INSTITUTIONAL PROGRAM REVIEW 2014 – 2015
Program Efficacy Phase: Instruction
DUE: April 13, 2015

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.

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 (and submitted to the Dean) so that your review team can work with you at the small-group workshops (Feb 13, Feb 27, Mar 27, and Apr 10, 2015). Final documents are due to the Committee co-chair by **Friday, April 13, 2015** at midnight.

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

In response to campus-wide feedback that program review be a more interactive process, the committee piloted a new program efficacy process in Spring 2010 that included a review team who will work with the writer as they draft their documents during the efficacy process. Another campus concern focused on the duplication of information required for campus reports. As such, the efficacy process now incorporates the EMP sheet, a curriculum report, SLO/SAO documentation already generated elsewhere. The committee continues to strive to reduce duplication of other information while maintaining a high-quality efficacy process.

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

Program Being Evaluated

Geography & GIS

Name of Division

Science

Name of Person Preparing this Report   **Extension**

Vanessa Engstrom	x8653

Names of Department Members Consulted

Todd Heibel (Full-Time GEOG); Ramaa Mukundan, Edmund Ogbuchiekwe, Steven Sandlin, Alma Hidalgo, Dan Sherrill and Lisa Schmidt (Adjunct GEOG); and Robert Conrad, Juan Gonzalez, Jeffrey Krizek, and Solomon Nimako (Adjunct GIS)

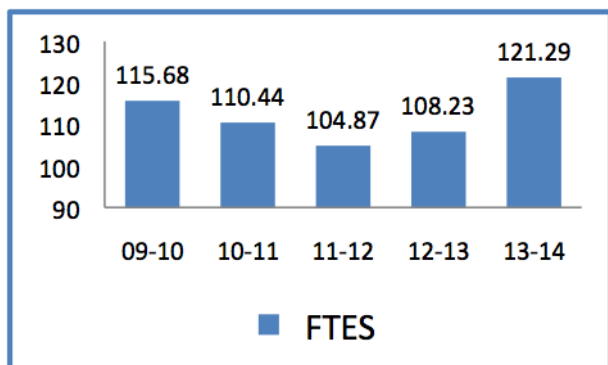**Name of Reviewers**

Sandra Moore and Wally Johnson

| Work Flow	Due Date	Date Submitted
Date of initial meeting with department		March 24
Final draft sent to the dean & committee		April 13
Report submitted to Program Review Team		March 27
Meeting with Review Team		March 27
Report submitted to Program Review co-chair		April 13

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	1 (Science Division Dean)	0	0
Faculty	2	0	10
Classified Staff	0	0	0
Total	3	0	10

Geography EMP

FTES chart: 09-10: 115.68, 10-11: 110.44, 11-12: 104.87, 12-13: 108.23, 13-14: 121.29

	09-10	10-11	11-12	12-13	13-14
Duplicated Enrollment	1,183	1,124	1,044	1,031	1,179
FTEF	6.14	5.94	5.74	5.74	6.60
WSCH per FTEF	565	558	548	566	551

	09-10	10-11	11-12	12-13	13-14
Success	61%	63%	69%	71%	70%
Retention	78%	79%	89%	91%	89%
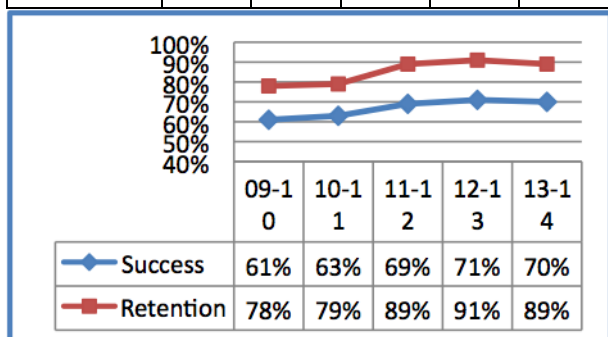
	09-10	10-11	11-12	12-13	13-14
Sections	38	33	33	35	40
% of online enrollment	0%	0%	0%	3%	0%
Degrees awarded	0	2	3	1	2
Certificates awarded	N/A	N/A	N/A	N/A	N/A

Description: The spatial science of geography examines both physical and cultural landscapes with an emphasis on human-environmental interactions. Geography integrates multiple natural and social sciences and includes the study of: nature and interactions of the atmosphere and the land; plants and animals; earth's waters; weather and climate; earth's dynamic surface; landforms and soils; human interaction with the physical environment through forms of agriculture, language, religion, and cities.

Assessment:
- FTES rates have fluctuated with overall college enrollment and budgetary trends since 09-10.
- Efficiency rates while fluctuating have remained above the college goal of 525 since 09- 10. The significant drop during the 11-12 year is most likely a result of section cap cutbacks brought on by budget considerations.
- Success and retention rates have exceeded college averages and, in general, have been stable since the 11 -12 year.

Department Goals:
- Increase the number of degrees awarded under the new AA-T degree and revised AS degree.
- Collaborate with other departments to offer service based learning opportunities.
- Develop learning communities with other disciplines, as well as support for tutors and SI leaders.
- Increase the number of funded field trips and maintain laboratories with equipment and supplies needed for quality education.
- Identify study abroad opportunities.
- Cultivate relationships with four-year institutions and area employers as a means to increase transfer and career opportunities.

Challenges & Opportunities:
- With the creation of the AA-T Geography Degree for Transfer, we should see an increase in the number of degrees awarded.
- Continue to fund field study opportunities as budgets remain flat or decline.
- As the field of geospatial technology grows, emphasize how GIS can be used in the study of Geography and Environmental Science.
- FTEF supports hiring additional full-time faculty member in the future.

Action Plan:

- Advertise the Geography Department more effectively, both on and off campus.
- Increase the number of Geography graduates and transfer students by cultivating grant, scholarship, research, internship, and career opportunities.
- Develop online/hybrid sections in geography.
- Continue to revise curriculum, including new course development.
- Hire another full-time Geography faculty in the coming years.

GIS EMP
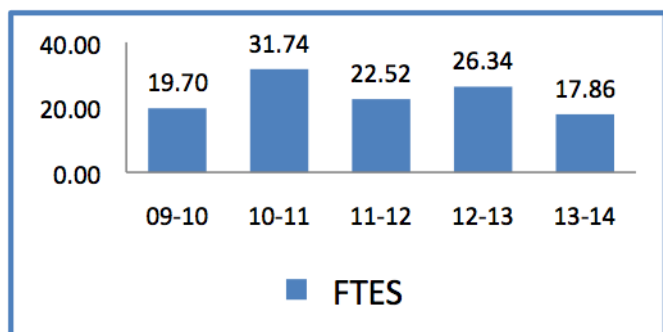
FTES chart values: 09-10: 19.70, 10-11: 31.74, 11-12: 22.52, 12-13: 26.34, 13-14: 17.86

	09-10	10-11	11-12	12-13	13-14
Duplicated Enrollment	186	239	173	187	134
FTEF	1.69	2.45	2.45	1.95	2.22
WSCH per FTEF	350	389	276	405	241

	09-10	10-11	11-12	12-13	13-14
Success	78%	77%	60%	72%	77%
Retention	91%	88%	74%	89%	92%
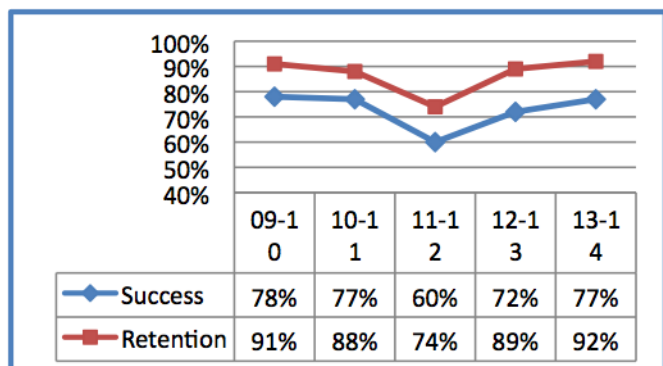
	09-10	10-11	11-12	12-13	13-14
Sections	10	15	15	12	17
% of online enrollment	0%	27%	0%	0%	0%
Degrees awarded	N/A	N/A	N/A	N/A	N/A
Certificates awarded	10	0	14	7	17

Description: The GIS Certificate is designed to provide the skills and knowledge necessary for immediate entry-level employment for persons interested in Geographic Information Systems (GIS) and automated mapping technology.

The GIS Certificate provides a foundation for transfer to four year and graduate education within the fields of GIS, Geography, Remote Sensing, Environmental and Earth Sciences.

Assessment:
- FTES rates continue to fluctuate.
- Success and Retention rates are increasing and in the case of retention have surpassed 09-10 rates.
- Program lacks a full-time faculty assigned 100% to this discipline.
- WSCH/FTEF (efficiency) was at its highest in 12-13.

Department Goals:
- Provide students with the skills needed to enter geospatial technology related fields.
- Maintain laboratories with equipment and supplies needed for quality education.
- Advocate for full time faculty.
- Use Perkins Funds to increase GIS awareness on and off campus.
- Develop a service based learning course.
- Increase student participation in GIS realted events.
- Cultivate additional internship and employment opportunities within local public and private agencies.
- Implement online and hybrid courses.

Challenges & Opportunities:
- Increase awareness of entry-level geospatial technology courses for non GIS certificate oriented students.
- Strengthen partnership with local high schools offering entry-level GIS courses, including ROP program.
- Raise funds for GIS tutors and SI leaders to extend lab hours via grants.
- Lack of computer lab infrastructure to host simultaneous labs- creates scheduling issues.
- Lack of a full-time GIS faculty member.

