

The Comprehensive Instructional Program Review Report

1. College: Berkeley City College

Discipline, Department or Program: Earth Sciences: Geography, Geology, Physical Science (Marine Science)

Date: November 1, 2015

Members of the Comprehensive Instructional Program Review Team:

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2. Narrative Description of the Discipline, Department or Program:

Goals of the Earth Sciences Department

The most important goal of the science department, in which biology is one of the disciplines, is to provide students with the knowledge and skills they will need in order to perform successfully in the next stage of their careers, whether that stage involves transfer to a 4-year institution, entering a professional program or entering the workplace in a specialized field such as GIS (Geographical Information Systems) Another important goal is to build stepping stones to science in order to make careers in science accessible to students who have little or no background in science and math but who have been excited by the news and the potential of interesting jobs in biotechnology and other science related fields. A third goal of the science department is to provide the community with informative courses to enhance their understanding and appreciation of the world of science; these include seminar-style courses taught by local scientists and scientific laboratories and a monthly science seminar series.

Courses Offered in Earth Sciences: The Geography Department offers the following transfer level courses for Geography Majors: Geography 1 and Geography 1L and the following non-major transfer courses: Geography 18 Geography of California, and Geography 19, Global Climate Change. The geography department will also offer the following courses once a full time faculty position is secured: Geography 2, Cultural Geography, Geography 3, World Regional Geography. Geography 5, Economic Geography, is presently not in the BCC catalog but may be developed and offered by a new faculty member. There is one course and lab offered in Geology, Geology 10 and 10L, Introduction to Geology and Geology Lab and one course in Physical Sciences, Physical Science 20: Introduction to the Marine Environment. All Earth Science classes can be used to satisfy IGETC requirements.

Goals of Students enrolled in Earth Science Courses: The majority of students enrolled in the Earth Science classes are planning to transfer to 4 year schools in assorted disciplines. There are a few students in Geography 1, 1L who are planning to pursue degrees in geography. Geology 10, 10L is presently targeted to students enrolled in education classes and planning to complete either an A.A. degree or Certificate of Achievement in Elementary Teacher Education. All transfer-level courses offered at BCC are taught at the same level of rigor as similar classes taught at those 4-year colleges and universities. This is to ensure that our students, once they transfer to any 4-year colleges or universities, are at a competitive edge with their classmates in those colleges or universities. There are evidences that show many of our science graduates have done very well in 4-year colleges and universities.

Grants, Awards, Donations

The Earth Science Department has benefitted from the donation of map filing cabinets and maps and supplies from USGS.

3. Curriculum:

Please answer the following questions and/or insert your most recent curriculum review report (within the past 3 years) here. Attach the Curriculum Review Report or Answer these Questions:

- *Have all of your course outlines of record been updated or deactivated in the past three years? If not, list the courses that still need updating and specify when your department will update each one, within the next three years.*

Yes, courses have been updated.

- *What are the disciplines, department or program of study plans for curriculum improvement (i.e., courses or programs to be developed, enhanced, or deactivated)?*

A. New courses

1. Geography 18. Geography of California. Offered for the first time in Spring 2015
2. Geography 19. Global Climate Change. Offered for the first time in Fall 2015
3. A course in GIS (Geographical Information Systems) will be developed once a full time faculty has been hired. This class would be taught by an adjunct with practical experience using GIS in their profession so that they can direct students toward careers in this field.
4. Geology 10L. Introduction to Geology Laboratory. Offered for the first time in Spring 2014.

- *Please list your degrees and/or certificates. Can any of these degrees and/or certificates be completed through Distance Education (50% or more of the course online)? Which degree or certificate*

All of the certificates and degrees awarded include extensive laboratory training and as such there are no offerings in Distance Education.

4. Assessment:

Please answer the following questions and attach the TaskStream “At a Glance” report for your discipline, department, or program for the past three years. Please review the “At a Glance” reports and answer the following questions.

