

INSTITUTIONAL PROGRAM REVIEW 2015 – 2016
Program Efficacy Phase: Instruction
DUE: March 30, 2016

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 each spring 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.

Two or three committee members will be meeting with you to carefully review and discuss your 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 (March 4 and March 25, 2016). Final documents are due to the Committee co-chair(s) by **Wednesday, March 30** at midnight.

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

The efficacy process incorporates the EMP sheet, a curriculum report, SLO/SAO documentation. We have inserted the curriculum report for you. We have also inserted the dialogue from the committee where your last efficacy document did not meet the rubric. SBVC's demographic data will be available on or before February 26. Below are additional links to data that may assist you in completing your document:

California Community College Chancellor's Office Datamart: <http://datamart.cccco.edu/>

SBVC Research, Planning & Institutional Effectiveness:
<http://www.valleycollege.edu/about-sbvc/offices/office-research-planning>

California Community Colleges Student Success Scorecard:
<http://scorecard.cccco.edu/scorecard.aspx>

Program Efficacy

2015 – 2016

Complete this cover sheet as the first page of your report.

Program Being Evaluated

Aeronautics

Name of Division

Applied Technology, Transportation and Culinary Arts

Name of Person Preparing this Report

Extension

Tarif Halabi

Names of Department Members Consulted

James Hoyt, Tom Teegarden, David Cassillas

Names of Reviewers (names will be sent to you after the committee meets on February 19)

Joel Lamore, Paula Milligan, Kay Weiss

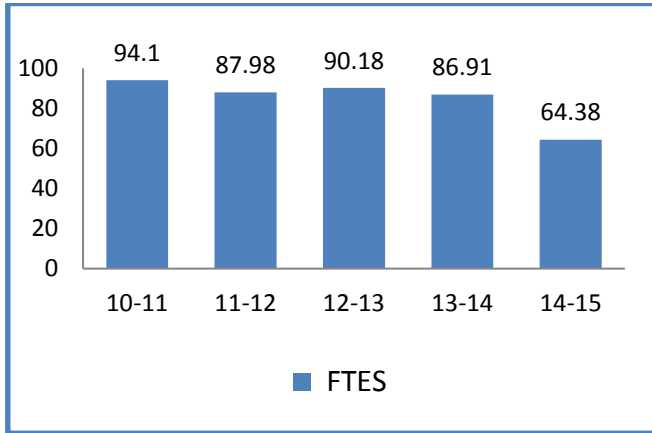
Work Flow	Date Submitted
Initial meeting with department	02/03/2016
Meeting with Program Review Team	03/03/2016, 03/25/2016
Report submitted to Program Review co-chair(s) & Dean	by midnight on March 30, 2016

Staffing

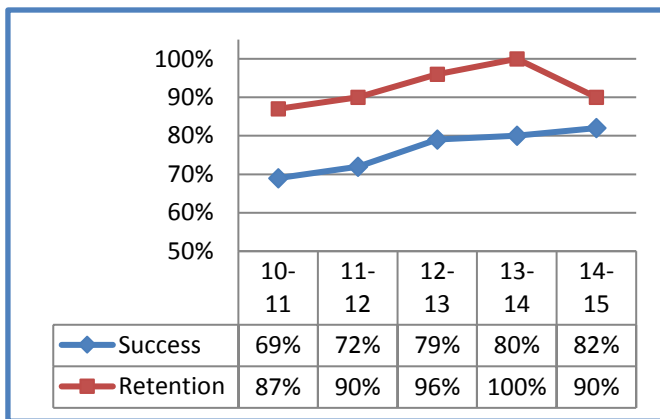
List the number of full and part-time employees in your area.

Classification	Number Full-Time	Number Part-time, Contract	Number adjunct, short-term, hourly
Managers	0	0	0
Faculty	0	1	5
Classified Staff	0	0	0
Total	0	1	5

AERONAUTICS EMP 2014-2015



	10-11	11-12	12-13	13-14	14-15
Duplicated Enrollment	477	417	431	304	242
FTEF	7.02	6.82	6.09	5.69	5.98
WSCH per FTEF	402	387	445	458	323



Description:

The Airframe and Powerplant Technician program prepares Students for employment in the aviation industry as a certified Airframe and Powerplant Mechanic. The curriculum encompasses 1900 hours of instruction, 750 hours in Airframe, 750 hours Powerplant, and 400 hours in the Airframe and Powerplant General Curriculum. The program is certified by the FAA under Federal Aviation Regulation Part 147. The industry analyst from Boeing predicts that 556,000 new mechanics and 498,000 pilots will be needed by 2032.

Assessment:

- FTES decreased by 25% within a year due to the sudden departure of the only full time Faculty and chair responsible for administering, promoting, and managing the program.
- WSCH per FTEF has decreased 19% in five years but most noticeably in the last year for above stated reason. Lack of program continuity of the faculty not being full-time.
- Even with reduced FTES and WSCH, Student success and retention are higher than the campus average. Program is #4 on campus in number of certificates issued.
- ZERO (0) full-time Faculty for 6 FTEF, F/T needed to grow program and do required administrative duties of faculty.
- Enrollment has dropped due to the lack of continuity of the faculty not being full-time.

Department Goals:

- Hire full-time faculty so program can grow.
- Fill the vacant laboratory assistant position.
- Focus on close association with industry representatives in a continuing effort to meet the needs of a changing workforce.
- Update instructional technology and teaching aids to meet these industry needs.
- Adapt and implement new regulatory and environmental requirements.

Challenges & Opportunities:

- Increased regulatory demands and high FTEF demonstrate importance of additional F/T faculty to grow program and meet the demands of industry.
- Difficult to recruit part-time faculty due to HIGH employability in industry and low adjunct faculty pay.
- Lab Assistant is needed to ensure continued student safety and to prepare lab for improved student learning and efficiency.
- Due to severe space constraints two lab sections are taught in one lab at the same time.

	10-11	11-12	12-13	13-14	14-15
Sections	20	19	17	12	14
% of online enrollment	0%	0%	0%	0%	0%
Degrees awarded	2	2	0	3	
Certificates Awarded	40	36	39	42	

Award Source:

http://datamart.cccco.edu/Outcomes/Program_Awards.aspx

TOP Code: 0950XX

Action Plan:

- Expose student to data that explains advantages of degree programs over minimum CTE course offerings.
- Demonstrate the need and importance of full-time faculty based on institutional and industry driven data. Hire lab assistant for safety and success.
- Pursue procurement of new technology environmentally friendly alternative fuel Powerplants and high technology composite structures.

Part I: Questions Related to Strategic Initiative: Access

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

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part I: Access		
Demographics	The program does not provide an appropriate analysis regarding identified differences in the program's population compared to that of the general population	The program provides an <u>analysis</u> of the demographic data and provides an interpretation in response to any identified variance. If warranted, discuss the plans or activities that are in place to recruit and retain underserved populations.
Pattern of Service	The program's pattern of service is not related to the needs of students.	The program provides <u>evidence</u> that the pattern of service or instruction meets student needs. If warranted, plans or activities are in place to meet a broader range of needs.

INSERT DEMOGRAPHIC DATA (PROGRAM & CAMPUS) Program Review Committee will provide this on or before February 26.