Action Plan:

- Partner with local agencies and businesses to provide internship opportunities, including short non-credit options through PDC.
- Incorporate entry-level classes in other certificate programs- Water Supply Technology, Architecture and Environmental Design and Real Estate.
- Offer colloquium series focused on industry based GIS applications.
- Build on existing faculty, curricular, institutional, and industry relationships to increase student enrollment, transfer, and career placement.
- Hire a full-time GIS faculty member.

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.

Demographics - Academic Years - 2011-12 to 2013-14		
Demographic Measure	**Program: Geography**	**Campus-wide**
Asian	3.3%	5.2%
African-American	19.2%	14.2%
Hispanic	59.6%	59.2%
Native American	0.6%	0.3%
Pacific Islander	0.8%	0.4%
White	14.6%	16.8%
Unknown	1.9%	3.9%
Female	53.8%	54.8%
Male	46.1%	45.1%
Disability	6.5%	5.7%
Age Min:	18	14
Age Max:	81	84
Age Mean:	28	29

Demographics - Academic Years - 2011-12 to 2013-14		
Demographic Measure	**Program: GIS**	**Campus-wide**
Asian	7.0%	5.2%
African-American	16.5%	14.2%
Hispanic	49.0%	59.2%
Native American	2.2%	0.3%
Pacific Islander	0.9%	0.4%
White	23.1%	16.8%
Unknown	1.3%	3.9%
Female	38.9%	54.8%
Male	61.1%	45.1%
Disability	4.6%	5.7%
Age Min:	18	14
Age Max:	70	84
Age Mean:	32	29

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?

GEOGRAPHY:

Within Geography, the following demographic groups are underrepresented:
- African-American,
- Hispanic,
- Native American,
- Pacific Islander,
- Male, and
- Students with Disabilities.

In general, the Geography Department's population mirrors that of the college. With the exception of Asian, African-American, and White populations, variance is one percent or less. The preceding cohorts are likely overrepresented for the following reasons (reasons for variance):
- Physical geography lecture (GEOG 110) and laboratory (GEOG 111) comprise the greatest number of Geography sections offered during the fall, spring, and summer semesters. This reflects a longtime and continued demand for transfer-level, physical science (natural science) courses. Because GEOG 110 and 111 comprise the requisite four-unit, physical science transfer credit into CSU, UC, and other common transfer destinations, it remains a popular choice for transfer-minded SBVC students. For better or worse, many students perceive these courses as more approachable and less daunting than other physical science courses (e.g. astronomy, biology, chemistry, geology, and physics). Students may also satisfy physical science transfer requirements by taking GEOG 114: Weather and Climate, although this course is offered only once per academic year.
- In addition to satisfying physical science transfer requirements, selected geography courses can also satisfy social science transfer requirements. These courses include: GEOG 100: Map Interpretation and Geospatial Analysis (cross-listed as GIS 100), GEOG 102: Cultural Geography, GEOG 106: Geographic Perspectives on the Environment, GEOG 118: California Geography, and GEOG 120:

World Regional Geography. However, students have a greater number of social science transfer choices across the SBVC curriculum.

- Historically, students who comprise the preceding cohorts (overrepresented) enter college with a lack of basic skills. Of course, this is a gross generalization. Nonetheless, when students lack basic skills (regardless of ethnicity or gender) they tend to select courses according to perceived ease and opportunities for success. Rightly or wrongly, many geography courses are perceived to be more accessible to students than many of their Science Division counterparts. This may be partially a result of a lack of basic skills prerequisites – including reading, English, and mathematics – for SBVC geography courses. In spite of basic skills advisories, some students enroll in geography courses with the impression that they will be "easy." Unfortunately, students who lack basic skills are not successful within physically- and socially-oriented geography courses. During the most recent curriculum revision, all geography courses include English 015 as an advisory, and GEOG 110 and 114 also include Math 942 as an advisory. Faculty are considering making these English and math advisories prerequisites for selected geography courses during future curriculum revisions.

The SBVC Geography Department would also like to capture students who successfully complete one or more geography courses as geography majors. In other words, the Geography Department endeavors to increase the number of Geography degrees awarded, as well as number of students who transfer into four-year geography degree programs. As evidenced by the low number of Geography AS degrees awarded at SBVC, while large numbers of students enroll in geography courses, few become geography majors. Recruitment of additional geography majors, especially from our over- and underrepresented cohorts, would greatly benefit our students with additional transfer and career options. To this end, the Geography Department has revised its curriculum, added new courses, and created an AA-T degree.

Within Geography, the following demographic groups are underrepresented:
- Asian,
- White, and
- Female.

The larger discrepancy in underrepresented Asian and White populations may reflect the relative invisibility of geography as a subject within feeder high schools. For traditional high school to college populations, the invisibility of geography as a viable major, degree option, and career choice may limit Asian and White enrollment in SBVC geography courses. In addition:
- These cohorts may enter college better prepared than other groups. If this is the case, then they may choose physical and social science courses that are perceived as more rigorous. In other words, if these cohorts are better prepared in terms of basic skills development, then they may assess at a higher level within English and mathematics. They may also feel that their career prospects are better within other fields (e.g. astronomy, biology, chemistry, geology, physics, as well as social science and humanities fields).
- The Geography Department may need to better target recruitment and advertising efforts toward these cohorts. At the same time, the department must balance continued service to overrepresented cohorts.

GIS:

Within GIS, the following demographic groups are overrepresented:
- Asian,
- African-American,
- Native American,
- Pacific Islander,
- White, and

- Male.

Within GIS, the following demographic groups are <u>underrepresented</u>:
- Hispanic,
- Female, and
- Students with Disabilities.

The GIS program is well represented by the Asian, African American, Native American, Pacific Islander, White and Male demographic groups, while at the same time could increase representation by Hispanic, Female and Students with Disability cohorts. Exposing students to geospatial technologies while enrolled in other geography courses (where these demographic groups are overrepresented), is one way to increase participation. Each semester, we offer 10 sections of Physical Geography and 6- 7 sections of Physical Geography Lab, by integrating geospatial exercises into these existing courses, we can increase awareness of the GIS program. Other opportunities include scheduling a panel discussion on jobs in GIS, hosting the local Inland Empire GIS User group meeting, increasing Geography Awareness week activities, and marketing the Geography Club.

GIS can benefit from participating in STEM (Science, Engineering, Technology and Mathematics) related events geared at attracting underrepresented minorities and females. One example is the annual SBVC Women in Mathematics and Science event. By increasing exposure to geospatial technologies and educating our students on the growing geospatial job market, we may see more participation by underrepresented groups.

Developing stronger partnership with local high schools may also increase participation. Colton High School has a GIS course that articulates to our GIS 130 course. Talking with students about GIS related job opportunities and the required educational pathways should garner interest. In addition, GIS faculty have begun to attend local high school career fairs as a way to inform the community about our GIS 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.

Both Geography and GIS programs offer a variety of schedules to meet the needs of traditional and working students:

<u>**GEOGRAPHY:**</u>
- Mon and Wed:
  - 8:00 to 9:15 AM,
  - 9:30 to 10:45 AM,
  - 11:00 AM to 12:15 PM,
  - 11:00 Am to 1:15 PM (Lecture/lab sections)
  - 1:00 to 3:50 PM (Lab sections),
  - 4:00 to 5:50 PM (Late-start sections), and
  - 6:00 to 8:50 PM (Evening lecture/lab sections).

- Tue and Thu:
  - 8:00 to 9:15 AM,
  - 9:30 to 10:45 AM,

- o 11:00 AM to 12:15 PM,
- o 1:00 to 3:50 PM (Lab sections),
- o 4:00 to 5:50 PM (Late-start sections),
- o 6:00 to 8:50 PM (Evening lecture/lab sections), and
- o 6:00 to 7:20 PM (Evening lab sections).

- Fri:
  - o 9:00 to 11:50 AM (Lecture/lab sections), and
  - o 12:30 PM to 3:20 PM (Lecture sections),

GIS:
- Mon and Wed:
  - o 11:00 Am to 1:15 PM (Lecture/lab sections), and
  - o 6:00 to 8:10 PM (Evening lecture/lab sections),

- Tue and Thu:
  - o 6:00 to 8:50 PM (Evening lecture/lab sections),
  - o 6:00 to 7:20 PM (Evening lab sections),
  - o 7:30 to 9:00 PM (Evening lecture sections),

- Fri and Sat:
  - o 11:00 AM to 5:20 PM (Late-start sections),
  - o 5:30 to 8:20 PM (Evening lab sections), and
  - o 8 AM to 1:50 PM (9 week section).

GEOGRAPHY:

In addition to providing traditional face-to-face lecture and laboratory courses, the Geography Department has provided interactive television (ITV) GEOG 106 and 110 sections within the past three years, most recently during the fall 2014 semester. Beginning with the fall 2015 semester, GEOG and GIS 100 will be offered in a hybrid format. Because many other geography courses are approved for distributed education (DE), it is likely that additional sections will be offered in a hybrid or full online format in the spring 2016 and future semesters. This will increase access for working students, single parents, students living outside of our traditional service area, and those with limited mobility.

GIS:
Most of our GIS related courses are taught in the evenings or on Fridays and Saturdays. Traditionally, the certificate program was geared at working students who were returning to school to expand their skill set. Thus night time and weekend classes allowed them to work traditional hours and attend school in the evening. We started offering a day time section of the GIS 100 and GIS 130 as a way to provide access to our traditional daytime students. Our daytime sections do not always fill. Increasing exposure to these sections through internal marketing, counselor support and word of mouth will help expand the daytime course offerings. Increasing participation in the entry level courses will help to fill the advance level courses.

Next fall, we will be offering a hybrid version of GIS 100 and GIS 130. We believe this hybrid format will provide flexibility for working individuals and single mothers. Instead of coming to campus twice a week, they will complete the majority of the work when and where it best fits into their schedule. This will reduce the travel time to and from campus, which may be an attractive option for those who travel by public transportation.