COURSES	Data available from previous rounds?	Action Plan from Previous Rounds?	Notes	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018
Geog 001, Physical Geography	Y	Y		Y					
Geog 001L, Physical Geography Lab	Y	Y							
Geog 018, California Geography	Y	Y			Y				
Geog 019, Global Climate Change	Y	Y		Y					
Geol 10, Introduction to Geology	Y	Y				Y			
Geol 10L, Introduction to Geology Lab	Y	Y				Y			
Physc Sci 20, Introd. to the Marine Environment	Y	Y				Y			

Questions:

- *How does your discipline, department or program ensure that students are aware of the learning outcomes of the courses and instructional programs in which they are enrolled? Where are the discipline, department or program course and program SLOs published? (For example: syllabi, catalog, department website, etc. If they are on a website, please include a live link to the page where they can be found)*
 - Course SLOs appear in the following locations:
 - Syllabi
 - Student Learning Outcomes webpage: <http://www.berkeleycitycollege.edu/wp/slo/student-learning-outcomes/>
 - Program Learning Outcomes appear in the following locations:
 - College Catalog (printed and on the website http://www.berkeleycitycollege.edu/bccdocs/BerkeleyCityCollege_2015_17Catalog.pdf)
 - Program Assessment Matrices webpage: <http://www.berkeleycitycollege.edu/wp/slo/program-assessment-matrices/>
- *Briefly describe at least three of the **most significant changes/improvements** your discipline, department or program made in the past three years as a response to course and program assessment results. Please state the course number or program name and assessment cycle (year) for each example and attach the data from the “Status Report” section of Task Stream for these findings.*
 1. Development of Geography 18, California Geography that will serve to satisfy IGETC requirements for physical science without a laboratory.
 2. Development of Geography 19, Global Climate Change that will serve to satisfy IGETC requirements for physical science without a laboratory.
 3. Development of Geology 10L, Introduction to Geology Lab. Geology 10 and 10L are required for students enrolled in education classes and planning to complete either an A.A. degree or Certificate of Achievement in Elementary Teacher Education. These geology classes can also be used to satisfy IGETC requirements for a physical science with a laboratory.
- *Briefly describe three of the **most significant examples** of your discipline, department or program plans for course and/or program level improvement for the next three years as result of what you learned during the assessment process. Please state the course number or program name and attach the data from the “Assessment Findings and Action Plan” section for each example.*
 1. An AS-T degree in Geography or Earth Science should be available to students.

In order to develop an AS-T in Geography, several classes needed to be reinstated and offered: Geography 2, Cultural Geography, Geography 3, World Regional Geography, and Geography 5, Economic Geography. These courses meet the requirements for transfer to U.C, as Social and Behavioral Sciences, and for transfer to California State University as Area D, Social Sciences.

Importantly, a full time tenure track faculty is needed in geography to develop the geography offerings and department at BCC.
 2. A dedicated classroom for the Earth Sciences is critically needed in order to inspire students to consider the earth sciences as fields for study that lead to jobs and to support student success. The classroom should have both white board and screens, a large map of the world, pin board space and access to a sink and water for experimental demos in marine science.

3. Geography 1 and 1L need to be re-structured into one 4-unit class with 3 hours of lecture and 3 hours of lab per week similar to many science classes. This change will require going through the district CIPD and to the State for approval. Presently, students can enter the laboratory class having completed the lecture class anywhere in the district – a real problem for the instructor who wants to relate the material covered in lecture section to the laboratory. Depending on the instructor and their area of expertise in geography, different areas of physical geography are stressed in different colleges. Complicating matters are on-line classes and intensive classes (3 weeks in length) in which the material has been altered to fit the format (in some cases seriously diluted) leaving students unprepared to succeed in the laboratory classes taught at BCC. For students not in need of a lab, one or two sections of Physical Geography could still be taught by the department without an attached lab.
- *Describe how assessment results for Distance Education courses and/or programs compare to the results for the corresponding face-to-face classes.*

Not Applicable. The Science Department does not offer online courses.

- *Describe assessment results for courses with multiple sections. Are there similar results in each section?*

No assessment has been done at this time. There are 2 sections of Geography 1 and 1L taught by 2 different instructors. There are no other classes with multiple sections.

