 066 Preparation for Los Angeles City Welding Certification-Structural (AWS D1.1)	Active	12/10/2018	12/10/2024

	WELD 067 Structural Steel Special Inspection (ICC)	Active	12/10/2018	12/10/2024
	WELD 068 Preparation for Los Angeles City Welder Certification - Reinforced Steel and Light Gauge Steel	Active	12/10/2018	12/10/2024
	WELD 077 Introduction to Continuous Wire Welding	Active	12/06/2016	12/06/2022
	WELD 080 Gas Metal Arc Welding - Beginning	Active	12/10/2018	12/10/2024
	WELD 081 Gas Metal Arc Welding-Intermediate	Active	12/10/2018	12/10/2024
	WELD 082 Gas Metal Arc Welding-Advanced	Active	12/10/2018	12/10/2024
	WELD 090 Flux Cored Arc Welding-Gas Shielded	Active	12/10/2018	12/10/2024
	WELD 091 Flux Cored Arc Welding-Self Shielded	Active	12/10/2018	12/10/2024
	WELD 092 Flux Cored Arc Welding-Advanced	Active	12/10/2018	12/10/2024
	WELD 098 Welding Work Experience	Active	09/24/2018	09/24/2024
	WELD 099 Independent Study in Welding Technology	Active	10/21/2013	10/21/2019
	WELD 645 Shielded Metal Arc Welding-Beginning	Active	12/10/2018	12/10/2024
	WELD 646 Shielded Metal Arc Welding-Intermediate	Active	12/11/2018	12/11/2024
	WELD 660 Fabrication and Layout-Beginning	Active	12/11/2018	12/11/2024
	WELD 666 Preparation for Los Angeles City Welding Certification-Structural (AWS D1.1)	Active	12/11/2018	12/11/2024
	WELD 680 Gas Metal Arc Welding-Beginning	Active	12/11/2018	12/11/2024
	WELD 681 Gas Metal Arc Welding-Intermediate	Active	12/11/2018	12/11/2024
	WELD 690 Flux Cored Arc Welding-Gas Shielded	Active	12/11/2018	12/11/2024
	WELD 691 Flux Cored Arc Welding-Self Shielded	Active	12/11/2018	12/11/2024
	WELD 010 Introduction to Welding	Historical		

	WELD 010 Introduction to Welding	Historical		
	WELD 010 Introduction to Welding	Historical		
	WELD 012 Oxy-Acetylene Welding	Historical		
	WELD 012 Oxy-Acetylene Welding	Historical		
	WELD 012 Oxy-Acetylene Welding	Historical		
	WELD 015 Beginning Gas Tungsten Arc Welding (GTAW)	Historical		
	WELD 015 Gas Tungsten Arc Welding-Beginning	Historical		
	WELD 015 Beginning Gas Tungsten Arc Welding (GTAW)	Historical		
	WELD 016 Gas Tungsten Arc Welding-Intermediate	Historical		
	WELD 017 Gas Tungsten Arc Welding-Advanced	Historical		
	WELD 023 Oxy-Acetylene Welding	Historical		
	WELD 027 Inspection of Welds: Destructive Tests	Historical		
	WELD 027 Strength of Materials Testing: Destructive	Historical		
	WELD 027 Inspection of Welds: Destructive Tests	Historical		
	WELD 027 Inspection of Welds: Destructive Tests	Historical		
	WELD 027 Inspection of Welds: Destructive Tests	Historical		
	WELD 028 Inspection of Welds: Non-Destructive Examination	Historical		
	WELD 028 Strength of Materials Testing: Non-Destructive	Historical		
	WELD 028 Inspection of Welds: Non-Destructive Examination	Historical		
	WELD 028 Inspection of Welds: Non-Destructive Examination	Historical		
	WELD 045 Shielded Metal Arc Welding	Historical		
	WELD 045 Beginning Shielded Metal Arc Welding (SMAW)	Historical		
	WELD 045 Beginning Shielded Metal Arc Welding (SMAW)	Historical		