PLEASE SEE NEXT PAGE

Demographics - Academic Years - 2012-13 to 2014-15		
Demographic Measure	Program: Aeronautics	Campus-wide
Asian	6.0%	4.9%
African-American	18.1%	13.4%
Hispanic	43.0%	61.8%
Native American	1.6%	0.3%
Pacific Islander	0.4%	0.4%
White	26.5%	15.4%
Unknown	4.4%	0.6%
Female	17.0%	55.1%
Male	83.0%	44.7%
Disability	3.6%	5.6%
Age Min:	18	15
Age Max:	78	83
Age Mean:	29	27

Does the program population reflect the college's population? Is this an issue of concern? If not, why not? If so, what steps are you taking to address the issue?

In general, the program population numbers closely parallels, by ratio, the campus-wide numbers under each category or measure except for the female and male statistics. Aeronautics has historically been a male dominated field due to the heavy lifting and more physically strenuous requirements of the program. Nevertheless, there has been a significant increase of female enrollment compared with four years ago in that it went up from 3.63% to 17% which is quite noticeable, about six folds, but falls far short from paralleling the campus –wide number. This continues to be a challenge. But the six fold improvement illustrates the departments continuing efforts to recruit females to the program with presentations at local high schools, booths and recruitment activities, campus open house events, that are held throughout the year to illustrate the opportunities of degrees and certificates that are available to help them achieve a higher level of awareness of career paths for improving their lives. All the preceding efforts are undertaken by our Part Time Faculty that includes a female, to recruit potential students of both genders and the diverse ethnic backgrounds from the community that we serve into our program.

If we analyze each race category, we realize that Asian enrollment is 1.1% higher than campus average and three times higher than the previous four years. Also, it is encouraging to see that the African-American enrollment has exceeded the campus average by approximately 5 percent and has definitely turned the tide compared to four years ago where it was below campus-wide average showing the results of the program faculty's continued recruitment efforts. As for the Hispanic population, it seems that it constitutes the bulk of our student body both campus-wide and program-wise, but program-wise tends to be lower than campus average by about 19%. This has continually and consistently mirrored previous years data trends, one reason may be that, traditionally, the Hispanic population has not considered the aviation field as a stable and an in-demand field, but continued recruitment efforts within our community is making them more aware of the opportunities afforded to them by going through our program. In addition, for the Native American and Pacific Islanders categories, both have increased from the previous four years which had a zero statistic for enrollment. It seems that the Pacific Islanders numbers closely match the campus-wide average but the Native Americans far exceeded it even though it's a small number. Furthermore, the white male program population seems to be significantly higher than campus-average and has always been elevated and historically mirrored industry statistics. If we examine Current population Survey for 2015 data from the Bureau of Labor Statistics (www.bls.gov/cps/cpsaat11.pdf) shows the following percentage of employment in the field women at 5.2%, African American 8.3%, Asian 3.1%, and Hispanics at 13.6%, we find that our program enrollment, factoring in the inland empire demographics being heavily Hispanic, are in line with these statistics and thus correctly reflect the community that we serve and is in line with our Colleges mission statement of providing quality education and services that support a diverse community of learners. Lastly, it is also to note that students with disabilities percentages are lower than the campus average since the nature of the program does not lend itself well to students with certain physical disabilities. But we, can also see that we have had an improvement in that number compared with the previous four years. Some Federal Aviation Administration rules and regulations do affect the Disabled persons abilities to successfully complete the certificated program.

Pattern of Service

How does 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.

Our Airframe and Powerplant Maintenance curriculum is offered only in the daytime. One reason is that there is the limitation of laboratory space and equipment availability for the allotted elongated class times that are required by FAA. Meaning, that lab and equipment must be available to the students for extended periods of time during the day that would not leave enough time to schedule evening courses of the same subject matter let alone having enough Faculty to support the evening classes. Students have specified lab projects that are mandatory from the FAA. There is only so much space and laboratory equipment that is available and it would be very difficult to operate both an evening and day class due to this reason. Another reason is that a student is required to attend classes for the FAA mandated hours of instruction to receive a certificate. To complete these hourly requirements in a reasonable amount of calendar time, our classes are set up as 5 and 6 unit lecture classes as well as 5 and 6 unit lab classes with some of these classes being scheduled Mondays thru Thursdays. Therefore, if we schedule evening offerings, it would extend the program to a much longer time than a four semester program to satisfy the required FAA hours. In addition, The other main reason we do not offer evening and Saturday classes is that we do not have enough faculty to teach the evening and Saturday hours. Also, to remedy the additional FAA required hours that the students must spend in doing hands on projects, we opened up additional Aero 900 course as an open Lab on Fridays that will permit students to meet these stringent time requirements for hands on lab hours in order for them to qualify to take their written examinations.

Part II: Questions Related to Strategic Initiative: Student Success

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part II: Student Success – Rubric		
Data/analysis demonstrating achievement of instructional or service success	Program does not provide an adequate <u>analysis</u> of the data provided with respect to relevant program data.	Program provides an <u>analysis</u> of the data which indicates progress on departmental goals. If applicable, supplemental data is analyzed.
Student Learning Outcomes (SLOs)	Program has not demonstrated that they are continuously assessing Student Learning Outcomes (SLOs) based on the plans of the program since their last program efficacy. Evidence of data collection, evaluation, and reflection/feedback, and/or connection to student learning is missing or incomplete.	Program has demonstrated that they are continuously assessing Student Learning Outcomes (SLOs) based on the plans of the program since their last program efficacy. Evidence of data collection, evaluation, and reflection/feedback, and connection to student learning is complete.

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 3 & 4 that address Success & Retention and Degrees and Certificates Awarded”)

By examining Chart Number 3 on the EMP, we see that student retention has steadily increased by about 13% within the last four years due to the engaging curriculum and class conduction of our faculty. In addition, student retention had peaked in 2013-14 to 100% year but went back down to 90% which still is higher by 3% from the previous four years and is impressively much higher than the campus average. Our program possesses among the highest success and retention rates within the campus and the number of students being awarded FAA certifications have also steadily increased to 42. But compared to the previous four years this number has more than doubled which is quite astounding. Our faculty has pushed students to take and pass the FAA examinations which would award them their Airframe and Powerplant certifications and student success has really shown through. All this despite the fact that by obtaining a certificate from our program does not mean that the student will pass and obtain an FAA Airframe and Powerplant certification which gives no incentive for the student to apply and receive the Certification from our school. Hence, what has occurred is that most of our enrolled students went through our program then took the FAA written, oral, and practical exam and received their FAA certifications and then were prompted by our part-time faculty to apply to receive the SBVC certifications which was reflected in this two-fold increase in certificate awards from four years ago. All the above are inspite the fact that the only full-time faculty and department chair retired two years ago and left the program with a skeletal part-time faculty cadre.

Nevertheless, departmental effort is continuing to increase student success and retention by insuring that students are aware of the benefits of completing all sections of the Aeronautics technology program by having the instructors explain the benefits of completing all sections of the program for an institutional certificate instead of taking one or two classes that can enable them to find entry level employment

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.