- *Describe your discipline, department or program participation in assessment of institutional level outcomes (ILOs).*
No assessment has been completed at this time, but as a discipline, Earth Sciences is so vast in scope that the material addresses all institutional level outcomes.

5. Instruction:

- *Describe effective and innovative strategies used by faculty to involve students in the learning process.*

Field trips enhance the classroom experience of geography particularly for students in an urban area that have not had much exposure to the natural environment. Use of videos, maps, in class demos likewise engage students in the learning process.

- *How has new technology been used by the discipline, department or program to improve student learning?*

1. Moodle is used by some instructors to reinforce the learning experience with short videos, practice quizzes and copies of PowerPoint lectures.

2. On-line submission of lecture reports and other assignments using turnitin.com have been used in some classes. This has provided students with streamlined grading and feedback while helping to ensure academic integrity using the site.

3. The geography lab class is offered in a computer lab where students use ArcGIS, Google Earth, and other primary sources such as NASA space imagery.

4. Purchase of new materials and equipment for the Geology laboratory has allowed students to conduct experiments and be more engaged in learning the material.

- *How does the discipline, department or program maintain the integrity and consistency of academic standards with all methods of delivery, including face to face, hybrid, and Distance Education courses?*
All courses in geography, geology and marine science are offered face-to-face. Academic standards are delineated in class syllabi and actively are reinforced in lecture and lab courses.

How do you ensure that Distance Education classes have the same level of rigor as the corresponding face-to-face classes?

Not Applicable. The Science Department does not offer DE courses.

- Briefly discuss the enrollment trends of your discipline, department or program. Include the following:*

- Overall enrollment trends in the past three years*

Course & number	Course Name	F12	S13	F13	S14	F14	S15	Mean
Geography 1	Physical Geography	133	148	123	133	147	124	135
Geography 1L	Physical Geography Lab	57	57	56	59	49	29	51
Geography 18	California Geography	---	---	--	---	---	24	---
Geography 19	Global Climate Change	---	---	---	---	---	---	---
Geology 10	Introduction to Geology	39	36	33	43	38	40	38
Geology 10L	Introd. to Geology Lab	---	---	---	24	27	23	25
Physical Sci 20	Introd. to Marine Science	---	40	42	40	47	35	41

Not offered = '---'

- An explanation of student demand (or lack thereof) for specific courses.*

The greatest student demand is for Geography 1 Physical Geography). This course fulfills IGETC, Area 5, for students intending to transfer to a 4 year institutions.

- Productivity for the discipline, department, or program compared to the college's productivity rate.*

College's average productivity rate in the last 3 years is **18.05**.

Average productivity for the earth sciences in the last 3 years is **18.97**

Course & number	Course Name	F12	S13	F13	S14	F14	S15	Mean
Geography 1	Physical Geography	22.17	24.67	20.50	22.17	24.50	20.67	22.45
Geography 1L	Physical Geography Lab	17.81	17.81	17.50	18.44	15.31	18.13	17.50
Geography 18	California Geography	---	---	--	---	---	12	---
Geography 19	Global Climate Change	---	---	---	---	---	---	---
Geology 10	Introduction to Geology	19.50	18.00	16.50	21.50	19.00	20.00	19.08
Geology 10L	Introd. to Geology Lab	---	---	---	15.00	16.88	14.38	15.42
Physical Sci 20	Introd. to Marine Science	---	20.00	21.00	20.00	23.50	17.50	20.40

Not offered = '---'

- Salient factors, if known, affecting the enrollment and productivity trends you mention above.*

Lower productivity in Geography occurred in new courses (to be expected) while articulated courses have the greatest productivity.

- Are courses scheduled in a manner that meets student needs and demands? How do you know?*

Yes, as much as is feasible. Classes are scheduled each day, Monday through Thursday, in both the mornings and afternoons.

- *Recommendations and priorities.*
 1. Hire full time faculty member to develop the Earth Sciences offerings at BCC.
 2. Locate a dedicated room to Earth Sciences
 3. Restructure Geography 1, 1L.

