

The Comprehensive Instructional Program Review Report

1. College: Laney

Discipline, Department or Program: BIOLOGY

Date: October 30, 2015

Members of the Comprehensive Instructional Program Review Team: Amy Bohorquez, Leslie Blackie, Rebecca Bailey

Members of the Validation Team:

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

Please provide a mission statement or a brief general statement of the primary goals and objectives of the discipline, department or program. Include any unique characteristics, degrees and certificates the program or department currently offers, concerns or trends affecting the discipline, department or program, and a description of how the discipline, department or program aligns with the college mission statement.

The mission of the Biology Department includes providing:

- introductory courses that meet requirements of AA and AS degrees
- Career Technical Education, specifically Biomanufacturing (including two certificates and an AS degree)
- transfer courses to four year schools
- prerequisites for professional schools (including programs for Registered Nurse, Licensed Vocational Nurse, Nurse Practitioner, Radiology Technician, Physician Assistant, Dental, Dental Hygiene, Medical and Pharmacy).

We meet the educational needs of the community by providing up-to-date programs and allowing students flexibility to earn degrees and certificates in select occupational and academic fields. Our program also allows students to expand their general knowledge and improve their position in the work force. Our faculty and staff strive to:

- prepare students for the next level of study
- facilitate and inspire each student's best effort
- be fair, consistent and organized
- challenge students to reach higher and farther than they thought they could.

NOTE: Biomanufacturing is completing a separate CTE Program Review, but that program is also included in this report.

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.

The majority of our 26 courses have been updated within the last 3 years. BIOL 10 and 11 were updated in 2013, but are being updated now to reflect our improved way of recording SLO assessments.

Within our Biomanufacturing Program, we have some courses that are in need of updating, however we were waiting for the C-ID descriptors to be finalized. Now that they are final, we will be updating those this academic year.

The department's curriculum review report is complete (see attached), and is scheduled for review at the Curriculum Committee meeting November 6, 2015.

Course Number	Course Name	Date of most recent update
072A	Biotech Instrumentation: Good Laboratory Practices and Safe Chemical Handling	12/3/2010
072B	Biotech Instrumentation: Clean Room	12/3/2010
072C	Biotech Instrumentation: PCR	12/3/2010
072D	Biotech Instrumentation: Quality Control	12/3/2010
74	Scientific Communication	12/3/2010

79	Bioreactor Cell Culture and Protein Recovery	12/3/2010
73	Cell Culture Principles and Techniques	1/19/2011

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

The Biology Department faculty work collaboratively to perform assessments and improve curriculum on a regular basis. Our analysis of assessment results and collaboration among faculty members to improve our teaching advances student access, success and equity. All f/t faculty and many p/t faculty are involved on the college and/or district level, and promote innovation and collaboration on many levels. We have built programs of distinction – including biomanufacturing, pre-health care, and transfer courses for majors and general education - and continue to improve upon these models. We work to advance access, success and equity in all our programs. Group work and creating a classroom atmosphere with an expectation that students support each other pertains to all the strategic planning goals. The biomanufacturing program is particularly successful at engaging our community.

The department is prepared to finalize our AS-T in Biology. All of our courses that are eligible for C-ID descriptors have either been approved or are conditionally approved and will be updated to match. We are also looking into the AS-T for Allied Health Professionals and will be working with the Chemistry department to develop a strategy for this degree’s development. We will be replacing the existing Science degree with the Allied Health degree once finalized.

Equity and success for all students is of constant concern in our department. This semester we are trying different methods of assess to provide us with more robust results concerning the successes of our students. The use of in-lab student assistants is also being tracked to monitor success rates of students and to determine which students ask for help with the material. This information may lead to changes in our curricular design.

- 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?

Biomanufacturing	Active - Certificate of Achievement	03/09/11 STATE APPROVAL
Biomanufacturing Production	Active - A.S. Degree	09/10/2012 STATE APPROVAL
Biomanufacturing Skills	Active - Certificate of Proficiency	12/11/12 BOT

None of our degrees can be complete through Distance Education.