<p>Specific Job Market Data related to A&P Degree or Certificates</p>	<p>Major and Certificate related Jobs available: Airframe Mechanic, Powerplant Mechanic, Airframe and Power Plant Mechanic, Sheet Metal worker, Structural Assembler, Inspector in many types of Fabrication industries, Aircraft Dispatchers, Aviation management positions, Aviation Support personnel. There are also jobs available in other industries besides aviation and examples of companies that have hired our graduates including aviation and non-aviation related industries are: Sky West Palm Springs Southern California Aviation General Atomics Cessna Citation Oil Refinery Maintenance Mechanic Amusement Parks</p>
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	<p>Scott Oxygen Systems Hydraulics Specialist Recreational Vehicle Technician Virgin America Pulsar Aviation United Parcel Service Federal Express</p>
Program Standards	<p>Program is FAA Approved, audited, and inspected to meet the requirement of Federal Aviation Regulations Part 147 of the FAA code and adheres to the depth of instruction, and time requirement for each instructional unit as delegated by the FAA. In addition, program goals exceed these standards which results in our graduates in many cases becoming the supervisors or lead persons in the industry.</p>
Labor and other statistics (national, western states, regional) www.labormarketinfo.edd.ca.gov	<p>Employment projections for the decade beginning 2012 -2022 shows the following projected increases per category statewide: Aircraft Mechanics and Service Techs: 3.6% annual increase current employment 12000. Aircraft Structure, Surface, Rigging, assemblers: 3.4% annual increase, current employment 4700. Aviation and Airport Services 4.8% annual increase current employment 21,800. Sheet metal workers increase 2.9% annual increase. <i>The overall outlook for aircraft Mechanics should be favorable over the next 10 years. The small number of young workers in the labor force, coupled with a large number of retirements, point to good employment conditions for students just beginning training. . Large MRO's have projected retirement and industry labor shortfalls and have initiated Job shadowing programs to expose the industry to a prospective workforce. (FedEx Corporation and Boeing Corporation)</i></p>
FAA Certification award rate for SBVC students	<p>Success rate for SBVC students receiving FAA Certifications after finishing program has maintained an impressive 96% within the last four years.</p>

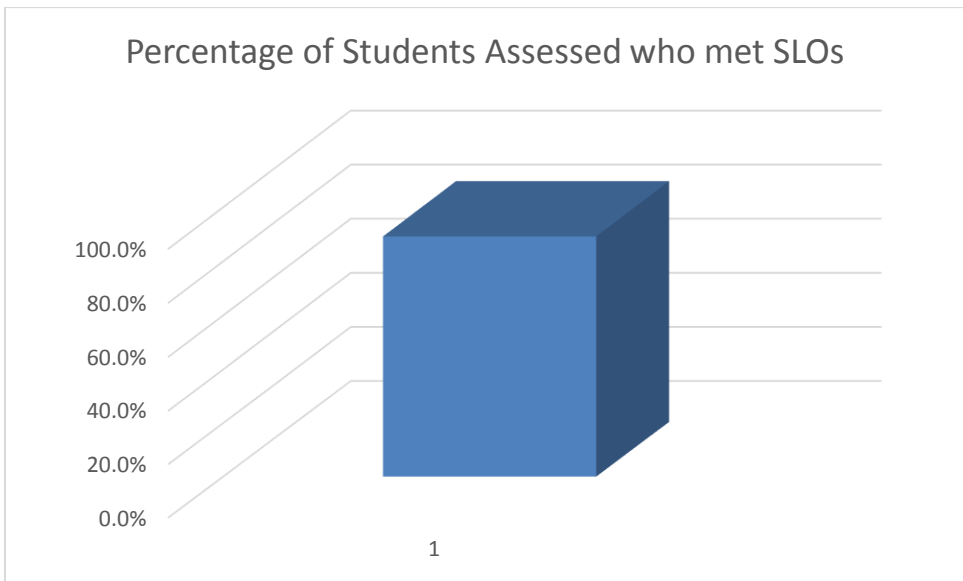
Comparison Colleges	SBVC is one of only 7 community colleges in all of Southern California that offer the Airframe and Powerplant certificates and degrees that prepare students to take the FAA part 147 certification in A&P maintenance. These are Antelope Valley College, Orange Coast College, West Los Angeles College, Long Beach City College, Chaffey College, and San Diego Miramar College.
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Student Learning Outcomes

Course SLOs. Demonstrate that your program is continuously assessing Course Student Learning Outcomes (SLOs), based on the plans of the program since the last efficacy review. Include evidence of data collection, evaluation, and reflection/feedback, and describe how the SLOs are being used to improve student learning (e.g., faculty discussions, SLO revisions, assessments, etc.). Generate reports from the SLO Cloud as necessary. Include analysis of SLO Cloud reports and data from 3-year summary reports. This section is required for all programs.

See [Strategic Goal 2.11](#)

AERONAUTICS



#	SLO Statement	# of Students Assessed	# of Students who Met SLO	% of Students who Met SLO
1	Familiarization with and application of general/calculations and basic electricity of aviation as required by the FAA	285	233	81.75%
2	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	80	66	82.50%

#	SLO Statement	# of Students Assessed	# of Students who Met SLO	% of Students who Met SLO
3	Interpret airframe and powerplant manuals	471	445	94.48%
4	Perform required inspections on an aircraft	471	445	94.48%
5	Troubleshoot aircraft, airframe and powerplant systems	471	445	94.48%
6	Service aircraft, airframe and powerplant systems	471	445	94.48%
7	Assess the serviceability of parts	471	445	94.48%
8	Write descriptive discrepancy reports	471	445	94.48%
9	N/A			

13 Assessment Methods & Criteria

- course project 70% or better (AERO-104-01 for 2013FA)
- Oral and written test (AERO-103L-01 for 2015SP)
- WRITTEN FINAL AND ORAL EXAM. 70% IS GOOD ENOUGH. (AERO-101-01 for 2015SP)
- WRITTEN FINAL ORAL AND HANDS ON EXAMS WITH THE STUDENT. 70% IS GOOD ENOUGH. (AERO-101L-01 for 2015SP)
- Assessments with Federal practice exams Achieving 75% or higher Diagram projects and tests on drawings Achieving 75% or higher Written exams on critical key Airframe components Achieving 75% or higher (AERO-103-01 for 2015SP)
- Assessment with Federal practice exams achieving 70% or better. Diagram projects and graded drawing assignments with 70% or better. Students able to recognize key engine and accessory components and identify maintenance practices. (AERO-105-01 for 2015SP)
- Written final oral and practical (hands on) on exams with the students. 70 % is good enough. (AERO-105L-01 for 2015SP)
- A final grade of C or higher is the assessment criteria. This is the minimum FAA required grade to be eligible to test for certification as an Aviation Maintenance Technician and perform work associated with the SLO's. (AERO-102-01 for 2015FA)
- Final exam; written, oral, and practical (hands-on). FAA requires a minimum 70% grade to qualify for the FAA certification allowing the student to sit for the FAA written test. After the written tests are passed the student sits before the FAA examiner for the oral and practical test. We follow the same procedure the FAA uses to prepare the student for the tests. (AERO-102L-01 for 2015FA)
- Test, verbal , written 70 is good enough per FAA Standards (AERO-100-01 for 2015FA)