6. Student Success:

- *Describe course completion rates (% of students that earned a grade “C” or better or “Credit”) in the discipline, department, or program for the past three years. Please list each course separately. How do the discipline, department, or program course completion rates compare to the college course completion standard?*

College course completion standard: **70%**; mean course completion rate for earth sciences: **66%**

Course & number	Course Name	F12	S13	F13	S14	F14	S15	Mean
Geography 1	Physical Geography	76.15	76.35	63.41	69.17	61.90	62.10	68.18
Geography 1L	Physical Geography Lab	85.45	85.96	76.79	81.36	85.71	68.77	80.67
Geography 18	California Geography	---	---	--	---	---	54.17	---
Geography 19	Global Climate Change	---	---	---	---	---	---	---
Geology 10	Introduction to Geology	53.85	47.22	45.45	58.14	60.53	65.00	55.03
Geology 10L	Introd. to Geology Lab	---	---	---	58.33	44.44	69.57	57.45
Physical Sci 20	Introd. to Marine Science	---	97.50	73.81	80.00	82.98	77.14	68.57

Not offered = ‘---’

Course Success Rate by Course and Ethnicity:

Course & number	Course Name	Am. Ind. Alaskan Native	Asian	Black/ African Amer.	Filipino	Hispanic	Pacific Islander	While Non Hispanic
Geography 1	Physical Geography	66.67	73.68	54.61	70.59	58.57	75.00	81.23
Geography 1L	Physical Geography Lab	100	87.50	64.15	100	82.00		88.24
Geography 18	California Geography		100	50.00				60.00
Geography 19	Global Climate Change							
Geology 10	Introduction to Geology		42.11	40.74	33.33	30.56		81.93
Geology 10L	Introd. to Geology Lab		50.00	33.33	100	44.44		68.57
Physical Sci 20	Introd. to Marine Science		91.30	92.59	75.00	75.00		76.00

Blanks reflect no students enrolled

Discussion:

1. The mean success rates for the earth science classes are far lower than the mean retention rates. For example, Geography 1 has a success rate of 68.18% and a retention rate of 82.28%; Geology 10 has a success rate of 55.03 and a retention rate of 79.35 and Marine Science has a success rate of 68.57 with a retention rate of 88.23. One explanation for this discrepancy may be student’s perception of the relative ‘easiness’ of the class. All of the earth science offerings satisfy IGETC for physical science and 2 of the classes, Geography 1 and 1L, are transfer level for the geography major. More students planning to transfer opt to enroll in geography and geology to satisfy the IGETC requirement rather than enroll in physics or chemistry. However, the earth science classes are very challenging, particularly the transfer level classes, and thus the discrepancy between retention and success.
2. The low success rates seen in Black/African American students is concerning and not the result of low numbers enrolled. The low rates among Filipino and Hispanic students in Geology 10 and 10L cannot be explained as the percentages reflect less than 10 students total.

- Describe course completion rates in the department **for Distance Education** courses (100% online) for the past three years. Please list each course separately. How do the department's Distance Education course completion rates compare to the college course completion standard?

Not Applicable. The Science Department does not offer online courses.

- Describe course completion rates in the department **for Hybrid** courses for the past three years. Please list each course separately. How do the department's Hybrid course completion rates compare to the college course completion standard?

Not Applicable. The Science Department does not offer Hybrid courses at this time.

- Are there differences in course completion rates between face to face and Distance Education/hybrid courses? If so, how does the discipline, department or program deal with this situation?

Not Applicable. The Science Department does not offer online or Hybrid courses.

- Describe the discipline, department, or program retention rates (After the first census, the percent of students earning any grade but a "W" in a course or series of courses) for the past three years. How does the discipline, department, or program retention rate compare to the college retention standard? College retention standard: **70%**

Retention Rates for Biology from Fall 2012 to Spring 2015 Mean for Earth Sciences: **83.51%**

Course & number	Course Name	F12	S13	F13	S14	F14	S15	Mean
Geography 1	Physical Geography	87.69	91.22	72.36	81.95	74.15	86.29	82.28
Geography 1L	Physical Geography Lab	94.55	89.47	83.93	94.92	87.76	82.76	88.90
Geography 18	California Geography	---	---	--	---	---	62.50	---
Geography 19	Global Climate Change	---	---	---	---	---	---	---
Geology 10	Introduction to Geology	84.62	75.00	72.73	74.42	86.84	82.50	79.35
Geology 10L	Introd. to Geology Lab	---	---	---	83.33	70.37	82.61	78.77
Physical Sci 20	Introd. to Marine Science	---	97.50	80.95	90.00	87.23	85.71	88.23

Not offered = '---'

Discussion: See discussion under 'student success' and completion rates above.