We are using some of the Perkins Grant funds to create geospatial vignettes which can then be used to educate students previously unaware of geospatial technology. In addition, Perkins funds were used to purchase IPADs for the GIS program. This technology provides access to work place technology and helps to better prepare our students.

Plans and activities to recruit and retain over- and underrepresented cohorts within Geography and GIS:
- Continue to develop grant and other non-credit-type programs – especially within the science,

technology, engineering, and mathematics (STEM) areas – in order to attract underrepresented populations (both GEOG and GIS, for example grants targeted to Hispanic Serving Institutions (HSIs)).

- Utilize the Geography Club (and perhaps create a GIS Club) to attract students in an extracurricular framework.
- Participate more fully within "Women in Science" and "Science Day" events.
- Better incorporate over- and underrepresented populations within "Geography Awareness Week" and "GIS Day" events.
- Invite speakers from off campus who will better appeal to over- and underrepresented groups. Specifically, these speakers can present on topics of geography undergraduate and graduate degree programs, as well as careers within the geographical sciences.
- Cultivate partnerships with the District Applied Technology and Training Center (ATTC) and Professional Development Center (PDC) to develop workforce preparedness and college preparedness programs. This will be especially helpful for students interested in the GIS program and careers.
- Expand focus and recruitment for geography and GIS majors and related careers within elementary, middle school, and high school outreach events.
- Emphasize the broad applicability of geography and GIS to myriad social and natural science majors and careers – including law, marketing, environment, real estate, computing, transportation, and planning – within the following venues: part of the classroom curriculum, on-campus outreach events, off-campus outreach events, credit and non-credit courses and summer grant programs, workshops, and other means.
- Utilize current (and future) information technologies and platforms, including: school and department websites, *Blackboard*, *iTunes U*, *Edustream*, podcasts, *YouTube*, *Google Earth* and other means.
- Invite students to participate in local and regional professional geography conferences (e.g. California Geographical Society (CGS), Association of Pacific Coast Geographers (APCG), Associated of American Geographers (AAG), Inland Empire GIS User Group, and ESRI International User Conference.

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")

Geography Success, Retention, and Degree Data:

Year:	G Success:[1]	C Success:[2]	G Retention:[1]	C Retention:[2]	Degrees:
09-10	61%	61.20%	78%	78.90%	0
10-11	63%	63.92%	79%	81.38%	2
11-12	69%	61.20%	89%	78.90%	3
12-13	71%	69.5%[4]	91%	88.5%[4]	1
13-14	70%	67%[4]	89%	88.5%[4]	2

GIS Success, Retention, and Certificate Data:

Year:	G Success:[3]	C Success:[2]	G Retention:[3]	C Retention:[2]	Certificates:
09-10	78%	61.20%	91%	78.90%	10
10-11	77%	63.92%	88%	81.38%	0
11-12	60%	61.20%	74%	78.90%	14
12-13	72%	69.5%[4]	89%	88.5%[4]	7
13-14	77%	67%[4]	92%	88.5%[4]	17

[1]Success and retention rates for the Geography program.
[2]Success and retention rates for the SBVC campus, based on the spring semester.
[3]Success and retention rates for the GIS program.
[4] Success and retention rates for SBVC Non-Distance Education.
http://www.valleycollege.edu/~/media/Files/SBCCD/SBVC/online-classes/success-retention/14sucretDEFALL12SP14.pdf

Geography:

During the past five academic years, both success and retention rates have improved. During the past two academic years, departmental success and retention rates have slightly exceeded campus rates. The number of Geography AS degrees has remained low. However, spring 2015 represents the conclusion of the first year that the new Geography AA-T degree has been available to students. In tandem with the new AA-T degree, the original AS degree has been revised. The impact of the new degree and existing degree modification will be closely monitored.

From the attached Geography EMP document, the following goals are meant to increase students success, retention, and degree completion:

Increase the number of degrees awarded under the new AA-T degree and revised AS degree:
- Beginning with the current academic year (2014-15), students now have the option to complete a geography transfer degree, an AA-T.
- In addition to offering the Geography AA-T, the existing AS degree has been revised.
- These new and revised options have the potential to increase AA-T and AS degree attainment.

Collaborate with other departments to offer service based learning opportunities:
- Because the Geography and GIS Departments have been diligently working on multiple goals, progress on this important goal has been limited.
- During future semesters, the departments will work with other departments within Science and other divisions that have successfully created service based learning opportunities.
- Service based learning opportunities not only have the potential to increase student success and retention, but also better prepare students for transfer and future careers.

Develop learning communities with other disciplines, as well as support for tutors and SI leaders:
- The Geography Department has been fortunate to include a tutor for the past five academic years. The tutor is presently funded through various STEM and HSI grants. Although anecdotal, the tutor seems to have increased student enrollment, retention, and success, especially for those students who regularly seek tutorial support.
- The department is currently exploring SI participation for one or more GEOG 110 sections during the fall 2015 and spring 2016 semesters.
- The department has been in intermittent dialogue with English faculty in order to create a learning community. This community may be in place by the spring 2016 semester.

Increase the number of funded field trips and maintain laboratories with equipment and supplies needed for quality education:
- The Geography and GIS programs regularly participate in the annual Program Review Needs Assessment process. Through this vehicle, both programs have increased field trip, instructional, non-instructional, and equipment budgets. However, much more progress must be made for these important line items.
- Additional funding has been made available through special, intermittent one-time funding vehicles. However, these programs are ephemeral by nature and both programs seek more stable funding platforms.

Identify study abroad opportunities:
- The Geography Department will continue to coordinate with Lara Gomez (Counseling) and others who endeavor to resurrect the SBVC study abroad program in Costa Rica.
- In addition to the Costa Rica program, established study abroad agencies (e.g. EF Tours) provide packaged programs to undergraduate students.

Cultivate relationships with four-year institutions and area employers as a means to increase transfer and career opportunities:
- The Geography Department participates in Cal State-San Bernardino "open house" and "bridge" programs. These programs exist in order to facilitate transfer from SBVC to CSU-SB. The student Geography Club organizations from both institutions have also been collaborating as a means to increase the number of Geography majors, degrees awarded, and overall success and

retention.
- Outreach beyond CSU-SB must occur, and the Geography Department is cultivating contacts at other CSU, UC, and private four-year institutions.
- Greater contact between ESRI (a major area employer of geography and GIS graduates) and SBVC is occurring. However, additional inroads must be made with other area and regional employers.

GIS:
In general the GIS success and retention rates have been better than the campus as a whole. Nonetheless, we can help more students succeed by providing open lab hours (access to computers and tutors) and short instructional videos for completing common tasks.

As a department we have identified the following educational goals:
Departmental Goal: Build on existing faculty, curricular, institutional, and industry relationships to increase student enrollment, transfer, and career placement.
- We have a solid Advisory board made up of local employers, some of whom host interns. A more focused effort is needed to recruit employers as potential internship sites. In additon, inviting these companies to speak in panel discussions will help students secure intern and job placements, when and if something becomes avilable. In addition, students are more likely to finish the certificate, if we increase career placement opportunities.

Departmental Goal: Raise funds for GIS tutors and SI leaders to extend lab hours via grants.
- GIS as a technology must be practice. While the software is available on library computers, the lack of a knowleageable tutor or student employee makes completing the labs difficult. Extended the open lab hours will provide more access to students and in return help students succeeed. Money from the CTE Enhancment fund will go towards purchasing a few laptops, which can be used outside faculty offices to complete the work (and get assistance) when a tutor is not available.

Departmental Goal: Hire a full-time GIS faculty member:
- An additional component that has the potential to increase student success and retention is to continue lobbying Program Review and related official processes in an effort to hire a full-time GIS faculty member. Alternatively, a full-time faculty member split between Geography and GIS programs would be beneficial. At present, with the exception of one section, there is no full-time faculty support for the GIS program. Although our adjunct GIS faculty represent industry experts, they cannot guarantee long term stability and support for the GIS program. Equally, it is difficult (and unfair) to ask adjunct faculty to develop long term strategies to ensure student success and retention, including advertising and recruitment. A full-time faculty member would be able to devote considerable time, thought, and action toward these endeavors.

Departmental Goal: Continue collaboration with other community college and four-year geography and GIS departments:
- Continue the dialog established with faculty chairs and faculty members within geography and GIS departments at area community colleges and four-year institutions in order to ensure appropriate curriculum development, improve transfer rates, and improve employability.

Departmental Goal: Continue grant exploration and development to supplement declining budgets:
- Using Perkins (related to career and technical education (CTE)) and CTE Enhancement funding – we have been able to compensate adjunct faculty for developing teaching vignettes, participating in career fairs and panel discussions. We believe that these activities will increase student retention and success. Exploring STEM related grants especially as they pertain to women in science, will also provide additional support for success and retention.

Departmental Goal: Collaborate with other departments in order to develop interdisciplinary courses:
- Learning communities (e.g. based on models including Tumaini, Puente, and Valley Bound), supplemental learning (e.g. tutoring and workshops), and interdisciplinary – including team-taught – courses could also be included in a multifaceted effort to improve student success and retention.

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.

Available career paths for those with AS, BS, and BA Degrees within Geography and GIS may include (source: Association of American Geographers: Association of American Geographers, Jobs & Careers Website, Salary Data and Trends,
http://www.aag.org/cs/salary_data_and_trends/salary_data_and_trends_overview   (accessed 03/18/2015).
•   Educator (secondary education and higher education),
•   City/Urban Planner,
•   Soil and Plant/Water Resources Specialist,
•   Climatologist/ Atmospheric Scientist,
•   Environmental Analyst/Director/Planner/Specialist/ Technician,
•   Geospatial Analyst/Coordinator/Manager/Programmer/ Technician,
•   GIS Analyst/Coordinator/Manager/Programmer/ Technician,
•   Emergency Management Specialist,
•   Forest Fire Inspector,
•   Marketing Manager,
•   Physical Scientist,
•   Policy Analyst,
•   Regional Director,
•   Transportation Planner,
•   Epidemiologist/Medical Geographer, and
•   Demographer/Census Data Analyst.

