

Institutional Program Review—2018-2019
Program Efficacy Phase: Career Technical Education (CTE)
Two-Year Mini-Review
DUE: Monday, March 18, 2019 by NOON

Send by e-mail to the Program Review Co-Chairs:

Paula Ferri-Milligan pferri@sbccd.cc.ca.us
Wallace Johnson wjohnson@sbccd.cc.ca.us

Our current efficacy cycle for full review is every four years. However, in order to comply with Title 5 regulations, CTE programs are required to review their programs every two years. To meet this requirement, but also not to over-burden these programs, we have instituted a mini-review between the full efficacy cycles (that is, two years following the most recent efficacy report).

This review is not designed to be comprehensive, but rather, it is expected to be a two-year **update** since the last full efficacy report. Specifically, this update should address the following seven program components:

1. Purpose
2. Demand
3. Quality
4. External Issues
5. Cost
6. Two-Year Plan
7. Deficiencies

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

Instructions:

For each of the seven sections:

1. Mark the checkbox that best identifies where the program stands.
2. Provide a brief supporting narrative. Within each section there are examples related to that particular area, which could serve to help describe your program status. It is not necessary to address every item listed; these are included as possible examples. If you have other relevant information pertaining to a given area, then you are encouraged to include that as well.
3. **Scan the documents—with signatures.**
4. **Do NOT change the file name**

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.**

The purpose of this report is a mid-term update in order to comply with Title 5; therefore, the length should be ***no more than five pages***. The boxes for each section are expandable; take the space needed for each section. Keep in mind that this report is an **update** of the previous two years rather than a comprehensive analysis.

CAREER TECHNICAL EDUCATION PROGRAM TWO-YEAR REVIEW

Date: March 18, 2019

College: San Bernardino Valley College

Program: Automotive Technology

1. Purpose of this Program

No Changes in Purpose
in the Last Two Years

Minor Changes in Purpose
in the Last Two Years

Significantly Changed Purpose
In the Last Two Years

(Provide update since last full efficacy review; examples include description, mission, target population, etc.)

The Automotive program provides high quality instruction and services to a diverse community of learners. We provide our students with the needed skills in order to be successful in today's industry and to transfer to 4 year college. All courses offered apply towards a certificate or degree and allow our students to work day or evening in order to complete the required courses and complete their Certificate or Degree and enter into industry or transfer.

2. Demand for this Program

Low Demand

Adequate Demand
for our Students

High Demand

(Provide update since last full efficacy review; examples include labor market data, advisory input, etc.)

In 2017, there were 13,418 automotive technology occupational group jobs in the Inland Empire/Desert Region. Across the region, employment related to the automotive technology occupational group is expected to increase by 7% through 2022. Employers in the region will need to hire 7,724 workers during the five-year timeframe to fill new jobs and to backfill jobs that workers are permanently leaving (includes retirements).

The median wage for each of the occupations in the automotive technology occupational group is above the MIT Living Wage estimate of \$12.30 per hour for a single adult living in the Inland Empire/Desert Region.

There appears to be an opportunity for program growth based on the average annual number of program completions for the selected community college programs (213 average annual community college credentials, 885 credentials from other educational institutions, 1,098 total average annual credentials) and the annual job openings for the automotive technology occupational group in the local region (1,545 annual job openings).

The department continues to promote the automotive technician career path to our local students and their parents. With the current amount of advance technology in the automotive industry we need students to be at a high level in basic skills. Providing that information to high school and middle school students is important and will better prepare the technicians of the future.

Region	2017 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Inland Empire/Desert	13,418	7%	7,724	1,545	19%

3. Quality of this Program

Needs Significant
Improvement

Meets Student Needs

Highest Quality

(Provide update since last full efficacy review; examples include core indicators, student outcomes, partnerships, certificates, degrees, articulation, faculty qualifications, diversity, grants, equipment, etc.)

In the data from the 16-17 EMP, the department issued 21 certificates and 8 degrees. The department is continuing to upgrade and implement new equipment and course content to existing courses that will give the students the education and skills needed to perform diagnostic and service procedures on advance technology systems and components. The department continues to relay the importance of completing a certificate or degree and how it will benefit the students in achieving their long term goals. Much of the department's success is lost because of the students need to gain employment and the department providing those skills and education in each and every class. Without finishing the requirements for the certificate or degree the students begin their career at an entry level position but lack the education and experience to move to the next step because they did not finish the required courses. The department will provide a certificate that should come online in the Fall of 2019 that is geared towards a basic preventative maintenance technician and will allow the students to complete in one year. This will provide the students with a short term goal and give them more structure to their educational plan.

Core Indicators: Based on student evaluations and testing with objective and practical exams, students are meeting and exceeding their goals within the core indicators. The student working effectively in group settings allows expression of knowledge, along with personal and professional development, as a tool for the Auto departments structure.