- What has the discipline, department, or program done to improve course completion and retention rates? What is planned for the next three years?
5. Offered two seminar series that present students with the latest areas of scientific endeavor. A "Noontime Seminar Series" emphasizes careers in STEM fields (e.g. medicine, engineering, environmental science, physics and computer systems) with guest speakers from local research and industry laboratories, and an Evening Seminar Series that emphasizes recent developments in science and medicine, including issues pertaining to water usage and global climate change.

Additional Future Plans

1. Science Saturdays aimed at high school students interested in STEM fields. Presently in the planning stage, the idea is to engage high school students in activities that will give them the idea of the types of pathways in science they can pursue. A combination of activities and mini lectures that cover a breadth

of science fields will be offered. This will be funded by the *East Bay Career Pathways Consortium* (referred to as the *Career Pathways Trust, CPT*).

2. Friday Science Assist Afternoons aimed at high school students taking science classes. Presently in the planning stage, the idea is to have high school students work directly with BCC students on homework problems and other matters to improve the retention of prospective science students in high schools. This will be funded by CPT.

- Which has the discipline, department, or program done to improve the number of degrees and certificates awarded? Include the number of degrees and certificates awarded by year, for the past three years. What is planned for the next three years?

This is not applicable to the Earth Sciences at this time as the department is very small and the classes taught by adjuncts.

7. Human, Technological, and Physical Resources (including equipment and facilities):

- Describe your current level of staff, including full-time and part-time faculty, classified staff, and other categories of employment.

Full-time faculty headcount: **0**

Part-time faculty headcount: **5 (3 geographers, 1 geologist, 1 marine scientist)**

Total FTEF faculty for the discipline, department, or program: **0**

Full-time/part-time faculty ratio: **0**

- Describe your current utilization of facilities and equipment.

Biology classes use 2 laboratory rooms exclusively: Room 522 and Room 513. Room 522 has been designated for Biology 1A and the biotechnology classes in an effort to keep it free of plants and other live material that can contaminate tissue culture used in advanced classes. At present the room is occupied full time between 8:30 a.m. and 10:00 p.m. Mondays and Wednesdays, 3:00 – 10:00 p.m. Tuesdays and Thursdays, and depending on the semester all day on Fridays through 7:00 p.m. There is space for a second 3 hour Biology 1A lab Tues Thurs mornings only. The Room is used almost every Saturday between 10 – 5 p.m. for molecular genetics (F), Immunology (Sp) and Microbiology (F, Sp). Room 513 is used for Biology 1B (plant biology) and Biology 10. The only available space to offer another section of Biology 10 in this room is Tuesday Thursday mornings. The room is used on Saturdays for Biology 13L.

Other rooms available to the Biology Department include a prep room, an instrument room and a storage room. The Biology Department maintains an inventory of all equipment, materials and supplies on line via Quarty and in paper in the prep room. At present all drawers, cabinets and shelves are filled with materials in the two laboratory rooms, prep room and storage room for the science department.

The Biology department uses the following equipment on a daily basis: assorted microscopes, refrigerators and freezers, fume hoods, laminar flow hoods, autoclave, ice machine, water baths, deionizer, assorted spectrophotometers, thermocyclers, rockers, assorted centrifuges and pH meters. A flow cytometer is used in the spring semester for Bio 33 (immunology).

- What are your key staffing needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, and/or other factors.

1. Faculty: One full-time geographer and 2 adjunct faculties for geology and marine science. Berkeley City College needs to hire a full-time geographer to provide continuity in the department. It is difficult to hire part-time teachers as geographers can find employment in business and government particularly those that have a background in GIS.