Our Geography and GIS programs prepare students for these careers primarily by preparing them for transfer into four-year degree programs. However, our GIS certificate program also prepares students for entry-level GIS technician positions. While students are encouraged to complete a four-year (or even graduate-level) GIS degree, they learn skill sets that prepare them for employment as technicians within private consulting firms (e.g. environmental consulting firms) and public sector (e.g. San Bernardino County, US Forest Service, and San Bernardino City Unified School District). In addition, students are encouraged to enroll in the GIS 098: GIS Work Experience course. Within this course, students work in an internship environment that better prepares them for future careers within the broad fields of geography and GIS.

Standards in the Field:

Students majoring and pursuing careers within the fields of Geography and GIS should remain aware of:
•   Geographic terminology (within Human and Physical Geography),
•   Geospatial software and technology (GIS, GPS, Remote Sensing and Google Earth),
•   Social, political, and economic changes, as they impact the environment, and
•   Geopolitics

Licensure Rates:

Geographers and GIS technicians and analysts are not required to possess licenses, per se, within the State of California. However, related fields, including: real estate, surveying and civil engineering, landscape architecture, and law practice require licensure and registration.

GIS professionals can obtain GISP recognition. According to the GISCI website(www.gisci.org):
"The **GIS Certification** Institute (GISCI) is a tax-exempt, not-for-profit organization that provides the geographic information systems (GIS) community with a complete certification program, leading to GISP® (Certified GIS Professional) recognition. GISCI offers participants around the world, from the first early years on the job, until retirement, a positive method of developing value for professionals and employers in the GIS profession. We offer the only industry-wide, internationally-recognized, software-agnostic Certification available to geospatial professionals around the world. "

Students completing the GIS Certificate program may find attending a panel discussion on this topic beneficial. Another opportunity to assist our students would be to help them find a GISP mentor. Eventually, the GIS department may consider offering courses as part of the educational component of this certification.

Advisory Committee Recommendations:

The GIS Advisory Committee consists of the following members: ESRI in Redlands, CSU-San Bernardino Geography (and GIS and Environmental Studies) Department, US Forest Service (field office in San Bernardino), County of San Bernardino Geographic Information Management Services (GIMS), Colton-Redlands-Yucaipa ROP (Regional Occupational Program), San Bernardino City Municipal Water District, SBVC Water Supply Technology (WST) Department, SBVC Architecture and Environmental Design Department, SBVC Office of Research, Planning, Development, and Grants, and Air Quality Management District (AQMD), Riverside County Flood Control, Cal Fire, Foundation for Sustainable Communities, San Bernardino City GIS, Western Municipal Water District, City of Rancho Cucamonga, and Rancho California Water District . The next advisory committee meeting will be held during the spring 2016 semester.

Current recommendations include continued curriculum revisions in order to capture the latest employment trends, expansion of distributed education (DE) opportunities, student participation in professional organizations, creation of a GIS AA/AS degree, and expansion of the work experience/internship program.

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.). This section is required for all programs

See Strategic Goal 2.11

Course:	SLO Completed?	Plan to Complete by:
GEOG 100: Map Interpretation and Intro to Geospatial Technologies	No- First Offered in Fall 2014	Spring 2015
GEOG 102: Cultural Geography	Yes	
GEOG 106: Geographic Perspectives on the	Yes	

Environment		
GEOG 110: Physical Geography Lecture	Yes	
GEOG 111: Physical Geography Lab/ Lab Honors	Yes	
GEOG 114: Weather and Climate	Yes	
GEOG 118- California Geography	No- First Offered in Spring 2015	Spring 2015
GEOG 120: World Regional Geography	Yes	
GEOG 222	No	
GEOG AS Degree Program	Yes	
GEOG AA-T	No- First Offered in Fall 2014	Spring 2016 when Geography AS degree is assessed.
GIS 039: GPS Field Techniques	Yes	
GIS 098: GIS Work Experience	Yes	
GIS 100: Map Interpretation and Intro to Geospatial Technologies	No- First Offered in Fall 2014	Spring 2015
GIS 130: Intro to GIS	Yes	
GIS 131: GIS Applications	Yes	
GIS 133: GIS Cartography and Base Map Development	Yes	
GIS 134- Data Acquisition and Management	No, First offered in Fall 2014, but was canceled.	Fall 2015
GIS 135: Spatial Analysis with GIS	Yes	
GIS 136: GIS for Science, Government, and Business	No	This course is rarely offered and will be assessed the next time it is offered.
GIS 137: GIS Advanced Applications	Yes	
GIS 222	Yes	
GIS Certificate Program	Yes	

The Geography and GIS faculty, ten of which are adjunct faculty, have been collecting Student Learning Outcomes for every section and every class. As a department we meet every semester to discuss the results of the outcomes and to strategize about how to improve instruction. For example, results from a GEOG 111 SLO assessment question have led to an improved solar altitude lab exercise. In addition, for classes with multiple sections (e.g., GEOG 110 and 111) we have instituted a department wide SLO assessment tool. Some recent discussions have covered streamlining the assessment tool to make tallying the results more straightforward. All faculty will participate in the SLO cloud data reporting system during the spring 2015 semester.

Instructional Program SLOs. If your program offers a degree, certificate, or TMC, describe how the SLOs are being used to improve student learning at the program level (e.g., faculty discussions, SLO revisions, assessments, etc.). Include a discussion of how the **courses are mapped to the program**, and how this set of data is either being evaluated or is planned to be evaluated. If your program does not offer a degree, certificate, or TMC, this section is optional (but encouraged)

See Strategic Goal 2.11

GEOG As & AA-T PLO Mapping-

	Geography AS/ AA-T Degree	Demonstrate expertise in basic cartographic principles, including map location, scale, and distortion.	Integrate fundamentals of sociology, biology, chemistry, physics, geology, and other social and natural sciences within a spatial network of human-environment interactions.	Interpret spatial patterns, as indicated on maps, and utilize tabular and textual information as a means to produce basic maps.
CLASSES				
GEOG 102			SLO #2	SLO #2
GEOG 110		SLO #2	SLO #3	SLO #3
GEOG 111/111H		SLO #2		
Select 6 - 7 Units				
GEOG 100 / GIS 100		SLO #2 and SLO #3		SLO #2 and SLO #3
GEOG 114			SLO #3	SLO #3
GEOG 118		SLO #1	SLO #2	SLO #1
GEOG 120			SLO #1 and SLO #2	SLO #1 and SLO #2
GIS 130		SLO #3		SLO #1, SLO #2, SLO #3

Select 6 Unit				
ANTHRO 102				
ENG 102/102H				
GEOL 101				
GIS 133		SLO #1, SLO #2, SLO #3		SLO #1, SLO #2, SLO #3
OCEAN 101				
OCEAN 111				
POLIT 141				

GEOG PLO Spring 2013-
San Bernardino Valley College: Program Summary Report Form
2012/2013
Division: Science
Program: As in Geography Degree
Semester Assessed: Spring 2013
Next Assessment: Spring 2016

Program Learning Outcome	**PLO #1**- Demonstrate expertise in basic cartographic principles, including map location, scale, and distortion. **PLO #2**- Integrate fundamentals of sociology, biology, chemistry, physics, geology, and other social and natural sciences within a spatial network of human-environment interactions. **PLO #3**- Interpret spatial patterns, as indicated on maps, and utilize tabular and textual information as a means to produce basic maps.
Assessment Methods	Method #1- assess the number of AS in Geography Degrees awarded. Method #2- Align PLOs with course level SLOS. **PLO #1** – Results for SLO # 2 for GEOG 110 and SLO # 2 for GEOG 111 and scale related questions on an exit worksheet. **PLO #2-** Results for SLO # 2 for GEOG 102, SLO # 2 for GEOG 106, SLO # 3 for GEOG 110, SLO # 3 for GEOG 114, and SLO #1 and # 2 for GEOG 120. **PLO #3-** Results for SLO # 2 for GEOG 102, SLO # 2 for GEOG 106, SLO # 3 for GEOG 110, SLO # 3 for GEOG 114, and SLO #1 and # 2 for GEOG 120.
Criteria – what is "good enough"? Rubric	Method #1- Completion of a As degree is sufficient. Method #2- Completion of 70% or better on various course level SLOs is also sufficient.
What % of students met the criteria? Is this % satisfactory?	Method #1- 5 Students were awarded As in Geography degrees between Spring 2010 and Fall 2012. Method #2- PLO#1- **:** GEOG 110 was assessed in the Fall of 2011 and the Spring 2012- Fall 2011 results: 62/88 (71%) of the students answered 11 out of 17 (65%) questions correctly. 55/88 (62%) answered 14 out of the 17 (82%) questions.

Spring 2012 results-73/89 (82%) of the students answered 8 out of 16 (50%) questions correctly. 56/89 (63%) answered 12 out of 16 (75%) questions.

Analysis: the drop in the Spring results was a product of test reorganization.

GEOG 111 was assessed in the Spring of 2013-
52/86 (60%) of the students could correctly use a graphic scale to measure map distance. 70/86 (81%) of the students could correctly identify the type of map scale used.
Analysis: Most of the semester, focus is on measuring map distance with a ruler and mathematically converting it to real world distances. This particular question used, focused on using a graphic scale not a ruler. Two things could improve- A) work more with graphic scales or B) add a ruler /mathematically based question to the exit worksheet.