Partnerships: The Automotive Department has partnered with local Dealerships which have employed our students after graduation. Fairview Ford, Chevrolet and Toyota are some of our partners that have help in promoting our hybrid and EV program by offering instructional assistance and support to make the class successful. Other partners are Pep Boys, Meineke Auto Repair, Firestone Complete Auto Care, American Transmission Exchange, Goodyear Tire Center and NAPA – Genuine Auto Parts. Having these companies as partners will establish the college as one of the premier facilities to look at for hiring students.

Certificates: The students that attend the Automotive classes are required to take an average of 30 units of lectures and lab training to achieve the certificates offered within the department. Success rates have been between 77% and 79% for 2016-17 to 2017-18 years. The retention rates are between 93% to 89% in the same period 2016-17 and 2017-18 years. The jobs the students are finding will not allow them to continue their education during the times the classes are available. The department has moved the classes to different time to assist the students in completing their goal of getting a certificate and will monitor the enrollment for 2018-19 year to see if this strategy is successful. Some students don't receive their certificates due to the industry seeking them out and hires them on the spot. Occasionally they come back and become completers. The Auto department has monitored and identified Preventive Maintenance which is needed in the industry. That new certificate is at the State level presently.

Degrees: The department also has a AS Degree. The Automotive classes at SBVC are offered weekdays in the morning and evening to accommodate the working students schedule. Again, by offering these courses with flexible hours work well with all students and supports industry demands.

Articulation: The Automotive has articulated with AB Miller High, Colton, Redlands, Yucaipa ROP program, Kaiser High, and Summit High. The students will have direction established for when they leave high school. The Big Bear high school is going to be doing off site

classes in Automotive. The FTES will increase with the off-site training.

Faculty Qualifications: The Full time Instructors have been working within the industry for over 20 years with hands on experience.

Diversity: Diversity is the strength the Auto department. The interaction with students of diverse groups enhances social development. These interactions of the groups widen their social circle and prepare students for future career success.

Grants: The Department uses funding from Perkins and Strong Work Force local and Strong Work Force Regional funding. The Strong Workforce and Regional have not been very supportive of the Automotive programs at SBVC. With the growing and demand of electric cars and Hybrids in the area the department cannot expand to be equivalent with other colleges within the Inland Empire because of the lack of funding. The department is looking into other grants to help expand our growth.

Equipment: The equipment that is within the Automotive department is the latest technology within the industry. The Perkins grant and the Edison Grant has proven beneficial for the department. The newest component purchase by the Auto department is the Hybrid Classroom training module to be used in the "NEW" Auto Hybrid and EV class.

4. External Issues

Not Consistent with
External Issues

Complies with External Issues

Benefits From and Contributes
to External Issues

(Provide update since last full efficacy review; examples include legislation, CCCCCO mandates, Perkins, CTE transition, CalWORKs, WIOA, Career Ladders, etc.)

The Automotive Technology program participates in Perkins grant (VTEA) and uses the funds for equipment and instructional supplies and to fund professional experts who provide the students with assistance in the lab. The department works with the strong workforce grant local and regional shares. The grant provides funds for equipment and new emerging technologies. The regional meetings has allowed us to collaborate with other local colleges and mirror our courses in order to make it easier for students to gain credit from college to college. We currently have about 95% of courses completed. The department articulates with all local feeder schools and provides a path for the students to complete a certificate or degree.

Since the Full Efficacy Review, a bond was passed to build a new CTE building on campus. The first phase of designing will be in Fall 2019. We expect to take residence in Fall 2024, until then, we must maintain our facility and acquire tooling and equipment that we can move into the new building.

We will continue to request funding from Perkins, Program Review and Strong Workforce and continue to ask the industry for equipment donations and/or grant funds.

5. Cost of this Program

Expenditures
Exceed Income

Income Covers
Expenditures

Income Exceeds
Expenditures

(Provide update since last full efficacy review; examples include enrollment/FTES generated & in-kind contributions of time/resources minus salaries/equipment/supplies, etc.)

The program's FTEF has drop slightly from 2016-2017 to 2017-2018 by .68. This is due to the growing economy and the increase in job opportunities for our students in our local community. The department continues to promote career development and the opportunities for growth in the

automotive mechanical area and the importance to have a career and not just a job. The department is constantly recruiting and providing information about the college and the department and fill our offered courses.

The support the Auto Department is getting from its advisory committee is outstanding. The Perkins funding this year was low at about \$43,000. These funds are our biggest budget for new equipment, instructional supplies, travel, professional development and professional experts combined. The Professional Experts assist the instructors, with students in "out of sight" areas and promotes an excellent safety record. The Automotive Department is looking into other avenues of support for equipment, instructional supplies and professional experts through program review. The department is very pleased with the support from Edison with a \$50,000.00 grant toward the Hybrid expansion. The Strong Workforce Program funding also helps the program acquire new equipment and update/develop new curriculum and programs to meet the industry and employer needs.