2. **Student workers.** The role of the student workers is to assist the faculties with the laboratory class to ensure that students are able to follow the instructions and get the most out of the experiment.

SPECIFIC NEEDS FOR THE BIOLOGICAL SCIENCES

- Student workers: 12 hrs/wk x 35 wks (420 total hours) @ 13.25/hr = \$5,565/yr
- Summer Session: 52.5 hrs @ 13.25/hr = \$696
- Sick Leave: 30 hrs work/1 hr sick leave = 472 /30 = 15.7 x 13.25 = \$209
- Approximate Total monies based on above/yr: **\$6,470**

- *What are your key technological needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, and/or other factors. See Appendix A*

1. Software for Geography (GIS)
2. 3 Microscopes for Geology (@\$2000 each) for students to observe details of rocks
3. Assorted supplies that are easily broken and lost each year for geography and geology (\$2000)

- *What are your key facilities needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, and/or other factors.*

Earth Science needs a dedicated classroom with adjacent storage for rocks and supplies. The room should have not only a screen but sufficient whiteboard to draw more complicated maps and diagrams. There should be room for a large world map and other maps as needed. Ideally the walls would be pin board so that some of the extensive collection of maps and geologic diagrams can be displayed.

8. Community, Institutional, and Professional Engagement and Partnerships:

- *Discuss how faculty and staff have engaged in institutional efforts such as committees, presentations, and departmental activities. Please list the committees that full-time faculty participate in.*

One adjunct who previously retired from the district has continued to serve on search and other committees. The other adjuncts have full time positions and are unable to participate in college activities.

- *Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations. N/A – see comment above.*
- *Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.*

Geography and Geology courses are included in programs in Global Studies and Elementary Education. Geography 1 has been linked with the Global Studies program and World Regional Geography (Geog 3) and Geology 10 and 10L are requirements for the Elementary Education program.

Adjunct faculties participate in the selection of seminar speakers and topics for science department professional day meetings.

Professional Development:

- *Please describe the professional development needs of your discipline or department. Include specifics such as training in the use of classroom technology, use of online resources, instructional methods, cultural sensitivity, faculty mentoring, etc.*

Monies for professional meetings are needed. Importantly, monies should be available for professional meetings that occur outside of the academic year and which are often not advertised in advance. At present, the only way to be paid for these meetings is to submit a request in advance, but this is not always feasible. We would like to see monies made available to faculty after the meetings (and with appropriate travel and meeting receipts).

10. Discipline, Department or Program Goals and Activities:

- *Briefly describe and discuss the discipline, department or program goals and activities for the next three years, including the rationale for setting these goals. NOTE: Progress in attaining these goals will be assessed in subsequent years through annual program updates (APUs).*

- **Goal 1. Curriculum: Restructure Geography 1 and 1L and add Geography 2 (Cultural), 3 (World Regional) and 5 (Economic).**

Activities and Rationale: The restructuring of Geography 1. 1L will increase student success in this course. Adding the other courses will help to build a viable Geography Department and expose students to the critical fields of study within the Earth Sciences that lead to exciting and ‘in demand’ positions in the workforce.

- **Goal 2. Assessment: Complete Assessment for all Earth Science Classes**

Activities and Rationale: An assessment of these classes will allow the faculties to improve the delivery of the material and offer support materials. This will increase student success and help to build programs of distinction.

- **Goal 3. Instruction: Hire tenure track faculty member in geography and secure a dedicated classroom for Earth Sciences.**

Activities and Rationale: To build a Department of Earth Sciences and teach the courses in Geography. A dedicated room is critical to student engagement and student learning.

- **Goal 4. Student Success: Continue Seminar Series, Participate in Science Informational Days, Field Trips.**

Activities and Rationale: Additional activities that will be developed through the CPT grant include ‘Science Saturdays’ and Friday Afternoon Science Assist. All of these activities will hopefully support student success and increase enthusiasm for the STEM fields.

- **Goal 5. Professional Development, Community, Institutional and Professional Engagement and Partnerships: Plan to participate in Advisory Board Meetings, Science Budget Committee, participation on Curriculum and other college and district activities.**

Activities and Rationale: Advisory Board Meetings helps to keep the Science Department offerings up to date and participation on other committees ensures that faculties are fully engaged with the college’s goals.