WELD 045 Beginning Shielded Metal Arc Welding (SMAW)	Historical		
WELD 046 Intermediate Arc Welding	Historical		
WELD 046 Intermediate Shielded Metal Arc Welding (SMAW)	Historical		
WELD 046 Intermediate Shielded Metal Arc Welding (SMAW)	Historical		
WELD 047 Power Plant and Field Pipe Welding I	Historical		
WELD 047 Power Plant and Field Pipe Welding I	Historical		
WELD 047 Intermediate Shielded Metal Arc Welding	Historical		
WELD 047 Power Plant and Field Pipe Welding I	Historical		
WELD 048 Power Plant and Field Pipe Welding II	Historical		
WELD 048 Power Plant and Field Pipe Welding II	Historical		
WELD 060 Layout Fitter I	Historical		
WELD 060 Layout Fitter I	Historical		
WELD 060 Layout Fitter I	Historical		
WELD 060 Layout Fitter	Historical		
WELD 061 Layout Fitter II	Historical		
WELD 061 Layout Fitter II	Historical		
WELD 062 Consolidated Welding	Historical		
WELD 062 Consolidated Welding	Historical		
WELD 063 Consolidated Welding	Historical		
WELD 063 Consolidated Welding	Historical		
WELD 064X4 Consolidated Welding	Historical		
WELD 064X4 Consolidated Welding	Historical		
WELD 065 Welding Inspection Visual	Historical		
WELD 065A Welding Inspection Visual	Historical		
WELD 065B Welding Inspection Visual	Historical		
WELD 066 Los Angeles City Welding Certification	Historical		
WELD 066 Preparation for Los Angeles City Welding Certification	Historical		

	WELD 066 Los Angeles City Welding Certification	Historical		
	WELD 066A Los Angeles City Welding Certification	Historical		
	WELD 066B Los Angeles City Welding Certification	Historical		
	WELD 067 Structural Steel Special Inspection (ICBO)	Historical		
	WELD 067A Structural Steel Special Inspection (ICBO)	Historical		
	WELD 067B Structural Steel Special Inspection (ICBO)	Historical		
	WELD 068 Los Angeles City Reinforcing Steel and Structural Sheet Steel (Light Gauge)	Historical		
	WELD 068 Los Angeles City Reinforcing Steel and Structural Sheet Steel (Light Gauge)	Historical		
	WELD 070X4 Tig Welding	Historical		
	WELD 070X4 TIG Welding	Historical		
	WELD 077 Introduction to Continuous Wire Welding	Historical		
	WELD 077X4 Continuous Wire Welding	Historical		
	WELD 080 Gas Metal Arc Welding-Beginning	Historical		
	WELD 081 Gas Metal Arc Welding-Intermediate	Historical		
	WELD 082 Gas Metal Arc Welding-Advanced	Historical		
	WELD 090 Flux Cored Arc Welding-Gas Shielded	Historical		
	WELD 091 Flux Cored Arc Welding-Self Shielded	Historical		
	WELD 092 Flux Cored Arc Welding-Advanced	Historical		
	WELD 098 Welding Work Experience	Historical		
	WELD 123 Oxy-acetylene Welding	Historical		
	WELD 145 Shielded Metal Arc Welding	Historical		
	WELD 146 Intermediate Arc Welding	Historical		

	WELD 147 Intermediate Shielded Metal Arc Welding	Historical		
--	--	------------	--	--

Articulation and Transfer

List Courses above 100 where articulation or transfer is <u>not</u> occurring	With CSU	With UC
N/A		

Describe your plans to make these course(s) qualify for articulation or transfer. Describe any exceptions to courses above 100.

N/A

Currency

Review all mentions of your area in the catalog. Is the information given accurate? If not, briefly identify the areas that will be revised.

The information in the college catalog appears to be accurate.
--

If any courses are no longer offered, list them here. (Include Course # and Title of the Course). If the information is inaccurate and/or there are listed courses not offered, how does the program plan to remedy the discrepancy?

Follow the link below and review the last college catalog data.

<http://www.valleycollege.edu/academic-career-programs/college-catalog.aspx>

If your information needs updating, contact Kay Dee Yarbrough, Administrative Curriculum Coordinator, (kyarbrough@sbccd.cc.ca.us).

Challenges:

Referencing the narratives in the EMP summary, provide any additional data or new information regarding planning for the program. In what way does your planning address trends and weaknesses in the program?

Significant growth has been a challenge. This growth can be seen in the latest EMP data and narratives. Our labs are being used at the current maximum capacities because of equipment and space restrictions. The program is working hard to keep up with the student demand but did turn away some students Spring 2019. Because of this, the program is in the process of changing the lab configuration to free up new lab spaces for the growth we are experiencing. We will also continue to advocate for additional lab space in the new applied technical building that is being planned since the passing of measure CC.