PLO#2 and #3- :
GEOG 110 was assessed in the Fall of 2011 and the Spring 2012-
Fall 2011 results- 69/88 (78%) of the students answered 6 out of 9 (67%) questions correctly. 59/88 (67%) answered 8 out of the 9 (89%) questions.

Spring 2012 results- 62/89 (70%) of the students answered 6 out of 9 (67%) questions correctly. 54/89 (61%) answered 9 out of the 9 (100%) questions.

Analysis: The questions having the lowest student success were content questions that were primarily covered on a map packet. On the exam, 2 of these questions asked students to synthesize where these hazards would occur instead of asking them to locate them on a map. Perhaps having the questions align more closely with the map packet would increase success.

GEOG 120 was assessed in Spring 2011-
SLO #1: Was covered on all three Tests.
Test #1: 25 students took Test #1. 72 % answered 11 out of the 14 questions, while 56% answered all 14.
Test #2: 22 students took Test #2. 68% answered 6 out of the 9 questions.
Test #3: 20 students took Test # 3. 65% answered all 4 questions.

SLO #2: Was covered on all three Tests.
Test #1: 25 students took Test #1. 76 % answered 9 out of the 16 questions, while 60% answered 13 of the 16.
Test #2: 22 students took Test #2. 59% answered the one multiple choice question. 70% of the students scored 4 points out of 6 points on the written essay.
Test #3: 20 students took Test # 3. 70% answered all 4 questions.

Analysis:

SLO #1: Interestingly, every time I asked them to summarize the physical

	geography of a region, less than 70% could do so. In lecture and in the study guides, I talk about the individual aspects of physical geography, but rarely do I summarize the entire region. Students may be getting caught in the trees and not seeing the forest or they aren't good at taking information and summarizing it. **SLO#2:** Except for the essay questions asking students to compare the climate/ biomes of Russia and Sub Saharan Africa and the questions asked on Test 3, most test questions ask students to identify physical and cultural aspects within a region. Informally the comparison between regions is assessed during classroom discussions, but perhaps a more formal set of questions geared towards having them apply what they learned in one region and compare it to another is warranted.
Were trends evident in the outcomes? Are there learning gaps?	This is difficult to assess based on results from 3 out of 6 classes. In general, it seems that GEOG 111 lab students do better with latitude/longitude than the GEOG 110 lecture students, perhaps because lab students have more hands on work with this concept. When looking at the human-physical interaction, it appears that students are being exposed to these relationships, but the results could be higher. With regards to mapping, GEOG 110 and 120 students are required to make maps. Perhaps collecting data on the quality of those maps would be more beneficial in assessing PLO #3.
What content, structure, strategies might improve outcomes?	I think that reassessing how we will assess program level outcomes is warranted. Perhaps having a standardized set of questions in which all geography students answer would give a better sense of coverage and highlight potential gaps in learning.
Will you change assessment method and or criteria?	Yes, a better mechanism for assessing these program level outcomes is needed.
Evidence of Dialogue (Attach Representative Samples of Evidence)	*Check any that apply* ☒E-mail Discussion with ☒FT Faculty ☐Adjunct Faculty Date(s): various times throughout the semester ☒Department Meeting. Date(s): Impromptu meeting to discuss plan for assess program level outcomes. ☐Division Meetings. Date(s): ☐Campus Committees. Date(s): (ex: Program Review; Curriculum; Academic Senate; Accreditation & SLOs) SLO Dialogue focused on: Assessment methods
Will you rewrite the SLO? If so, please identify.	Quite possibly. While reviewing the assessment methods, discussion regarding the actual program level outcomes is very likely to occur.
Response to program outcome assessment?	☐Professional Development ☒Intra-departmental changes ☐Curriculum action ☐Requests for resources and/or services Review assessment and program level outcomes.

GIS Certificate PLO Mapping-

CLASSES	Geographic Information Systems Certificate	Entry-level technician in the field of GIS, automated cartography (geoinformatics/geo-visualization), and remote sensing for science, government, and business applications.	Scanning, hand-digitizing, and collecting global positioning systems (GPS) cartographic data as a means to create a base map,	Entering textual and numerical information as a means to create a tabular database,	Integration of raster data layers, including remotely sensed imagery, and vector data layers, including points, lines, and polygons, and	Basic GIS map analysis, including descriptive spatial statistics, inferential spatial statistics, and spatial autocorrelation.
GIS 039		C or better in Entry Level Courses		SLO #1	C or better	
GIS 098		C or better in Entry Level Courses		SLO #1		
GEOG/GIS 100		C or better in Entry Level Courses	SLO #1		SLO #3	
GIS 130		C or better in Entry Level Courses		SLO #1	C or better	
GIS 133		C or better in Entry Level Courses	SLO #2		C or better	
GIS 134			SLO #1	SLO #2		
GIS 135					C or better	SLO #1
GIS 136						
GIS 137		C or better in Entry Level Courses				SLO #2
GIS222						

GIS PLO Spring 2013-
San Bernardino Valley College: Program Summary Report Form
2012/2013
Division: Science
Program: GIS Certificate Program
Semester Assessed: Spring 2013
Next Assessment: Spring 2016

Program Learning	**PLO #1**- Entry-level technician in the field of GIS, automated cartography

Outcome	(geoinformatics/geo-visualization), and remote sensing for science, government, and business applications. **PLO #2**- Scanning, hand-digitizing, and collecting global positioning systems (GPS) cartographic data as a means to create a base map. **PLO #3**- Entering textual and numerical information as a means to create a tabular database. **PLO #4**- Integration of raster data layers, including remotely sensed imagery, and vector data layers, including points, lines, and polygons. **PLO #5**- Basic GIS map analysis, including descriptive spatial statistics, inferential spatial statistics, and spatial autocorrelation.
Assessment Methods	Method #1- Survey students in an upper level GIS course regarding grades in entry level classes. Align PLOs with Course level SLOs as follows: PLO #1 – C or better in entry level courses. PLO #2- C or better in GIS 133 – SLO #2 PLO #3- C or better in GIS 131- SLO #1 and 039- SLO #1 PLO #4-C or better in GIS 039, 130, 131, 133, and 135 PLO #5- C or better in GIS 135- SLO #1
Criteria – what is "good enough"? Rubric	Method #1- Students earning a C or better in the entry level GIS courses- 130, 131, 133, 039, and 098, if completed. Also, the number of students with satisfactory performance in course level SLOs.
What % of students met the criteria? Is this % satisfactory?	Method #1- PLO#1- 15/15 (100%) of the students surveyed stated a grade of C or higher in GIS 130. 17/17 (100%) of the students surveyed stated a grade of C or higher in GIS 131. 15/15 (100%) of the students surveyed stated a grade of C or higher in GIS 133. 13/13 (100%) of the students surveyed stated a grade of C or higher in GIS 039. 5/5 (100%) of the students surveyed stated a grade of C or higher in GIS 098. PLO- #2- 22/23 (95%) met GIS 133- SLO #2. PLO #3- Fall 2012 section- 18/18 (100%) and Spring section 10/10 (100%0 received a C or better on the final project in GIS 131. Spring 2013- 20/21 (95%) received a C or better on SLO #1 in GIS 039 PLO #4- Of the 17 students surveyed 100% of the students have passed the entry level courses. Note: not all the entry level courses were completed by all students in GIS 135. This is a product of course sequencing. PLO #5-23/25 students completed an online course as part of the in class course work. 23 out of 25 students earned 8 or higher on labs. This could be improved.
Were trends evident in the outcomes? Are there learning gaps?	Students are covering the basics aspects of GIS and are learning different skills in the various certificate courses. More raster based work could be added.
What content, structure, strategies might improve outcomes?	Revamping the course curriculum to align with the California Community College Model Certificate will ensure that all aspects of GIS are covered in the GIS courses and that little overlap will exist, except for basic functionality.
Will you change assessment method and or criteria?	Potentially. Program level outcomes could align closer to course level outcomes and should be tracked as a student progresses through the certificate program.
Evidence of Dialogue	*Check any that apply* ☒E-mail Discussion with ☒FT Faculty ☐Adjunct Faculty Date(s): various times

(Attach Representative Samples of Evidence)	throughout the semester ☒Department Meeting. Date(s): Impromptu meeting to discuss plan for assess program level outcomes. ☐Division Meetings. Date(s): ☐Campus Committees. Date(s): (ex: Program Review; Curriculum; Academic Senate; Accreditation & SLOs) SLO Dialogue focused on: Assessment methods
Will you rewrite the SLO? If so, please identify.	Quite possibly. As the certificate curriculum is aligned with the model certificate program, new outcomes may surface and older outcomes may become obsolete.
Response to program outcome assessment?	☐Professional Development ☐Intra-departmental changes ☒Curriculum action ☐Requests for resources and/or services Update curriculum.

GEOGRAPHY and GIS

Both Geography and GIS have assessed student learning at the program level. Most of the assessment has been based on course level outcomes. Since we only recently began collecting data for every class, every semester, the data used in the program level outcome was limited. The GIS certificate is the easier program to evaluate. For the most part, these courses are sequenced and in order to succeed at the advanced level, learning outcomes have to be met at the entry level. Once data is entered into the SLO Cloud, it will make it easier to track outcomes in entry level courses, but not for individual students. Another option would be to require students to maintain an electronic portfolio, highlighting their mastery of the various program outcomes.

Geography is more difficult to assess at the program level. Since geography courses are not sequenced, there is no culminating ("capstone") course. In addition, until SLO data is tracked per student, tracking the learning outcomes achieved by any individual student will be impossible. Perhaps a capstone course required after the completion of AA-T and AS required courses would give us a better sense of student learning at the program level.