Appendix A

Comprehensive Instructional Program Review Prioritized Resource Requests Summary

College: Berkeley City College

Discipline, Department or Program: Earth Sciences

Contact Person: Barbara Des Rochers, Rita Haberlin, Don Woodrow

Date: 11/01/2015

Resource Category	Description	Priority Ranking (1 – 5, etc.)	Estimated Cost	Justification (page # in the program review narrative report)
Human Resources: Faculty	A full time Geography Instructor	5		Goal 3. Development of the Earth Science Department ;
Human Resources: Classified				
Human Resources: Student Workers	Student workers	5	\$6.47K	Goal 3. Student workers are critical to assure student success in the laboratory classes.
Technology	<ul style="list-style-type: none"> Software for geography 	5	3K	GIS must be updated.
Equipment	Microscopes for Geology	5	6K	Geology needs special microscopes to observe micro details of rock formation
Supplies	Materials and Supplies	5		Assorted kits for each bench
Facilities				
Professional Development				

Summary of known monies needed for Biology/Biotechnology Department:

1. Annual support staff, small equipment and supplies: **\$7,470**
2. One time microscopes: **\$6,000**

Appendix B

PCCD Program Review Alignment of Goals Template

College: BCC

Discipline, Department or Program: Earth Sciences

Contact Person: Barbara Des Rochers, Rita Haberlin

Date: 11/01/2015

Discipline, Department or Program Goal	College Goal	PCCD Goal and Institutional Objective
<ul style="list-style-type: none"> • Goal 1. Curriculum: Restructure Geography 1 and 1L and add Geography 2 (Cultural), 3 (World Regional) and 5 (Economic). • Goal 2. Assessment: Complete Assessment for all Earth Science Classes • Goal 4. Student Success: Continue Seminar Series, Participate in Science Informational Days, Field Trips. 	<p>BCC Goal 1. Increase Equitable Access</p> <p>BCC Goal 2. Improve Equitable Success</p>	<p>Strategic Goals A: Advance Student Access, Equity, and Success</p> <p>2015-2016 Institutional Objectives</p> <p>A.1 Student Access: Increase enrollment for programs and course offerings in the essential areas of basic skills/ESOL, CTE and transfer to achieve the District target of 20, 609 RES FTES.</p> <p>A.2 Student Success: Using the total 2014-2015 data as a baseline, increase students' participation in SSSP eligible activities by at least 50%, with specific emphasis on expanding orientations, assessments, academic advising and student educational plans.</p> <p>A.3 Student Success: Fully implement an Early Alert process for all students.</p> <p>A.4 Student Equity: Address the achievement gap through fully implementing the student</p>

		<p>success and equity plans at each campus.</p> <p>A.5 Student Success: Using 2014-2015 data as a baseline, increase student engagement in activities such as student governance, student life activities, student leadership development, service learning programs, learning communities and student employment.</p>
<ul style="list-style-type: none"> • Goal 5. Professional Development, Community, Institutional and Professional Engagement and Partnerships: Plan to participate in Advisory Board Meetings, Science Budget Committee, participation on Curriculum and other college and district activities. 	<p>BCC Goal 3. Increase the number of new partners and enhance and leverage resources with existing partners.</p>	<p>Strategic Goals:</p> <p>B: Engage and Leverage Partners 2015-2016 Institutional Objectives:</p> <p>B.1 Partnerships: Develop a District-wide database that represents our current strategic partnerships and relationships, both locally and abroad. Identify the individual responsible for this objective by October 1, 2015.</p> <p>B.2. Partnerships: Expand and document domestic and international partnerships with K-12 institutions, community based organizations, four-year institutions, local government, and regional industries and businesses.</p>
<p>Goal 3. Instruction: Hire tenure track faculty member in geography and secure a dedicated classroom for Earth Sciences.</p>	<p>BCC Goal 4. Reduce education and achievement gap through building and implementing programs of</p>	<p>Strategic Goals:</p> <p>C: Build Programs of Distinction 2015-2016 Institutional</p>