- Test, verbal, written 70% is good enough per FAA standards.
(AERO-100L-01 for 2015FA)
- #1 Final exam; using written, oral and practical (hands on) student will be able to demonstrate verbally, written and hands on; in a clear and concise manner with an accuracy of 70 % or better. #2 Using service manuals, Parts catalogs and FAA approved documents student will demonstrate his/her ability to disassemble, inspect and repair a reciprocating engine # 3 Using lab project sheets students will conduct NDT on various engine structures ,components and materials and demonstrate verbally,written and hands with an accuracy of 70% or better.
(AERO-104L-01 for 2015FA)
- Prepare students for Powerplant Technician FAA examinations in areas of theory, maintenance and overhaul of reciprocating engine and engine subsystems. Course content based on assigned reading and presented with various media, aircraft parts and models, charts and schematics as well as Powerpoint slides with questions and answers, class discussion, student presentations, internet-based industry news, videos/films, and assigned homework, quizzes and tests. Grades for the course are based on assigned homework and test scores (including quizzes, a mid-term and a final), as well as participation, class presentation and notebook assignment. Students will be able to explain and demonstrate concepts in a concise manner with an accuracy of 70% or better.
(AERO-104-01 for 2015FA)

14 Reflection(s)

- Initiated new lecture notes method with FITB printed handouts to students. First semester of this technique
(AERO-104-01 for 2013FA)
- •Try new strategies? Yes •Add content? Yes •See notable improvement in class performance? Yes and No •Identify any learning gaps? Yes •Try new strategies? Yes •Make recommendations for content, assessment, or SLO modification? Yes, Yes, and Yes
(AERO-103L-01 for 2015SP)
- TRY MORE HANDS ON AND MORE STUDENT ORAL EXAMS LESS LECTURE.
(AERO-101-01 for 2015SP)
- USE MORE IN-CLASS TRAINERS, MORE HANDS ON, MORE QUIZES, MORE ORAL EXAMS.
(AERO-101L-01 for 2015SP)
- I have been adding more content to my current power point presentations and have noticed an improvement.
(AERO-103-01 for 2015SP)
- Students had been instructed in ADs and TCDSs in Fall 2014. All students achieved a passing grade in the course and did well, with all but one student scoring 80% or higher. Students did well with managing the course load and left positive comments on the course content and delivery. 3 students were awarded their certificates of completion. Supplemental handouts and visual aides helped students understand challenging material. Would like to engage students more with in-class activities such as presentations and group exercises.
(AERO-105-01 for 2015SP)
- Use more one on one oral and hands on as well as more equipment .
(AERO-105L-01 for 2015SP)
- Challenges in the class was due to computer based electrical trainers didn't work out of 6 computers the class had 2 Computers that worked. I will try to find a new system to train the students on for the future. Also Need to emphasize the first day of class about math, reading, and writing skills are necessary. I will also change the way I issue projects to students to get them to turn things in on time and how we work those projects, and have accountability. Learning gaps student are very unprepared for college life and this class, some can' write, some cant do basic math, some just have a problem with time management. Try to get full time hires in the department by working with the dean.

2 Section(s)

- AERO-100L-01 for 2014FA
- AERO-100-01 for 2014FA
- All students completed the assessments at the minimum acceptable standard or higher. No substantial changes necessary at this time.
(AERO-102L-01 for 2014FA)
- The three students that did not meet the SLO's did not attend class regularly and were absent a significant portion of the semester. Reasons given were based upon economic need for employment and family issues. Some of this may also be students being unprepared for the academic disciplines associated with attending college classes. I will continue to be sensitive to the economic pressures on students that some time interfere with attending college. I will do this by communicating the availability of various financial resources that may be available to students to lessen the economic burden on their education plans. I will also continue to look for creative ways to communicate the importance of attending class regularly and completing assignments.
(AERO-102-01 for 2015FA)
- New FAA guidelines for aviation maintenance schools (AC147-3b) will require a rewrite of class projects and assessments starting in the Spring 2016 Aero classes and all Fall 2016 Aero classes.
(AERO-102L-01 for 2015FA)
- need to emphasize that attendance correlates to improve grades in class and Lab.
(AERO-100-01 for 2015FA)
- nothing at this time. continue updating the content and the way it is given to the student.
(AERO-100L-01 for 2015FA)
- This semester I added student presentations to the course, and plan to include them in the future. The students did a great job presenting their topics, and the topics were relevant to the course and enriched the classroom experience.
(AERO-104-01 for 2015FA)

There has been a great improvement in the SLO data collection, assessment, and evaluations since the last Full Efficacy program Review. The above data was taken from the SLO Cloud and is quite comprehensive. It demonstrates that the SLO success rate of 89.2% reasonably correlates to the course completion rate of 84%. The SLO success rate is quite impressive due to continued Faculty efforts to prepare students to take the oral, written and hands on FAA tests in order to successfully obtain their FAA license. Furthermore, the SLO's are closely tied to FAA's main basic requirements but are more stringent so that they produce a more skillful and employable student by giving them pertinent research, presentation, and report writing skills that will enable them to attain higher managerial or supervisory positions in the field. Nevertheless the main focus of the SLO's does closely correlate to the FAA standard. Since currently all the program Faculty are Part-time adjunct Faculty but possess valuable industry and field experience have contributed positively towards the development and enhancement of the SLO criteria and they continue to develop and modify such SLO's to mirror any required changes that may be assessed by the FAA. Further analysis of the assessment methods show that there are hands on tasks such as dis-assemble, inspect, and repair a reciprocating engine in addition to written and verbal assessment methods that a typical student might encounter in the field.

Among the SLO's assessment methodology is that students shall achieve a 70%-75% or better on Federal practice exams pertaining to specific A&P requirements to help students prepare for the actual FAA examinations to ultimately receive their government issued certificates which is a testament to the effectiveness of the program to enable students to obtain their certificates with a higher overall success rate.

In the Reflections/feedback section of the SLO's, it is evident that the Faculty is utilizing and evaluating the data results effectively by trying new teaching strategies such as more hands on lab work with carbon fiber materials, sheet metal cutting, shaping, and riveting while also adding new instructional content to

engage students and foster learning, and identifying learning gaps that may exist between the peer groups. All the evaluations are pointing to a good sound and solid methodology to help improve student success and SLO outcomes.

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.). Discuss 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 3-year summary reports. If your program does not offer a degree or certificate, this section is optional (but encouraged).

(INSERT COURSE MAP IF AVAILABLE)—Contact Dr. Celia Huston if you need assistance.

See [Strategic Goal 2.11](#)

The following map provides an accurate SLO's association to the various coursework and certificates. Faculty is continuously assessing the effectiveness of the SLO since it has to closely adhere to FAA part 147 standards. Because within these standards lie the basic expected outcomes that are essential and cannot change such as interpreting airframe and powerplant manuals, perform required aircraft inspections, troubleshoot airframe and powerplant systems to name a few. However, the assessment methodology has and is continuously being evaluated and changed to better improve student success. For instance, students go through a rigorous regime of scenarios of common wear and tear issues that an airframe or powerplant may incur as a result of customary operation, and then students are guided towards the answer using critical thinking and knowledge base. Thus the criteria of evaluating and assessing the students performance can be changed to determine what constitutes a successful completion of the tasks. So, these criteria and evaluations are always being fine-tuned to directly support the SLO 's which ultimately support the PLO's.