Institutional SLOs/Core Competencies. Complete the **Core Competency grid** below. Describe how the Institutional SLOs/Core Competencies are being used to improve student learning in your program (e.g., faculty discussions, SLO revisions, assessments, etc.). This section is required for all programs.

See Strategic Goal 2.11

San Bernardino Valley College — Department: Geography. For each course, use an x to identify the core competencies that are given a major emphasis and are measured.	GEOG 100/ GIS 100	GEOG 102	GEOG 106	GEOG 110	GEOG 111/111H	GEOG 114	GEOG 118	GEOG 120	GEOG 222	
Commun.										
1.1 Read and retain information	X	X	X	X	X	X		X	X	
1.2 Write clearly	X									
1.3 Speak clearly	X									
1.4 Employ vocabulary of the subject studied	X	X	X	X	X	X		X		
1.5 Demonstrate active listening skills	X	X	X	X	X	X		X	X	
Info Comp										
2.1 Find and interpret information	X					X			X	
2.2 Evaluate authority and bias of information										
2.3 Utilize technology to organize and present information	X									
2.4 Demonstrate working knowledge of basic computer function	X									
Critical Thinking										
3.1 Evaluate strengths, weaknesses and fallacies of logic										
3.2 Locate, evaluate and select evidence to support or discredit an argument										
3.3 Construct a persuasive argument										
3.4 Apply learned knowledge to new situations	X									
3.5 Apply principles of scientific reasoning to solve problems						X			X	
3.6 Defend a logical hypothesis to explain observed phenomenon									X	
Ethics										
4.1 Accept responsibility for own actions										
4.2 Demonstrate respect for a diversity of ideas and the rights of others		X								
4.3 Exhibit personal, professional and academic honesty	X									
4.4 Display behavior consistent with ethical standards w/in a discipline										
4.5 Apply lessons from the past to ethical issues faced in the present										
4.6 Evaluate own ethical beliefs in relationship to moral dilemmas										
4.7 Assume civic, political or social responsibilities										
Creative Expression & Self Awareness										
5.1 Recognize own strengths and weaknesses										
5.2 Recognize own biases and values		X								
5.3 Recognize own learning style										
5.4 Give and receive constructive feedback										
5.5 Develop time management skills	X									
5.6 Set goals for educational, personal and professional development										
5.7 Set goals to create balance in personal and professional life										
5.8 Evaluate diverse artistic works										
5.9 Demonstrate creative thought through original expression										
Social Interaction & Cultural Diversity										
6.1 Demonstrate etiquette in face-to-face and written interactions										
6.2 Work effectively in group settings	X					X		X		
6.3 Utilize conflict resolution skills										
6.4 Demonstrate knowledge of and respect for other cultures		X						X		
6.5 Demonstrate knowledge of and respect for one's own culture		X						X		

Please note that GEOG 118: California Geography is offered for the first time in nearly two decades this semester (spring 2015). Therefore, the core competencies are missing on the document above. The GEOG 118 core competencies are:

- 1.1: Read and retain information,
- 1.4: Employ vocabulary of the subject studied,
- 2.1: Find and interpret information,
- 3.4: Apply learned knowledge to new situations,
- 4.5: Apply lessons from the past to ethical issues faced in the present,
- 5.2: Recognize own biases and values, and
- 6.4: Demonstrate knowledge of and respect for other cultures.

Core competencies are integral to all courses within the Geography and GIS Departments. They form the backbone of all course objectives and course content. As with course and program level outcomes, core competencies are a "living document" that can (and should) be modified over time. During end-of-semester faculty meetings, core competencies for all courses are discussed in tandem with course and program level outcomes. Exams, quizzes, assignments, and entire courses have benefitted from regular review and revision.

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	The program does not provide evidence that it is relevant, current, and that courses articulate with CSU/UC, if appropriate. Out of date course(s) that are not launched into Curricunet by Oct. 1 may result in an overall recommendation no higher than Conditional.	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.

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 of the program?

GEOGRAPHY:

The Geography program provides a path to students who wish to transfer to a CSU, UC, or private campus in Geography and serves the diverse needs of students who wish to obtain a broad and an in-depth understanding of the field. Additionally, this program allows students to examine the environmental and spatial science of geography including both physical and cultural landscapes across the Earth. Courses in Geography also prepare students interested in careers in environmental studies, education, engineering, urban planning, public health, sociology, political science, and architecture.

GIS:

The GIS Certificate is designed to provide the skills and knowledge necessary for immediate entry-level employment for persons interested in Geographic Information Systems (GIS) and automated mapping technology, utilizing earth resources data satellites, aerial photography, and computerized data banks of spatial data. Students working for certificates must have a basic knowledge of arithmetic, reading, and writing in order to learn and work in the occupations they select.

The GIS Certificate also provides a foundation for transfer to four year and graduate education within the fields of GIS, Geography, Remote Sensing, Environmental and Earth Sciences.

Specifically, the GIS Program prepares students for careers in the fields of geography, geographic information systems (GIS), education, cartography, demography, surveying, transportation and logistics, real estate, marketing, law, epidemiology, environmental studies, and other positions that demand knowledge and interpretation of spatial patterns. In addition, GIS courses allow students to more fully comprehend real-world, everyday cultural and environmental phenomena and news events. Students are therefore better equipped to make informed life decisions.

How does this purpose relate to the college mission?

GEOGRAPHY:

The mission of the College is to provide quality education to a diverse community of learners and is consistent with the purpose and mission of the Geography Department. The Department serves a diverse community of learners, as evidenced in its demographic data (please refer to the Demographic Information table in Part I). In addition, the Department adheres to the college vision statement by creating "informed, responsible, and active members of society" and value statement where "students become self-sufficient learners and contributing members of society."

GIS:

The mission of the College is to provide quality education to a diverse community of learners and is consistent with the purpose and mission of the GIS Program. The Program serves a diverse community of learners, as evidenced in its demographic data (please refer to the Demographic Information table in Part I). In addition, the Department adheres to the college vision statement by creating "informed, responsible, and active members of society" and value statement where "students become self-sufficient learners and contributing members of society."

GIS students contribute to access, student success, technology, institutional effectiveness, and partnerships by working on real-world campus projects. For example, GIS students will continue to work with the Office of Institutional Research, Planning, and Grants and Facilities Management on projects that will benefit the entire Campus and District.

GIS also relates to broader community, regional, national, and global environmental (green) initiatives. According to Esri's *GIS Best Practices* : *GIS is a Green Technology* pamphlet –"GIS solutions are currently being implemented around the world that provide the technological and scientific support necessary to create programs and processes designed to return our planet to a more sustainable and balanced level of use."

Our program is educating tomorrow's worker who will help provide solutions for reducing communities' environmental impact whether it is working for an environmental firm ,helping a logistic company reduce mileage or developing innovative applications.

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.

GEOGRAPHY:
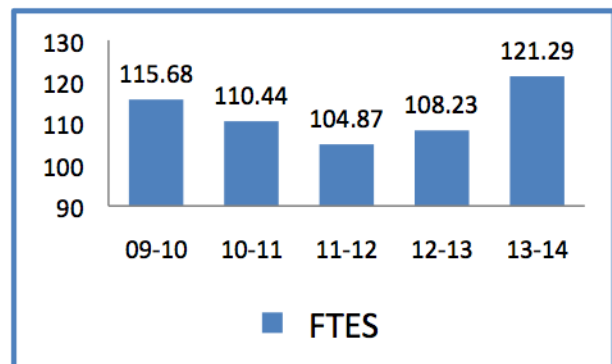
	09-10	10-11	11-12	12-13	13-14
Duplicated Enrollment	1,183	1,124	1,044	1,031	1,179
FTEF	6.14	5.94	5.74	5.74	6.60
WSCH per FTEF	565	558	548	566	551

Assessment:
- FTES rates have fluctuated with overall college enrollment and budgetary trends since 09-10.
- Efficiency rates, while fluctuating, have remained above the college goal of 525 since 09- 10. The significant drop during the 11-12 year is most likely a result of section cap cutbacks brought on by budget considerations.
- The relatively large increase in FTES, FTEF, and duplicated enrollment in 2013-14 is a reflection of improved budgets and an overall increase in the number of sections offered. The slight decline in efficiency is probably a result of slightly smaller per-section enrollment, as students had a greater number of section options. As the economy continues to improve, past experience suggests that student demand and enrollment will decline (e.g. more students are employed and there is a smaller demand for higher education and retraining).
- As a result of the new AA-T degree, revised AS degree, new courses, and additional DE options, it is anticipated that enrollment will increase. Any enrollment increase, however, is also contingent upon the ability to attract and retain geography students through outreach events and partnerships with four-year institutions and potential employers.

GIS:
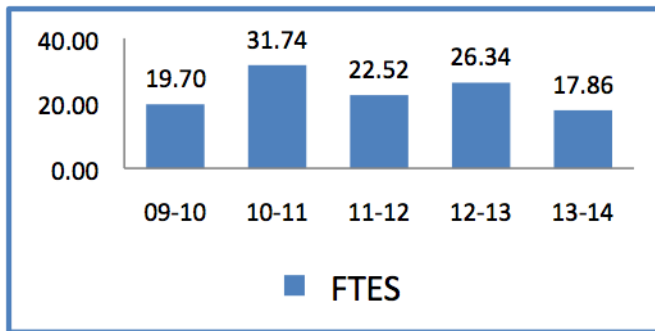
	09-10	10-11	11-12	12-13	13-14
Duplicated Enrollment	186	239	173	187	134
FTEF	1.69	2.45	2.45	1.95	2.22
WSCH per FTEF	350	389	276	405	241

GIS FTES rates continue to fluctuate and WSCH/FTEF (efficiency) was at its highest in 2012-2013. In order to increase productivity, we must grow our GIS program. We have been awarded Perkins Grant funds and CTE Enhancement funds, which will be used to advertise the GIS program both on campus and within the community. As a department we will also continue to recruit current SBVC students by informing various departments on campus about the benefits of using geospatial tools and techniques in fields other than geography. However, student enrollment within GIS courses is limited to the number of computers available. In addition, it is pedagogically unsound to increase the enrollment cap significantly within GIS courses, as students require abundant assistance and faculty interaction. Creative solutions include providing notebook computers and tablet devices for students to work on projects outside of the limited classroom space. Increased internship and work experience options, including paid positions, will also increase student enrollment, retention, success, and overall efficiency.