Another challenge is lack of student support. The welding program does not have any full-time lab technicians/professional experts. See the latest EMP under Departmental/Program Goals 1, Challenges & Opportunities and Action Plan. This lack of full-time lab technicians has a negative effect on services to our students and lab safety which directly affects student success. Faculty duties/responsibilities for welding include large amounts of classified work which takes faculty time away from instruction including: 1. sets up and prepares class demonstrations and experiments 2. Inventories, orders, receives, and stocks materials, supplies, and equipment for laboratory use. 3. Issues and maintains records on materials loaned to students, instructors, and other departments; issues and maintains records on lockers. 4. Demonstrates and provides instruction to students in proper use and care of laboratory materials and equipment; assists in maintaining security of laboratories, laboratory equipment, supplies, and materials. 5. Cleans up after each lab session by scrapping metal, organize tools, equipment, and restocking supplies. 6. Calibrates and maintains equipment and supplies. 7. Monitors production of, collects, and processes hazardous waste materials and toxic chemical materials resulting from lab classes; collects and properly stores hazardous waste. 8. Evaluates chemicals and equipment for suitability, cost, availability, and other factors. 9 May maintain expenditure records and provide data for budget estimates. 10. Performs related duties as required.

Most departments have a lab technician to help with all these responsibilities. This means that welding faculty have less instruction time with their students since they are required to perform classified work.

The program continues to advocate every chance possible for full time lab assistants to provide better support for the students. Program review needs assessments are submitted every year requesting full time lab assistants. The welding program has even submitted a request for funding through the local share of Strong Workforce to cover the cost of a lab technician.

In addition to the need for a full-time lab assistant, there is also a need for additional faculty. See Departmental/Program Goals 1 and 2 on the most recent EMP as well as the Challenges & Opportunities section. The program would like to offer additional courses/course sections but finding adjuncts has been difficult. An additional full-time faculty would allow the program to provide expanded and improved course offerings to the community. Program review needs assessments are submitted every year requesting full time faculty. The welding program has even submitted a request for funding through the local share of Strong Workforce to cover the cost of an additional full-time faculty.

VI: Questions Related to Strategic Initiative: Provide Exceptional Facilities

Goal: SBVC will support the construction and maintenance of safe, efficient, and functional facilities and infrastructure to meet the needs of students, employees, and the community.

SBVC Strategic Initiatives: [Strategic Directions + Goals](#)

	Does Not Meet	Meets	Exceeds
Facilities	The program <u>does not provide an evaluation</u> that addresses the sustainability of the physical environment for its programs.	Program <u>provides an evaluation</u> of the physical environment for its programs and <u>presents evidence</u> to support the evaluation.	In addition to the meets criteria, the program has <u>developed a plan</u> for obtaining or utilizing additional facilities for program growth.

Facilities:

Provide an evaluation of the facilities in your area and their impact on the educational environment for your students (classroom facilities, technology, space needs, maintenance issues, etc.). Address sustainability of the facility (including technology needs).

There are three labs available for welding classes but just 2 of them are being used efficiently. Because of this, the program is in the process of changing the lab configuration to free up new lab spaces for the growth we are experiencing. This will help temporarily but if the program continues to grow additional space will soon be required. With the passing of measure CC, we will also continue to advocate for additional lab space in the new applied technical building that is being planned.

The program has tried to schedule in as many days/times as possible to use the available facilities efficiently. There are however some openings that don't get filled in the mornings and afternoons because of the shortage of available faculty. The program continues to advocate every chance possible for additional full-time faculty to allow for the scheduling of the facilities during times they are currently unused. Program review needs assessments are submitted every year requesting full-time faculty. The welding program has even submitted a request for funding through the local share of Strong Workforce to cover the cost for a full-time faculty.

In addition to the size of the facilities and scheduling, there are several other factors that impact the educational environment for our students. These are mostly safety concerns including: Ventilation, ceiling height, flammable materials (pine needles), noise levels, room temperature, and growth needed for added technology.

The ventilation and ceiling height go together. Since the ceilings are low the labs fill up with fumes and gasses very quickly and the ventilation systems do not filter the air fast enough to keep up with a full class of students welding. The program has purchased some fans and use those to help circulate air. A secondary or supplemental air filter is also being tested in one of the labs with success. This, however, is expensive and funds are currently unavailable to purchase the additional units that are required to provide a safe environment for the students. The program has requested funds through the Local Shares of the Strong Workforce Program and will also be requesting funds through the program review needs assessment process.