PLEASE SEE BELOW (REFORMATTED TO FIT)

Airframe Maintenance Certificate	Familiarization with and application of general/calculations and basic electricity of aviation as required by the FAA	AERO-100	AERO-100L									
Airframe Maintenance Certificate	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	AERO-101	AERO-101L									
Airframe Maintenance Certificate	Interpret airframe and powerplant manuals	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			
Airframe Maintenance Certificate	Perform required inspections on an aircraft	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			
Airframe Maintenance Certificate	Troubleshoot aircraft, airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			
Airframe Maintenance Certificate	Service aircraft, airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			
Airframe Maintenance Certificate	Assess the serviceability of parts	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			
Airframe Maintenance Certificate	Write descriptive discrepancy reports	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	AERO-105L			

Aviation Maintenance Technician Certificate	Familiarization with and application of general/calculations and basic electricity of aviation as required by the FAA	AERO-100	AERO-100L										
Aviation Maintenance Technician Certificate	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	AERO-101	AERO-101L										
Aviation Maintenance Technician Certificate	Interpret airframe and powerplant manuals	AERO-100	AERO-100L	AERO-101	AERO-101L	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105	
Aviation Maintenance Technician Certificate	Perform required inspections on an aircraft	AERO-102	AERO-102L	AERO-103	AERO-103L								
Aviation Maintenance Technician Certificate	Troubleshoot aircraft airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L								
Aviation Maintenance Technician Certificate	Service and repair aircraft airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L								
Aviation Maintenance Technician Certificate	Assess the serviceability of parts	AERO-102	AERO-102L	AERO-103	AERO-103L								

Aviation Maintenance Technician Certificate	Write descriptive discrepancy reports	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105				
Avionics Technology Certificate	Be prepared to transfer a core curriculum to an accredited, 4-year college or university with junior class standing in electronics technology or a related major.	ELECTR-111	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELECTR-270	ELECTR-220C	
Avionics Technology Certificate	Select and operate electronic test equipment during troubleshooting and repair operations, with an emphasis on safety in use and accuracy in results.	ELECTR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-220C	ELEC TR-250C	ELEC TR-257C				
Avionics Technology Certificate	Analyze, interpret, and trace digital logic diagrams used in signal tracing of complex navigational and airborne communications circuits.	ELECTR-265	ELEC TR-266	ELEC TR-220C								

Avionics Technology Certificate	Effectively communicate with and advise customers and co-workers, both written and orally, regarding the progress of and decisions made concerning test and repair procedures.	ELECTR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELEC TR-270	ELECTR-220C	ELECTR-250C	ELECTR-257C
Avionics Technology Certificate	Be eligible to sit for industry/Federal-style examinations on the theory and procedures of avionics technology.	ELECTR-110	ELEC TR-111	ELEC TR-116	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-270	ELEC TR-220C			
Avionics Technology Degree	Be prepared to transfer a core curriculum to an accredited, 4-year college or university with junior class standing in electronics technology or a related major.	ELECTR-111	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELECTR-270	ELECTR-220C	
Avionics Technology Degree	Select and operate electronic test equipment during troubleshooting and repair operations, with an emphasis on	ELECTR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-220C	ELEC TR-250C	ELEC TR-257C				

	safety in use and accuracy in results.											
Avionics Technology Degree	Analyze, interpret, and trace digital logic diagrams used in signal tracing of complex navigational and airborne communications circuits.	ELECTR-265	ELEC TR-266	ELEC TR-220C								
Avionics Technology Degree	Effectively communicate with and advise customers and co-workers, both written and orally, regarding the progress of and decisions made concerning test and repair procedures.	ELECTR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELEC TR-270	ELECTR-220C	ELECTR-250C	ELECTR-257C
Avionics Technology Degree	Be eligible to sit for industry/Federal-style examinations on the theory and procedures of avionics technology.	ELECTR-110	ELEC TR-111	ELEC TR-116	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-270	ELEC TR-220C			
Powerplant Maintenance Technician Certificate	Familiarization with and application of general/calculations and basic	AERO-100	AERO-100L	AERO-104	AERO-104L	AERO-105	AERO-105L					

	electricity of aviation as required by the FAA											
Powerplant Maintenance Technician Certificate	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	AERO-101	AERO-101L	AERO-104	AERO-104L	AERO-105	AERO-105L					
Powerplant Maintenance Technician Certificate	Read and interpret powerplant manuals, charts and task sheets	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Perform required inspections, maintenance and repairs on aircraft powerplants	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Troubleshoot aircraft powerplant systems and components	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Overhaul aircraft powerplants	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Read and interpret powerplant overhaul manuals measure and determine	AERO-104	AERO-104L	AERO-105	AERO-105L							

	serviceability of parts											
Powerplant Maintenance Technician Certificate	Write descriptive and concise discrepancy reports	AERO-104	AERO-104L	AERO-105	AERO-105L							

Airframe Maintenance Certificate	Familiarization with and application of general/calculations and basic electricity of aviation as required by the FAA	AERO -100	AERO -100L									
Airframe Maintenance Certificate	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	AERO -101	AERO -101L									
Airframe Maintenance Certificate	Interpret airframe and powerplant manuals	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Airframe Maintenance Certificate	Preform required inspections on an aircraft	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Airframe Maintenance Certificate	Troubleshoot aircraft, airframe and powerplant systems	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Airframe Maintenance Certificate	Service aircraft, airframe and powerplant systems	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Airframe Maintenance Certificate	Assess the serviceability of parts	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Airframe Maintenance Certificate	Write descriptive discrepancy reports	AERO -102	AERO -102L	AERO -103	AERO -103L	AERO -104	AERO -104L	AERO -105	AERO -105L			
Aviation Maintenance Technician Certificate	Familiarization with and application of general/calculations and basic electricity of aviation as required by the FAA	AERO -100	AERO -100L									
Aviation Maintenance	Familiarization with and application of general/materials and servicing of	AERO -101	AERO -100L									

Technician Certificate	aviation as required by the FAA											
Aviation Maintenance Technician Certificate	Interpret airframe and powerplant manuals	AERO-100	AERO-100L	AERO-101	AERO-101L	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105
Aviation Maintenance Technician Certificate	Perform required inspections on an aircraft	AERO-102	AERO-102L	AERO-103	AERO-103L							
Aviation Maintenance Technician Certificate	Troubleshoot aircraft airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L							
Aviation Maintenance Technician Certificate	Service and repair aircraft airframe and powerplant systems	AERO-102	AERO-102L	AERO-103	AERO-103L							
Aviation Maintenance Technician Certificate	Assess the serviceability of parts	AERO-102	AERO-102L	AERO-103	AERO-103L							
Aviation Maintenance Technician Certificate	Write descriptive discrepancy reports	AERO-102	AERO-102L	AERO-103	AERO-103L	AERO-104	AERO-104L	AERO-105				
Avionics Technology Certificate	Be prepared to transfer a core curriculum to an accredited, 4-year college or university with junior class standing in electronics technology or a related major.	ELEC TR-111	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELECT R-270	ELEC TR-220C	