The Science degree was updated by our department, however, we do not feel as though it counts as one of our degrees. We do not have enough information to determine if that degree can be completed through Distance Education as it includes offerings from many departments. We plan on replacing it with an Allied Health Degree and working with the Chemistry department along with comparing pre-requisite lists from the California Nursing Association to determine the best courses to include.

4. Assessment:

Laney’s Program Review Resources & Information webpage (<http://www.laney.edu/wp/instruction/program-review/>) has several files you will need to complete this section. Please look at the files available and follow the instructions below. If you have questions, contact the Laney Assessment Coordinators, Heather Sisneros [and Rebecca Bailey \(hsisneros@peralta.edu, rbailey@peralta.edu\)](mailto:hsisneros@peralta.edu).

- 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 your 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)

Our SLOs are posted on our department website and on our syllabi. The PLOs for the biomanufacturing program are posted online

<http://www.laney.edu/wp/biomanufacturing/degrees/biomanufacturing-program-level-outcomes/>

and in the Laney College catalog and our departmental PLOs are posted online:

<http://www.laney.edu/wp/biology/student-learning-outcomes/>

This link also provides a link to the course outline information.

- Insert evidence of the approval status for all SLOs for every course offered in your department. Note that if the course has been updated through CurricUNET in 2007 or later, SLOs have been approved. Course approval dates can be found in the CurricUNET Report August 2015 file. Use the toggles at the column headings to choose your cluster or department, select the boxes for your area, and copy/paste below. The second tab shows the key to cluster abbreviations.

All our courses have approved SLOs in CurricUNET:

BIOL	001A	General Biology	2/20/15
BIOL	001B	General Biology	2/21/14
BIOL	2	Human Anatomy	9/19/14
BIOL	3	Microbiology	12/2/12
BIOL	4	Human Physiology	9/19/14
BIOL	10	Introduction to Biology	3/1/13
BIOL	11	Principles of Biology	3/1/13
BIOL	020A	Human Anatomy and Physiology	4/4/14
BIOL	020B	Human Anatomy and Physiology	4/4/14
BIOL	24	Basic Human Anatomy and Physiology	10/5/12
BIOL	27	Human Sexuality	2/20/15
BIOL	28	Human Nutrition	4/4/14
BIOL	40	Infectious Diseases	9/21/12
BIOL	41	AIDS:Facts and Issues	9/21/12
BIOL	072A	Biotech Instrumentation: Good Laboratory Practices and Safe Chemical Handling	12/3/10
BIOL	072B	Biotech Instrumentation: Clean Room	12/3/10
BIOL	072C	Biotech Instrumentation: PCR	12/3/10
BIOL	072D	Biotech Instrumentation: Quality Control	12/3/10
BIOL	73	Cell Culture Principles and Techniques	1/19/11
BIOL	74	Scientific Communication	12/3/10
BIOL	75	Fundamentals of Biotechnology	10/5/12
BIOL	76	Principles of Biomanufacturing	10/5/12
BIOL	77	Business and Regulatory Practices in Biomanufacturing	10/22/12
BIOL	79	Bioreactor Cell Culture and Protein Recovery	12/3/10
BIOL	201	Medical Terminology I	3/30/2015
BIOL	202	Medical Terminology II	3/30/2015
BIOL	801	Biology of Growing Food	9/16/11

To answer the following questions, please review either your “At-a -Glance” report generated from TaskStream, or your Laney Assessment Spreadsheet. Answer the questions below, and attach the report (save it with your area’s information and include it when you turn in your Program Review).

Biology uses mainly the Laney Assessment Spreadsheet, but some courses have been recorded in TaskStream in the past. All reports attached.

- 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 year of assessment for each example. Attach as evidence your Laney Assessment Spreadsheet or TaskStream “Status Report” for the courses in your examples.