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.

At this time, the only curriculum issue is GIS 098: Work Experience (Last Content Review Date of 10/2008). We have updated the curriculum for this program, refer to GIS 098: Work Experience (Last Content Review Date of 11/2012). The department intends to contact the Curriculum Committee chair to see why the 2008 version still exists in the system. All other GEOG and GIS course curricula, including degree and certificate programs, have been updated and approved through the official curriculum process.

Science				
Geography				
	Course	**Status**	**Last Content Review**	**Next Review Date**
	GEOG100 Map Interpretation and Geospatial Analysis	Active	11/03/2014	11/03/2020
	GEOG102 Cultural Geography	Active	09/14/2009	09/14/2015
	GEOG106 Geographic Perspectives on the Environment	Active	10/26/2009	10/26/2015
	GEOG110 Physical Geography	Active	10/12/2009	10/12/2015
	GEOG111 Physical Geography Laboratory	Active	10/12/2009	10/12/2015
	GEOG111H Physical Geography Laboratory - Honors	Active	10/12/2009	10/12/2015
	GEOG114 Weather and Climate	Active	09/28/2009	09/28/2015
	GEOG118 California Geography	Active	11/25/2013	11/25/2019
	GEOG120 World Regional Geography	Active	03/29/2010	03/29/2016
	GEOG130 Introduction to Geographic Information Systems (GIS)	Active	12/08/2014	12/08/2020
	GEOG222 Independent Study in Geography	Active	11/25/2013	11/25/2019

Science				
Geographic Information Systems				
	Course	**Status**	**Last Content Review**	**Next Review Date**
	GIS039 Global Positioning Systems (GPS) Field Techniques	Active	10/26/2009	10/26/2015
	GIS098 GIS Work Experience	Active	11/19/2012	11/19/2018
	GIS098 GIS Work Experience	Active	10/13/2008	10/13/2014
	GIS100 Map Interpretation and Geospatial Analysis	Active	11/03/2014	11/03/2020
	GIS130 Introduction to Geographic Information Systems (GIS)	Active	11/25/2013	11/25/2019
	GIS133 GIS Cartography and Base Map Development	Active	11/25/2013	11/25/2019
	GIS134 Data Acquisition and Management	Active	12/10/2013	12/10/2019
	GIS135 Spatial Analysis with GIS	Active	11/25/2013	11/25/2019
	GIS136 GIS for Science, Government, and Business	Active	10/12/2009	10/12/2015
	GIS137 GIS Advanced Applications	Active	10/12/2009	10/12/2015
	GIS222 Independent Study in Geographic Information Systems	Active	11/29/2012	11/29/2018

Articulation and Transfer

List Courses above 100 where articulation or transfer is **not** occurring	With CSU	With UC
GEOG 100/ GIS 100 : Map Interpretation and Geospatial Analysis		Not yet articulated within the UC system.
GEOG 118: California Geography		Not yet articulated within the UC system.
GEOG 222: Independent Study		Limited transfer to UC. Credit

		determined after transfer to UC.
GIS 134: Data Acquisition and Management		Not yet articulated within the UC system.
GIS 135: Spatial Analysis with GIS	Transfers as elective credit only.	Not yet articulated within the UC system.
GIS 136: GIS for Science, Government and Business		Not yet articulated within the UC system.
GIS 137: Advanced GIS Applications	Transfers as elective credit only.	Not yet articulated within the UC system.
GIS 222: Independent Study		Limited transfer to UC. Credit determined after transfer to UC.

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

At this time, GEOG 100 and 118 do not articulate with the UC system and GEOG 222 has limited UC articulation. While most 100-level GIS courses fully articulate and transfer to the CSU system, GIS 135 and 137 transfer as elective credit only. At this time, comparable courses are found within the upper division. Aside from GIS 100, 130 and 133, all other 100-level GIS courses do not yet articulate and transfer to the UC system. As with the CSU system, many GIS (and related geospatial) courses are found within the upper division.

The Geography and GIS faculty will continue to work with the SBVC articulation officer, as well as articulation officers at selected CSU, UC, and private transfer institutions. In addition, faculty will meet with community college and four-year faculty at professional meetings and regular telecommunication. Area industry and employer input will benefit these programs through industry advisory meetings.

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?

GIS 100 Map Interpretation and Geospatial Analysis should include this statement- C-ID (Course Identification Number): GEOG 150. Currently GEOG 100 (Cross listed course) does list the C-ID number. The department will ask the Curriculum Committee to update this item.

GIS 131- GIS Applications was discontinued Fall 2014 and approved by the board January 2015. The next college catalog should also reflect this change.

By mistake, the Geography AS Degree does not appear in the current catalog. This issue has been resolved and the next catalog should reflect this change.

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 identifies and describes 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?

Major trends may include:

- Environmental aspects related to global climate change and resource scarcity, specifically as it pertains to urbanization, air quality, and water use within the Inland Empire,
- Related mapping technologies, including GIS, GPS, and remote sensing, specifically job growth within the mapping sciences within the Inland Empire,
- Inclusion of greater numbers of previously underrepresented populations, specifically through outreach, workshop, guest speaker, and job fair events,
- Land and resource management programs, specifically through partnerships with ESRI, US Forest Service, City and County of San Bernardino, and other public and private entities within the Inland Empire, and

Depending on state and federal mandates, the demand for Geography school teachers (K-12) may increase.

The Department will continue to participate in discipline-specific and SBVC Professional Development conferences and workshops. In addition to these events, Department faculty will continue to collaborate with faculty at other California Community Colleges and four-year institutions to share ideas about pedagogy, curriculum, technology, and other current events. This dialogue will occur within professional meetings, workshops, and conferences, as well as through industry advisory committee recommendations.

The following external factors impact Geography and GIS student enrollment and service utilization:

- Student life demands,
- State of the economy, including specific job availability and marketplace demands,
- Demographic trends, including high school graduation trends,
- Federal and State funding trends,

- Transportation and related mobility issues, and
- Programs offered at competing area colleges and four-year institutions.

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. <u>In what way does your planning address accomplishments and strengths in the program?</u>

Major Geography Department accomplishments include:

- Garnering institutional support for two full-time faculty members,
- Creation and approval of the AA-T transfer degree,
- Revision of the AS degree,
- Creation and approval of new courses (GEOG 100, GEOG 118, GIS 100, and GIS 134),
- Revision of all existing GEOG and GIS courses,
- Offering hybrid (DE) courses within GEOG/GIS 100 and GIS 130 during the fall 2015 semester,
- Continuation of the ITV (DE) Physical Geography course at the Big Bear High School site,
- Active Department in many campus outreach activities (e.g. "Super Saturday," "Science and Math Day," "Celebrating Women in Science and Math," etc.),
- Faculty and student attendance at APCG (Association of Pacific Coast Geographers), CGS, and other professional geography conferences,
- Successful collaboration with publishers in the production of a customized Physical Geography textbook and laboratory manual (that saved students money),
- Creation of a Geography scholarship fund (through the San Bernardino Valley College Foundation), and
- Inclusion of Geography within STEM and HSI grants in order to fund a tutor.

Major GIS Certificate Program accomplishments include:

- Inclusion within Perkins and CTE Enhancement grants,
- Creation and approval of new courses (GEOG 100, GEOG 118, GIS 100, and GIS 134),
- Revision of all existing GEOG and GIS courses,
- Offering hybrid (DE) courses within GEOG/GIS 100 and GIS 130 during the fall 2015 semester,
- Dialogue with the Colton-Redlands-Yucaipa ROP for GIS course articulation and plans to include other area ROP programs for GIS articulation at campus ROP articulation workshops,
- Dialogue with the SBCCD PDC and SBVC Office of Research, Planning, Development, and Grants for course projects and internships at campus industry advisory committee meetings,
- Active Department in many campus outreach activities (e.g. "Super Saturday," "Science and Math Day," "Celebrating Women in Science and Math," etc.),
- Participation in area high school, middle school, and elementary school outreach projects,
- Coordination with area high school advanced placement (AP) GIS courses (for potential articulation agreements),
- Coordination with other on-campus programs (for development of combined and specialized certificate programs),
- Installation of the GIS (ESRI) software within other campus computer labs (beyond the normal classroom, HLS 231), including Library and DSPS High-Tech center, and
- Faculty and student attendance at APCG, CGS, and ESRI International User Conference, and Funding for GIS tutors to serve in an open lab environment during the fall and spring semesters.

Challenges

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

Geography Program:

There are presently several barriers to student success for students taking Geography courses, including lack of math, reading, and English skills. The Department will continue to address this through departmental advisories and possibly prerequisites for math, reading, and English proficiency. The Department has procured one tutor (within the Student Success Center) but no SI leaders to date.

There is limited instructional supply money for necessary classroom items, including up-to-date maps, globes, demonstration models, and laboratory supplies. While the transportation supply funding has been enhanced, it is likely that it will once again need to be supplemented, in light of increased fuel costs. Budgeting for technology for a variety of Geography courses is an ongoing issue.