Avionics Technology Certificate	Select and operate electronic test equipment during troubleshooting and repair operations, with an emphasis on safety in use and accuracy in results.	ELEC TR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-220C	ELEC TR-250C	ELEC TR-257C				
Avionics Technology Certificate	Analyze, interpret, and trace digital logic diagrams used in signal tracing of complex navigational and airborne communications circuits.	ELEC TR-265	ELEC TR-266	ELEC TR-220C								
Avionics Technology Certificate	Effectively communicate with and advise customers and co-workers, both written and orally, regarding the progress of and decisions made concerning test and repair procedures.	ELEC TR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELEC TR-270	ELECT R-220C	ELEC TR-250C	ELECTR-257C
Avionics Technology Certificate	Be eligible to sit for industry/Federal-style examinations on the theory and procedures of avionics technology.	ELEC TR-110	ELEC TR-111	ELEC TR-116	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-270	ELEC TR-220C			
Avionics Technology Degree	Be prepared to transfer a core curriculum to an accredited, 4-year college or university with junior class standing in	ELEC TR-111	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELECT R-270	ELEC TR-220C	

	electronics technology or a related major.											
Avionics Technology Degree	Select and operate electronic test equipment during troubleshooting and repair operations, with an emphasis on safety in use and accuracy in results.	ELEC TR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-220C	ELEC TR-250C	ELEC TR-257C				
Avionics Technology Degree	Analyze, interpret, and trace digital logic diagrams used in signal tracing of complex navigational and airborne communications circuits.	ELEC TR-265	ELEC TR-266	ELEC TR-220C								
Avionics Technology Degree	Effectively communicate with and advise customers and co-workers, both written and orally, regarding the progress of and decisions made concerning test and repair procedures.	ELEC TR-110	ELEC TR-115	ELEC TR-116	ELEC TR-155	ELEC TR-235	ELEC TR-265	ELEC TR-266	ELEC TR-270	ELECT R-220C	ELEC TR-250C	ELECTR-257C
Avionics Technology Degree	Be eligible to sit for industry/Federal-style examinations on the theory and procedures of avionics technology.	ELEC TR-110	ELEC TR-111	ELEC TR-116	ELEC TR-230	ELEC TR-235	ELEC TR-265	ELEC TR-270	ELEC TR-220C			
Powerplant Maintenance	Familiarization with and application of general/calculations	AERO-100	AERO-100L	AERO-104	AERO-104L	AERO-105	AERO-105L					

Technician Certificate	and basic electricity of aviation as required by the FAA											
Powerplant Maintenance Technician Certificate	Familiarization with and application of general/materials and servicing of aviation as required by the FAA	AERO-101	AERO-101L	AERO-104	AERO-104L	AERO-105	AERO-105L					
Powerplant Maintenance Technician Certificate	Read and interpret powerplant manuals, charts and task sheets	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Perform required inspections, maintenance and repairs on aircraft powerplants	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Troubleshoot aircraft powerplant systems and components	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Overhaul aircraft powerplants	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Read and interpret powerplant overhaul manuals measure and determine serviceability of parats	AERO-104	AERO-104L	AERO-105	AERO-105L							
Powerplant Maintenance Technician Certificate	Write descriptive and concise discrepancy reports	AERO-104	AERO-104L	AERO-105	AERO-105L							

Part III: Questions Related to Strategic Initiative: Institutional Effectiveness

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part III: Institutional Effectiveness - Rubric		
Mission and Purpose	The program does not have a mission, or it does not clearly link with the institutional mission.	The program has a mission, 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.
Relevance, Currency, Articulation	<p>The program does not provide evidence that it is relevant, current, and that courses articulate with CSU/UC, if appropriate.</p> <p>Out of date course(s) that are not launched into Curricunet by Oct. 1 may result in an overall recommendation no higher than Conditional.</p>	<p>The program provides evidence that the curriculum review process is up to date. Courses are relevant and current to the mission of the program.</p> <p>Appropriate courses have been articulated or transfer with UC/CSU, or plans are in place to articulate appropriate courses.</p>

Mission and Purpose:

SBVC Mission: San Bernardino Valley College provides quality education and services that support a diverse community of learners.

What is the mission statement or purpose of the program?

Our mission is to give a diverse group of students the knowledge and skills necessary to successfully gain employment in the aviation maintenance technology industry, be successful at numerous levels of employment, including commercial, corporate, or general aviation maintenance, and provide them the foundation necessary to continue to learn and progress in their field of endeavor. In addition, The program strongly adheres to the Federal Aviation Administration stringent standards and is certified by the FAA under Federal Aviation Regulation Part 147.

How does this purpose relate to the college mission?

The Aeronautics program mission correlates and parallels the college mission. We want our diverse community of learners to succeed! We provide our students a hands-on learning experience to accompany their ability to understand theory, the ability to think critically, and the capacity to apply that knowledge in a real-world setting in accordance with strict guidance, rules, and regulations. Our students do very well because we provide our diverse student population with quality training, skills and knowledge necessary to succeed in business, industry, and their chosen professions in a multicultural society. Although we do not have the ability to track the number of our graduates who were placed in the career field, but here we cite a small sample of former

graduates of the Aeronautics program that our Faculty have tracked: Ivan Romero works as a supervisor maintenance manager at Virgin America Airlines, Miguel Soto also maintenance supervisor at Virgin America Airlines, Jackie Sie as Aircraft Mechanic at United Parcel Service and Pulsar aviation, Tod LeBrane as Aircraft Maintenance Mechanic and General Atomics working on UAV's and many other successful students to name a few of many that we can list. This is a testament to the validity and efficacy of this program which supports the college mission

Productivity

Provide additional analysis and explanation of the productivity data and narrative in the EMP Summary, if needed. (Use data from charts 1 and 2 (FTEs; Enrollment; FTFE and WSCH per FTFE) on page 3 of this form). Explain any unique aspects of the program that impact productivity data for example; Federal Guidelines, Perkins, number of workstations, licenses, etc.

Analysis of FTES data should be analyzed in two time periods. If we look at the 2010 to 2013 years we see a pretty stable number and in fact a higher than the previous four year assessment due to an increase in the commercial aviation industry activity and growth in general in addition to our programs improved results of producing successful student candidates to receive FAA licenses. Also, These numbers were at maximum capacity without any possibility of exceeding this FTES level without adding additional sections due to limited lab work stations and mandatory FAA Instructor/student ratios. Furthermore, for the second time period from 2013 to 2015 there seems to be a 27% drop in FTES which is mainly due to the abrupt departure of the Program Chair and the only Full-Time instructor responsible for administering, promoting, and managing the program preventing sound program continuity. Since this is a tightly regulated and administered program that is subordinate to the FAA regulations, it must have a Full-Time Faculty who is qualified and certified with extensive field experience and is a subject matter expert to take command of the program. This is finally going to happen as full-time position has opened up and, when filled, will greatly help improve the productivity of this program. The FTEF number closely reflects the FTES trend and is a result of the same preceding argument. Nevertheless, the Part-Time Faculty have and continue to work to improve program productivity while they have focused on its effectiveness by greatly improving student success as they have dramatically increased the number of students who have acquired FAA certificates even-though the FTEF number has decreased. EMP data also indicates a FTEF number average for the last 4 years of 6.48 which points out the need for two full-time instructors. The issue of program enrollment numbers has become a focal point of the planning, administering, and promoting aspect of the all departmental Faculty but remain a challenge unless a full-time subject matter expert is at the helm .