Improvement 1. BIOL 10 – Due to assessment results, an online microscope quiz was created for students to take before their lab. This greatly improved their success with using the microscope during lab. A microscope quiz is also used in Biology 1A and 1B as well.

Improvement 2. Students met the criteria for knowing the advantages and disadvantages of using different types of organisms in biomanufacturing, but the instructor felt they would benefit from greater knowledge of this basic topic. The Biology 76 lecture on the topic was given more emphasis and contextualized to job interview skills and knowledge.

Improvement 3. In a variety of the biomanufacturing certificate courses, instructors noted students would benefit from more specific instruction on how to apply their basic skills and knowledge to biomanufacturing. Instructors across the biomanufacturing program developed certificates and degrees, and continue to update them with an emphasis on contextualized learning.

- 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 relevant data from your Laney Assessment Spreadsheet or the TaskStream report “Assessment Findings and Action Plan” section for each example.

Plan 1. BIOL 10 – We are testing a way to determine improvement for our SLO assessment this semester and testing an alternative method next semester to determine which provides the most accurate results.

Plan 2. Students will continue to write papers and learn how to communicate science clearly, a skill industry highly values. (Biol 74, 75,76,77)

Plan 3. Continue to assess students skill level with practice in the lab and skill assessment tests. (Biol 75, 72A, 72B, 72C, 72D, 79)

- Describe how assessment results for Distance Education courses and/or programs compare to the results for the corresponding face-to-face classes.

Anecdotally, instructors felt the results were similar for f2f and DE nutrition courses, but in the past we were not required to track this and do not currently have data to say for certain. Most of our DE courses (Biol 11, Biol 201, Biol 202) are not taught f2f so there is no comparison to make.

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

Within the BIOL 10 courses, we use similar questions/assignments and have found the results to be similar as well. We are working on consistency of methodology for assessments that are successful and given that our lab manual is the same for all sections, we can be confident that our assessment for the lab related outcomes are reliable. We have tested out different methods in different sections to see if there was a difference, but these data are very limited and we will have to conduct more tests before reporting. For other courses, instructors generally have felt results were similar and we pooled data, but we did not specifically analyze this as we’ve not been required to in the past.

- Describe your discipline, department or program participation in assessment of institutional level outcomes (ILOs).

In BIOL 1B – we participated in the assessment of Global Awareness in two parts. Our students read the IPCC (Intergovernmental Panel on Climate Change) Summary report and then we discussed it as a class. We kept this theme throughout the semester and I asked them questions again at the end of the semester. They retained most of the information that is most useful for discussions with other concerning climate change and had made changes to their personal lives as well as discussed the topic with friends and family.

In Fall 2014 one of the biomanufacturing courses participated in the assessment of ILO #1. In several courses, the department will be participating in the assessment of ILO #2 on critical thinking this year.

- How are your course and/or program level outcomes aligned with the institutional level outcomes? Please describe and attach either your Laney Assessment Spreadsheet or “Goal Alignment Summary” report from TaskStream.

Many of our courses have the same SLO (with varying degrees of success criteria) and those are the same as the PLOs for Biology to better assess how are students are doing as a whole. Our courses outlines that are not a part of an official degree are mapped to PLOs in TaskStream as well as mapped in our excel spreadsheet.

5. Instruction:

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

Biology instructors use hands-on activities in labs such as performing experiments and manipulation of models. We facilitate group discussions and teamwork, and analysis of data. We do active learning and critical thinking activities, including concept mapping. Technology is used for computer simulations of biological processes and experiments, and multimedia presentations. We need updated laptops in the department to continue to use technology effectively in our teaching.

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

Many of our faculty use Moodle as a supportive platform for courses with practice quizzes, online documents and recent research. In some of courses, exams and assignments are provided through Moodle as well.

Faculty have also tested out the use of iClickers and have received grant money for purchasing clickers for the department.

In our Anatomy and Physiology courses, programs like PhysioEx are commonly used so students can perform experiments on a digital platform.

- 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?