	<p>distinction through SSSP, Equity, BSI and other college-wide plans.</p>	<p>Objectives:</p> <p>C.1 Student Success: Develop a District-wide first year experience/student success program (such as Peralta Scholars).</p> <p>C.2 Student Success: Develop and fully implement an innovative student success program at each college that feeds into the District-wide first year experience/student success program.</p>
<p>4.</p>	<p>BCC Goal 5. Resolve the 2 ACCJC Recommendations and BCC's self-identified Actionable Improvement Plans</p>	<p>Strategic Goals:</p> <p>D: Strengthen Accountability, Innovation and Collaboration</p> <p>2015-2016 Institutional Objectives:</p> <p>D.1 Service Leadership: Provide professional development opportunities for faculty, staff and administrators that lead to better service to our students and colleagues and community partners.</p> <p>D.2 Institutional Leadership and Governance: Evaluate and update policies and administrative procedures, the overall PCCD organizational structure, and functional responsibilities within the District.</p> <p>D.3. Institutional Effectiveness: Evaluate and update the PBIM participatory governance structure and the Budget Allocation Model (BAM).</p> <p>D.4. Global Planning:</p>

		<p>Develop a Total Cost of Ownership (TCO) plan that includes agreed upon standards, estimates costs for facilities operations and maintenance, costs for technology acquisition, repair and replacement cycles, custodial and stationary engineering services for all existing buildings and potential new facilities.</p>
5.	<p>BCC Goal 6. Increase BCC additional and alternative funding sources through materializing BAM, funding raising, non-RES tuition, grants, etc.</p>	<p>Strategic Goals: E: Develop and Manage Resources to Advance Our Mission 2015-2016 Institutional Objectives:</p> <p>E.1 FTES/FTEF Target: Achieve the District target FTES/FTEF within budget.</p> <p>E.2 Budget to Improve Student Success: Increase alternative funding sources including, but not limited to, the Peralta Colleges Foundation, non-RES tuition (with a particular focus on recruiting international students), grants, etc.</p> <p>E.3 Fiscal Oversight: Prudently manage all fiscal resources; general fund, bonds, benefits, OPEB), other long-term liabilities; Resolve all outstanding audit findings.</p> <p>E.4 Support Quality Instruction: Increase investments in materials, equipment, and teaching and learning resources to enhance student learning outcomes.</p>

Appendix C

Program Review Validation Form and Signature Page

College: Berkeley City College

Discipline, Department or Program: Earth Sciences

Part I. Overall Assessment of the Program Review Report

Review Criteria	Comments: Explanation if the box is not checked
<p><input type="checkbox"/></p> <p>1. The narrative information is complete and all elements of the program review are addressed.</p> <p><input type="checkbox"/></p> <p>2. The analysis of data is thorough.</p> <p><input type="checkbox"/></p> <p>3. Conclusions and recommendations are well-substantiated and relate to the analysis of the data.</p> <p><input type="checkbox"/></p> <p>4. Discipline, department or program planning goals are articulated in the report. The goals address noted areas of concern.</p> <p><input type="checkbox"/></p> <p>5. The resource requests are connected to the discipline, department or program planning goals and are aligned to the college goals.</p>	

Part II. Choose one of the Ratings Below and Follow the Instructions.

Rating	Instructions
<input type="checkbox"/> 1. Accepted.	1. Complete the signatures below and submit to the Vice President of Instruction.
<input type="checkbox"/> 2. Conditionally Accepted.	2. Provide commentary that indicates areas in the report that require improvement and return the report to the discipline, department or program chair with a timeline for resubmission to the validation chair.
<input type="checkbox"/> 3. Not Accepted.	3. Provide commentary that indicates areas in the report that require improvement and return the report to the discipline, department or program chair with instructions to revise. Notify the Dean and Vice President of Instruction of the non-accepted status.

Part III. Signatures

Validation Team Chair

Print Name

Signature

Date

Discipline, Department or Program Chair

Print Name

Signature

Date

Received by Vice President of Instruction

Print Name

Signature

Date