Relevance and Currency, Articulation of Curriculum

If applicable to your area, describe your curriculum by answering the questions that appear after the Content Review Summary from Curricunet.

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.

All course sections are current and content reviewed to be up to date to any and all changes required by FAA. All listed active courses are offered except for AERO122 private pilot ground school which will be offered once space and logistics become available.

CURRICUNET REPORT IS PROVIDED

Applied Technology, Transportation & Culinary Arts				
Aeronautics				
	Course	Status	Last Content Review	Next Review Date
	AERO098 Aeronautics Work Experience	Active	04/28/2014	04/28/2020
	AERO100 General/Calculations and Basic Electricity Airframe and Powerplant Technologies	Active	10/15/2012	10/15/2018
	AERO100L General Laboratory/Calculations and Basic Electricity Airframe and Powerplant Technologies	Active	10/23/2012	10/23/2018
	AERO101 General/Materials and Servicing Airframe and Powerplant Technologies	Active	10/23/2012	10/23/2018
	AERO101L General Laboratory/Materials and Servicing Airframe and Powerplant Technologies	Active	10/23/2012	10/23/2018
	AERO102 Airframe Maintenance - Structures	Active	10/23/2012	10/23/2018
	AERO102L Airframe Maintenance Laboratory - Structures	Active	10/23/2012	10/23/2018
	AERO103 Airframe Maintenance - Systems and Components	Active	10/23/2012	10/23/2018
	AERO103L Airframe Maintenance Laboratory - Systems and Components	Active	10/23/2012	10/23/2018
	AERO104 Powerplant Maintenance - Reciprocating Engine Overhaul	Active	10/23/2012	10/23/2018
	AERO104L Powerplant Maintenance Laboratory - Reciprocating Engine Overhaul	Active	10/23/2012	10/23/2018
	AERO105 Powerplant Maintenance - Accessory Overhaul	Active	10/23/2012	10/23/2018
	AERO105L Powerplant Maintenance Laboratory - Accessory Overhaul	Active	10/23/2012	10/23/2018
	AERO122 Private Pilot Ground School	Active	04/28/2014	04/28/2020
	AERO011 Power Plant Maintenance Review	Historical		
	AERO011 Power Plant Maintenance Review	Historical		
	AERO013 Airframe Maintenance Review	Historical		
	AERO013 Airframe Maintenance Review	Historical		
	AERO015 Basic Fundamentals of Aircraft Composite Structures	Historical		
	AERO015 Bsc Fndmntls Aircft Cmpst Strut	Historical		
	AERO015 Basic Fundamentals of Aircraft Composite Structures	Historical		
	AERO098 Aeronautics Work Experience	Historical		
	AERO100.1 Airframe and Powerplant General Calculations	Historical		
	AERO100.2 Airframe and Powerplant General			

Content Review

	Publications	Historical		
	AERO100.2 Airframe and Powerplant General Basic Electricity	Historical		
	AERO101.1 Airframe and Powerplant General - Materials	Historical		
	AERO101.2 Airframe and Powerplant General - Servicing	Historical		
	AERO101.2 Airframe and Powerplant General - Servicing	Historical		
	AERO102 Airframe Maintenance Lecture - Structures	Historical		
	AERO103 Airframe Maintenance Lecture - Systems and Components	Historical		
	AERO104 PwrPlnt Maint Lec-Rcp Eng OvH	Historical		
	AERO105 Powerplant Maintenance Lecture - Accessory Overhaul	Historical		
	AERO106.1 Airframe and Powerplant General Laboratory - Calculations	Historical		
	AERO106.2 Airframe and Powerplant General Laboratory - Publications	Historical		
	AERO106.2 Airframe and Powerplant General Laboratory - Basic Electricity	Historical		
	AERO107.1 Airframe and Powerplant General Laboratory - Materials	Historical		
	AERO107.2 Airframe and Powerplant General Laboratory - Servicing	Historical		
	AERO107.2 Airframe and Powerplant General Laboratory - Servicing	Historical		
	AERO108 Airframe Maintenance Laboratory - Structures	Historical		
	AERO109 Airframe Maintenance Laboratory - Systems and Components	Historical		
	AERO110 Powerplant Maintenance Laboratory - Reciprocating Engine Overhaul	Historical		
	AERO111 Powerplant Maintenance Laboratory - Accessory Overhaul	Historical		
	AERO121 Aviation Fundamentals	Historical		
	AERO121 Aviation Fundamentals	Historical		
	AERO121 Aviation Fundamentals	Historical		
	AERO122 Private Pilot Ground School	Historical		
	AERO122 Private Pilot Ground School	Historical		
	AERO122C FAA Private Pilot Ground School	Historical		
	AERO122D FAA Private Pilot Ground School	Historical		
	AERO124 Aircraft Powerplants	Historical		

http://www.curricunet.com/SBVC/admin/reports/documents/content_review_before.cfm[2/10/2016 5:58:01 PM]

Content Review

	AERO124 Aircraft Powerplants	Historical		
	AERO124 Aircraft Powerplants	Historical		
	AERO125 Flight Safety	Historical		
	AERO125 Flight Safety	Historical		
	AERO125 Flight Safety	Historical		
	AERO126 Aircraft Structures	Historical		
	AERO126 Aircraft Structures	Historical		
	AERO131B Privt Cmmrcl Pilot Grnd School	Historical		
	AERO131B Privt Cmmrcl Pilot Grnd School	Historical		
	AERO134 Civil Aviation Management and Laws	Historical		
	AERO134 Civil Aviation Management and Laws	Historical		
	AERO134 Civil Aviation Management and Laws	Historical		
	AERO140 Instrument Ground School	Historical		
	AERO140 Instrument Ground School	Historical		
	AERO140C Instrument Ground School and Flight Simulators	Historical		
	AERO140D Instrument Ground School and Flight Simulators	Historical		
	AERO144 Aviation Weather	Historical		
	AERO144 Aviation Weather	Historical		
	AERO144 Aviation Weather	Historical		
	AERO144 Aviation Weather	Historical		
	AERO900 Lab Studies in Aviation Maintenance Technology	Historical		

Articulation and Transfer

List Courses above 100 where articulation or transfer is not occurring	With CSU	With UC
none		

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

Our courses are accepted for credit at various institutions. Cal Poly Pomona has recognized these courses for credit in their educational programs, San Jose State, Southern Illinois University, and Embry–Riddle Aeronautical University also recognize these classes for transfer credit.

Currency

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

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

Is the information given accurate? Which courses are no longer being offered? (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?

All courses listed are being offered and have proper descriptions. The only course that has not been offered and is stated is AERO122 Private Pilot Ground School. Classroom space and a certified, licensed instructor will be hired in order to offer the class.

Part IV: Planning

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part IV: Planning - Rubric		
Trends	The program does not identify major trends, or the plans are not supported by the data and information provided.	The program <u>identifies and describes</u> major trends in the field. Program addresses how trends will affect enrollment and planning. Provide data or research from the field for support.
Accomplishments	The program does not incorporate accomplishments and strengths into planning.	The program incorporates substantial accomplishments and strengths into planning.
Challenges	The program does not incorporate weaknesses and challenges into planning.	The program incorporates weaknesses and challenges into planning.

What are the trends, in the field or discipline, impacting your student enrollment/service utilization? How will these trends impact program planning?