Geography Planning:

One-year plan:
- Continue and strengthen partnerships with ESRI and four-year transfer institutions.
- Continued participation in "Science and Math Day," "Women in Science and Math," "Men in Science and Math," and "Super Saturday" on-campus activities.
- Continue and increase participation in regional high school recruitment off campus.
- Regularly offer (at least once per academic year) an expanded lineup of courses, including: GEOG 100, 102, 106, 110, 111, 114, 118, and 120.
- Offer online, hybrid, and ITV versions of the following courses: GEOG 100, 102, 106, 110, 114, 118, and 120.
- Inclusion of the Geography Department within future STEM, HSI, and Title V grants.
- Partnership with the American Meteorological Service (AMS) within the "Minority Scholarship" and online "Weather Studies" programs.

Three-year plan:
- Continue to lobby for hiring an additional full-time, tenure-track faculty member (perhaps 50% Geography and 50% GIS).
- Regularly offer the GEOG 111H honors Physical Geography laboratory course.
- Write curriculum to include honors sections for the GEOG 102 and 110 lecture courses.
- Expand outreach to include regional high school and adult education students.
- Continued expansion of Distributed Education (DE) offerings for the following courses: GEOG 102, 106, 110, 114, 118, and 120.
- Collaboration with the Science Division to submit a grant providing leadership and mentor training for our students, outreach efforts to local middle schools for "Science Saturday" workshops, and a summer bridge program for science and math success.

Five-year plan:
- Research and development of a grant to fund minority/underrepresented (and other) students to transfer into four-year Geography and Environmental Studies/Sciences programs.
- Creation of new topical courses, including Economic, Political, Urban, and Hazards/Natural Disasters courses.
- Development of one or more "study abroad" programs, beginning with the SBVC Costa Rica program.
- Continued collaboration – via professional conference, workshops, and bridge program – with community college and four-year institutions in terms of the development, articulation, and career development of courses.

GIS Program:

- With one exception, there are no full-time instructors within the GIS program. Although the current GIS instructors are professional and capable (and drawn from within the GIS industry), it is difficult to guarantee the permanence of adjunct instructors. However, with the introduction of a full-time geography faculty, the stability of the GIS program would be better maintained.
- Related to the previous point, there are only two full-time faculty advocates for GIS program, the faculty chair and a full-time geography faculty member. This faculty chair must also develop and maintain growth within the Geography and Geology-Oceanography Departments, as well as contribute to the new Environmental Sciences/Studies program. These multiple roles make it difficult to focus energy and resources on the GIS program. This has proven costly for SLO development and evaluation, as well as the Curriculum Content Review cycle.
- Because many entry-level GIS positions are found within the public sector (e.g. city, county, state, and federal governments), the slow economic recovery has resulted in fewer GIS positions being made available to SBVC GIS students.
- Although GIS tutors have served GIS students during past semesters, no long term funding has been procured for this important service. It will, therefore, be necessary to coordinate with the Student Success Center, Cal Works, Hi-Tech Center, and other on-campus student support services.

GIS Planning:

One-year plan:
- Continue and strengthen partnerships with ESRI and four-year transfer institutions.
- Continued participation in "Science and Math Day," "Women in Science and Math," "Men in Science and Math," and "Super Saturday" on-campus activities.
- Continue and increase participation in regional high school recruitment off campus.
- Regularly offer (at least once per academic year) an expanded lineup of courses, including: GIS 039, 098, 100, 130, 133, 134, 135, 137, and 222.
- Offer online, hybrid, and ITV versions of the following courses: GIS 100, 130, 133, 134, 135, and 137.
- Leverage existing Perkins and CTE Enhancement grants within future STEM, HSI, and Title V grants.
- Sequencing GIS courses such that students can successfully earn a certificate within three to four semesters.
- Further integrate the GIS program into SBVC Emerging Technology and Green Technology plans.

Three-year plan:
- Continue lobbying for hiring an additional full-time, tenure-track faculty member (perhaps 50% Geography and 50% GIS).
- Expand outreach to include regional high school and adult education students.
- Collaboration with the Science Division to submit a grant providing leadership and mentor training for our students, outreach efforts to local middle schools for "Science Saturday" workshops, and a summer bridge program for science and math success.
- Build upon the success of the MOU (Memorandum of Understanding) with the San Bernardino County Geographic Information Management System (GIMS) and expanding internship programs with other public and private agencies.
- Strengthen the SBVC-ESRI relationship so that GIS students can participate in internship and "job shadowing" programs.
- Coordinate with the Career and Transfer Center to assist student placement into internship (paid and unpaid) programs and four-year degree programs.

Five-year plan:
- Continued expansion of Distributed Education (DE) offerings for GIS courses, possibly including the ITV format for Big Bear and other mountain community students.
- Research and develop a grant to fund minority/underrepresented (and other) students to transfer into four-year GIS and Geography programs and transition into related careers.

- Create a "field camp" and/or "study aboard" GIS immersion program.
- Expansion of combination and specialized GIS certificate programs, including Water Supply Technology, Architecture and Environmental Planning, and Real Estate programs.
- Incorporation of Computer Science (CS) and Computer Information Technology (CIT) courses into the GIS certificate program.
- Development of a fully transferable GIS Associate Degree (AS) program.

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		
	Program does not demonstrate that it incorporates the strategic initiatives of Technology, Partnerships, or Campus Climate.	Program demonstrates that it incorporates the strategic initiatives of Technology, Partnerships and/or Campus Climate.
	Program does not have plans to implement the strategic initiatives of Technology, Partnerships, or Campus Climate	Program has plans to further implement the strategic initiatives of Technology, Partnerships and/or Campus Climate.

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?

Geography Program: Technology:

In addition to traditional lecture methods, including class discussion and whiteboard, the Geography Department is using the following technologies:

- Classroom computer and LCD projector for PowerPoint, Google Earth, World Wind, ESRI ArcGIS (including online), and other computer animation software,
- DVD and streaming educational videos,
- Blackboard course management system,
- Edustream video archiving and playback system
- Student e-mail,
- Interactive television (ITV) courses linked to the Big Bear High School site, and

- Official SBVC website: http://www.valleycollege.edu/academic-career-programs/degrees-certificates/geography

The Geography Department will expand the number of courses offered in a distributed education (DE) environment. The Department will continue to work closely with the College, Science Division, Audiovisual Department, Curriculum Committee, Program Review Committee, Technology Committee, and Professional Development.

GIS Program: Technology:

In addition to traditional lecture methods, including class discussion and whiteboard, the GIS Certificate Program is using the following technologies:
- Classroom computer and LCD projector for PowerPoint, Google Earth, World Wind, ESRI ArcGIS (including online), and other computer animation software,
- DVD and streaming educational videos,
- Blackboard course management system,
- Student e-mail, and
- ESRI Virtual Campus (on-line) courses.

The GIS Department will expand the number of courses offered in a distributed education (DE) environment. The Department will continue to work closely with the College, Science Division, Audiovisual Department, Curriculum Committee, Program Review Committee, Technology Committee, and Professional Development Committee.

An integral aspect of the GIS software – industry-standard ESRI (Environmental Systems Research Institute, a world leader in GIS software, based in Redlands, California) software – is close communication with the Foundation for California Community Colleges. For an affordable price, the District has purchased a District-wide site license for the ESRI GIS software. This allows faculty, staff, and students to use the latest versions of ArcGIS (including online), and related GIS software. This is the same software that GIS analysts use on a daily basis. Because our students use and interact with this software within their GIS courses, they will be well prepared for entry-level careers and transfer to four-year institutions. For more information about the Foundation for California Community Colleges GIS software program, please view the following website: http://www.foundationccc.org/CollegeBuys/OurPartners/tabid/489/Default.aspx#esri

The SBVC GIS Program will also coordinate with the California Community Colleges Geographic Information Systems Collaborative (CCCGIS Collaborative). This clearinghouse for CCC geographic data is available to all community colleges throughout the state. Not only may data be accessed from but also contributed to this clearinghouse. Please view the following website for additional information: http://www.cccgis.org.

GEOG and GIS Partnerships:

- Partnerships with professional organizations, including Association of American Geographers (AAG), Association of Pacific Coast Geographers (APCG), California Geographical Society (CGS), Inland Empire GIS User Group, and ESRI (Environmental Systems Research Institute, a leading producer of industry-standard GIS software) will continue to benefit the programs, students, and faculty. Relationships with these organizations serve to maintain curricular currency and provide students with career and transfer opportunities.
- Partnerships with the San Bernardino County Geographical Information Management Services (GIMS) and US Forest Service allow for input into curricular development, as well as continued provision of internship opportunities for students.
- Partnerships with SBVC and District entities, such as Science Division and departments within the division, Student Success Center, Research and Planning Office, Geography Club, and Economic Development and Corporate Training (EDCT) Division (formerly known as the ATTC), will continue to foster program growth through academic and career development.

Campus Climate:

- Both programs can contribute to campus safety and planning through collection and publication of global positioning system (GPS) and GIS data. For example, students from both programs can provide input and cartographic products for planning for future walkways, bicycle racks, parking lots, lighting, trashcan placement, smoking areas, and other campus features. Indeed, students and faculty have already shared some of these products with appropriate campus administrators and committees.
- The Geography Club and future GIS Club will coordinate with other SBVC student organizations in support of a variety of endeavors, including Red Ribbon Week, Health Fair, Science Day, Women in Science Day, Geography Awareness Week, GIS Day, and hosting on- and off-campus elementary, middle, and high school outreach events.
- The Geography and GIS Departments will continue outreach to other programs on campus. This will not only strengthen Geography and GIS but also partner programs. For example, basic geographic literacy and GIS skills are integral to any number of biology, environmental science/studies, marketing, police science, public health, political science, and social science programs.

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.

There are no previous "does not meet" categories, as identified within the most recent (2011-12) efficacy document.