6. Two-Year Plan

Need Significant Changes
And/or Increased Resources
to Continue

On Track for
Next Two Years

Significant Growth
Anticipated

(Provide update since last full efficacy review; examples include recommendations, project future trends, personnel and equipment needs, etc.)

The automotive industry is undergoing a period of extraordinary change, including advancements associated with powertrain, electronics, software, changing consumer preferences, and new materials. It is important to understand that the strong workforce program is not only used to strengthen the knowledge of our students of modern technology but also to outline the scientific research and technologies developments for a two-year timeframe that need to be undertaken to help meet the goals for reductions in oil consumption and carbon emissions from the ground transport vehicle sector of the economy. In order to fully meet the Partnership goals and current and future standards, additional approaches will be required. Electric drive vehicles, while still a small part of the market, have emerged as strong candidates for meeting these requirements, provided that a green electric grid evolves in parallel. The need for this project also addresses the gap identified in LMI and supply data by attracting more students and providing additional industry recognized credentials. The principal barrier to achieving Automotive, Automotive Collision and Heavy Duty Truck (Class 3 – 8) goals are the lack of fundamental understanding of the relevant physics, chemistry, and thermodynamics of newer technology. Consequently, the student's educational status and progress toward reaching its goals is best measured by advances in knowledge, the effectiveness of the communication of that knowledge to the appropriate industries demands, and ultimately the application of that knowledge to achieve an improvement in a vehicles-power train and vehicle control systems. These newer technologies are needed by graduates to secure employment in this rapidly changing industry. When combined with marketing and recruitment efforts underway, this project will reshape the image of automotive, automotive collision, and heavy-duty truck (Class 3 – 8) careers, increase student interest and enrollment, and improve completion rates across the region.

The needs are Hybrid and Electrical Vehicles as well as Hybrid and EV instructors along with all coordinating scanners, diagnostic equipment, lifts, teaching props and modules and tooling.

7. Progress on Previous Does Not Meets

No Progress

On Track for
Next Two Years

Significant Progress

What steps are being taken to address previous deficiencies as identified on the previous full efficacy review?

This efficacy under accomplishments shows how the financial support from the college is reflected by the rise in success and retentions rates. The program gives examples of how purchasing additional training modules and adding more workstations allowed the students to work in smaller groups and at their own pace to complete the lab task which increased student success. We will continue to upgrade tools and equipment which support student success and provide resources to help the students with course content and come up with ways to help all students achieve to the best of their ability with more support from DSPS and other departments which foster student success.

Student Success: Instructional success is clearly analyzed and demonstrated. Retention rates are high and success rates adequate. They note that despite the fact that students take courses for skills they need for work and leave without finishing certificates or degrees, the program is generally showing growth in awarding both. Some supplemental data on job growth and income are usefully included. There is an error in this section having to do with FTEF: they note that the department "maintains FTEF load of 8.3, but operates with 3 Full Time Faculty and 2 Adjunct Faculty" – since FTEF load is for year (two semesters), their current faculty complement is at near parity with load instead of being well under, as the statement seems to suggest. 46 However, though program includes SLO Cloud evidence of regular SLO evaluation and department and advisory committee discussions on SLOs, the notations in the meeting minutes are vague. Demonstration of active use of SLOs is missing (revision of SLOs, changes to curriculum or teaching due to SLO data, etc.) In addition, part of SLO discussion is in PLO area. While PLO maps are included, there is no evidence of evaluation of the PLOs (either by semester or 3-year).

Response.

The programs SLO information has been very helpful in structuring the Auto departments' goal of being successful. The department has over 80% of the students meeting or exceeding the Program SLOs. The SLOs are given every semester in all sections. The use of the SLOs have directed the Auto program to improve its training techniques and establish a better foundation of training for which the students would grasp information needed to support them in the quest for better education and job skills.

The assessment outcomes were discussed in the department meeting on 2-17-19 to align with the course outline of records. We are currently reviewing all SLOs for each course and will be updating them to meet the educational and career goals of our students to meet job requirements.

In the Spring 2019, the department will discuss in detail, all SLO's and PLO's for all courses as well as a major topic at the next Automotive Advisory meeting.

We have acquired new equipment in the labs and tools in the labs, enhanced curriculums and developed new programs in support of the program and Student learning outcomes.

We are also in the process of aligning PLOs with the Program Review timeline.

The Automotive department included more components within the lecture classes it helps identify and have more understanding of what is being taught. Now that the department has incorporated lecture into the lab and students can now relate to where components are located and its function of why the component was installed onto the engine or vehicle.

[Empty rectangular box]

Signatures:

Haniar
Administrator

3/18/2019
Date

Mark S. Witham
Faculty

3/18/2019
Date

Sean H.
Advisory Committee Member

3/18/2019
Date