The Aeronautics industry advisory board committee members as well as human resource data from national aviation maintenance companies indicate a large portion of the maintenance and inspection workforce 45% will be retiring in the next decade. This has alarmed the FAA which has formed a task force and a nationwide advertising campaign to promote aviation careers. Demand for qualified technicians is steady and forecast to grow. These positions will require qualified candidates to possess the FAA Airframe and Powerplant certifications that our program directly supports. Therefore, student enrollment is expected to grow. And again, as long as the program is FAA approved and sanctioned, then any regulation change and update is closely followed and adhered to so as to keep its relevancy and efficacy. It is also important to note that there has been an explosion in private for profit schools offering similar programs to ours with heavily commercialized and marketed campaigns that advertise their programs on radio and television with endless budgets but they remain very expensive and lack accreditation standards afforded to our program. Thus, this remains a strong recruiting

advantage to our program and program planning has included recruitment efforts and marketability strategies to capitalize on these advantages.

A notable trend in the industry seems to be that commercial pilots are in an ever increasing demand as the industry grows and existing pilots are retiring. Therefore, the department is now working on hiring another faculty to teach the pilot ground school class which is the beginning class for any student that wishes to pursue becoming a pilot as a career thus increasing our enrollment numbers. Also, the program long-term strategic goal is to include the offering of Pilot Instrumentation courses as well as Flight Simulator courses which are needed to obtain a commercial pilot license. Though the challenges remain that the equipment needed to teach is quite expensive and that additional experienced and licensed Faculty is required to teach these courses.

Another technological trend in the industry is in the materials science and composite airframe structures made of carbon fiber technology. Therefore, one of our program goals is to develop new curriculum and coursework to study the construction, repair, and inspection of such material structures used in a variety of industries including aerospace, automotive, leisure, power generation (wind turbine). This technology is quite expensive but program administrator is working on obtaining grant funding to support this endeavor.

Accomplishments and Strengths

Referencing the narratives in the EMP Summary, provide any additional data or new information regarding the accomplishments of the program, if applicable. In what way does your planning address accomplishments and strengths in the program?

EMP data indicates that the Aero dept. remains to be among the top 4 programs for number of certificates issued. The success rate, 78% average, has consistently risen from 2012 till 2015, with the retention rate over the same period at an average of 94%. The FAA monitors student test results for FAA certification and indicated that SBVC students are performing at a rate at which 92% of the students are passing at a level higher than the national average. The dept. continues to seek industry and community support for equipment that may be used for training purposes. Over the last four years, three new aircraft have been added from private and industry donations to maintain a quality student training environment.

Challenges

Referencing the narratives in the EMP Summary and/or your data, 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?

The added regulatory requirement from industry and the FAA place additional workload on a department that at one time had three full time instructors and a laboratory assistant. This has been reduced to no full time instructor and no lab assistance. This can be a safety issue in the lab due to student /instructor ratio and the FAA has indicated, through letters, that no full time instructor in the department may cause a lack of continuity and decreased student performance on FAA exams. Thus it remains a priority to hire a subject matter expert full time Faculty that can effectively deal with the challenges.

Other Challenges is that industry is continuing development in all aspect of aircraft technology, including aircraft structures, avionics, control, emerging Powerplant technology and troubleshooting systems. A perfect example is the composite repair technology which is experiencing rapid growth in industry due to emerging technologies and the industry trend to develop lighter and more fuel efficient aircraft. Planning recognizes this growth and is developing appropriate offerings to meet the need. Our composites class is a start but additional equipment is necessary to keep pace with this emerging technology. In addition, The

program needs new engine trainers that incorporate FADEC (Full Authority Digital Engine Control) systems and advanced emission control system. This will help ensure our graduates are fully prepared to enter the workforce trained on current generation technology. Planning needs to address a phased replacement of older technology and implementation of current training technology. Unfortunately this requires continual improvement in the training equipment and technology in our program. This requires more planning and development of strategies to not just keep up, but stay ahead of what the industry needs in regards to training, knowledge, and skill levels, for new employees entering the workforce. A primary method to improve in this area is specialized computer based troubleshooting simulators and software. Henceforth, the equipment needed to afford these advances and updates are expensive and department goals remain to establish good industry relations in order to secure donations of expensive decommissioned aircraft, engines, materials, tooling etc. in addition to obtaining grants to purchase such hardware so that we can update and meet the challenges stated previously. An example of such efforts, was the industry donations of a retractable complex Mooney aircraft, a 2 place reciprocating engine powered Rotorway Exec helicopter, and a high wing conventional geared Luscombe aircraft. These aircraft and additional equipment value at over \$200,000.00 were procured at no cost to the institution. Therefore, such planning and networking with industry is a vital part of the planning that will address the challenges that are faced.

V: Questions Related to Strategic Initiative: Technology, Campus Climate and Partnerships

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part V: Technology, Partnerships & Campus Climate		
	<p>Program does not demonstrate that it incorporates the strategic initiatives of Technology, Partnerships, or Campus Climate.</p> <p>Program does not have plans to implement the strategic initiatives of Technology, Partnerships, or Campus Climate</p>	<p>Program demonstrates that it incorporates the strategic initiatives of Technology, Partnerships and/or Campus Climate.</p> <p>Program has plans to further implement the strategic initiatives of Technology, Partnerships and/or Campus Climate.</p>

Describe how your program has addressed the strategic initiatives of technology, campus climate and/or partnerships that apply to your program. What plans does your program have to further implement any of these initiatives?

Technology is being used in every facet of teaching in all our classes. Our Faculty have utilized Power Point Presentations with computer linked projections as well as DVD's and online software with educational videos. All classrooms have these teaching tools. The learning resource center is used for online search and instruction whenever a computer lab is needed.

Also, emerging technologies such as carbon fiber composite structure technologies are being introduced in our program in addition to newer Powerplant technologies such as FADEC, dealing with digital control, while also keeping with traditional engine technologies and designs which remain vital in today's industry standards.

In keeping with our strategic initiatives of campus climate, our graduates are thoroughly trained and have proven to be shining examples and good ambassadors of the department and college. We stress safety very heavily to all of our students through extensive safety briefings and on a daily basis. Our program has an excellent reputation in the aviation industry for quality instruction. We maintain a safe environment for our students to work in. We try to keep our classroom and lab areas cleans and neat so that those coming to tour our area will have a good impression of our portion of the campus.

. Our faculty have and continue to established excellent relationships and connections with local aviation industry establishments such as Pulsar Aviation, San Bernardino Sheriff's Aviation, Mooney aircraft, to name a few and have included them in the departmental advisory board committee. In fact, our Faculty was recently approached by Tesla Foundation to help our students with obtaining internships in the ever expanding UAV support and maintenance. Furthermore, Faculty is reaching out to local aviation facilities, such as San Bernardino Airport to establish a mutual working relationship in terms of expanding our A&P maintenance program and to provide internship opportunities among other mutual benefits.

VI: Previous Does Not Meets Categories

Listed below, from your most recent Program Efficacy document, are those areas which previously received "Does Not Meet." Address each area, by describing below how your program has remedied these deficiencies, and, if these areas have been discussed elsewhere in this current document, provide the section where these discussions can be located.

Program Review 2012 team efficacy report does not identify any department deficiencies.