The program is working closely with M & O to make sure that the pine needles and other flammable materials are kept clear from around the welding areas as flammable materials mixed with welding always results in fires. The program has been setting less fires this semester as M & O has been doing an excellent job of keeping up with the pine trees and the rainy weather has also been helping. We will however continue to monitor this extremely closely.

The program is working with the district to determine if the noise levels in the welding labs are within the acceptable range required by the Occupational Safety and Health Administration (OSHA). In the meantime, students are encouraged to use ear plugs that are provided by the program and available in the tool room.

Room temperature has also been a concern and both faculty and students have been complaining. The labs are extremely hot during the summer 100° plus during the summer before welding even starts and it goes up from there. During the winter it often starts out colder inside the labs than the outside temperature. The program is investing in several thermometers to measure and monitor the temperature of the labs. Once the exact temperatures are known, the program will be addressing this at the safety committee to see what can be done.

The last major item is space for technology. The program has recently expanded its use of technology by adding a CNC plasma cutting system in one of the labs. It is requested on scheduling that the classes that incorporate this technology be held in a computer lab. This is becoming more difficult as programs are being encouraged to incorporate technology while most of the classrooms in the Applied Technology building do not have any computers available for student use. We will be trying to address this on the next program review needs assessment process and will also be advocating for computer labs in the new Applied Technology building being planned since the passing of measure CC.

VII: Previous Does Not Meets Categories

Listed below, from your most recent Program Efficacy document, are those areas which previously received “Does Not Meet.”

Address, in **DETAIL AND WITH SPECIFIC EXAMPLES**, how each deficiency was resolved. If these areas have been discussed elsewhere in this current document, provide the section where these discussions can be located.

Two-Year Review—Spring 2017

Demand for the Program: The program demonstrates continued need for the program with labor market data and advisory committee impact support. FTES are not explained. The program needs to address drop in enrollment and the need for the program. The program also does not address reduced section count that could explain the drop-in enrollment. Why has it reduced sections?

Response:

I am a little confused as to why the committee is requesting a thorough analysis of FTES, Drop in enrollment and reduced sections for a 2 year report for “Demand for the Program” when what the committee asked for was **“(Provide update since last full efficacy review; examples include labor market data, advisory input, etc.)”** If an evaluation of FTES, enrollment and sections offered, is really what the committee wants, please specify that on the report.

That being said, the FTES for the welding program did see a significant drop for the 2013-2014 year to the 2014-2015 year. FTES for the 2013-2014 year was 75.98 and 52.31 for the 2014-2015 year. This was caused by a remodeling of the primary welding lab. During the remodel, class sections and caps had to be reduced as the program was running in approximately 50% of normal allotted lab space. For the 2015-2016 year, the most recent data available at the time of preparing the 2 year review, there continued to be a small drop in FTES. This was just a 2.79 drop in FTES from the 2014-2015 year to the

2015-2016 year. This showed the program was beginning to stabilize as the drop in FTES was significantly less than the previous year.

As could also be expected, the enrollment followed a similar trend as the FTES dropping significantly from the 2013-2014 year to the 2014-2015 year and then experienced just a slight drop from the 2014-2015 year to the 2015-2016 year.

Sections offered was 39 for the 2013-2014 year. This was reduced, because of the lab remodel, to 32 for the 2014-2015 year and then to just 28 for the 2015-2016 year. An additional reason for scheduling less sections for the 2015-2016 year was the efficiency. for the 2014-2015 year the efficiency (WSCH per FTEF) had dropped to just 201. by reducing the sections even more to 28 for the 2015-2016 year, the program was able to begin the process of increasing the efficiency of the program by increasing the enrollment cap in each section and offering less sections to try and increase the WSCH per FTEF.

This put the program on track to regrow into the remodeled facility. In fact, the FTES for the 2017-2018 year was 89.98. The highest it has been for all of the years represented in the most recent EMP. The FTES went from 49.52 to 89.98 in just 2 years. This is a 33.68% increase from the 2016-2017 year to the 2017-2018 year and a 81.7% increase in FTES from the 2015-2016 to the 2017-2018 year.

As could also be expected, the duplicated enrollment also shows a remarkable improvement from the low of 326 during the 2015-2016 year and is now at the highest recorded for the years represented on the most recent EMP coming in at 513 duplicated enrollments for the 2017-2018 year.