The faculty who teach within a particular program meet on a regular basis. We discuss issues such as exams, assignments and grading scales to ensure integrity and consistency of standards. We have developed an Instructors' Credo and a statement regarding A Culture of Academic Honesty, which are posted on the department webpage (<http://elaney.org/wp/biology/>).

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

Our Distance Education courses are reviewed by faculty that have or currently teach the face-to-face version of the course. We try to maintain consistency by utilizing similar methodology and sharing material like test banks. For our BIOL 11 course, the face-to-face version of the course also uses Moodle as a support platform and the shell contains much of the same information.

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

- Overall enrollment trends in the past three years

BIOL/HTLOC	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Headcount	230	309	360	217	303	371	181	426	420

Age	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Under 16	2	1		4	2		15	2	
16-18	22	43	5	48	54	10	25	38	31
19-24	92	489	334	96	504	418	103	445	363
25-29	43	216	211	39	238	207	50	228	245
30-34	19	116	98	24	135	117	29	118	109
35-54	25	120	124	33	161	124	29	154	132
55-64	2	6	9	1	16	11	3	24	15
65 & Above		2	3	1	1	2	1	4	
Grand Total	205	993	784	246	1,111	889	255	1,013	895

Ethnicity	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
American Indian/Alaskan Native	1						5		2
Asian	58	268	227	76	273	272	81	240	243
Black/African American	47	229	174	48	299	193	52	256	205
Filipino	4	31	26	6	46	31	6	35	39
Hispanic	18	102	75	29	129	99	27	116	121
Multiple	20	110	94	36	124	90	38	124	109
Other Non white		5		1		4	1	3	2
Pacific Islander	7	8	4	5	10	7	2	3	3

Unknown/Non Respondent	10	59	34	9	50	43	6	47	31
White Non Hispanic	40	181	150	36	175	150	42	187	140
Grand Total	205	993	784	246	1,111	889	255	1,013	895

Sex	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Female	132	633	491	162	721	587	160	664	587
Male	65	322	267	75	367	272	89	329	289
Unknown	8	38	26	9	23	30	6	20	19
Grand Total	205	993	784	246	1,111	889	255	1,013	895

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

All of our courses are in high demand during both the regular semester and the summer.

- o Productivity for the discipline, department, or program compared to the college productivity rate.

As you can see in the, the Biology department exceeds the college's productivity rates in almost every semester, with an average rate of 19.52.

BIOL/HLTOC	Term								
	2012 SUMMER	2012 FALL	2013 SPRING	2013 SUMMER	2013 FALL	2014 SPRING	2014 SUMMER	2014 FALL	2015 SPRING
Productivity	16.28	22.14	20.56	17.08	20.54	21.41	18.44	19.64	19.58

College productivity rate = 16.34 is the average of the following data points

LANEY	Term								
	2012 SUMMER	2012 FALL	2013 SPRING	2013 SUMMER	2013 FALL	2014 SPRING	2014 SUMMER	2014 FALL	2015 SPRING
Productivity	16.76	17.63	17.41	16.40	16.53	16.48	15.05	15.40	15.41

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

Department members work as a team to ensure we do well in the areas of enrollment and productivity.

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

We listen to students, work with other departments and discuss this topic frequently to try to meet the needs and demands of students. Most of our courses are overflowing with students, so we know that we don't completely meet demand. We want to have the funds and lecture/lab space to open more sections.

Enrollment comparison of Day versus Night (no information about actual time of day)

Course by Time of Day	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
BIOL 10 - INTRO TO BIOLOGY	64	184	108	64	185	186	63	176	183
DAY	64	184	108	64	185	186	63	176	183
BIOL 11 - PRIN OF BIOLOGY					101	33		78	35
DAY					101	33		78	35
BIOL 1A - GENERAL BIOLOGY		37	30		26	34		30	20
DAY		37	30		26	34		30	20

BIOL 1B - GENERAL BIOLOGY	22	30		24	26		32	31	
DAY	22	30		24	26		32	31	
BIOL 2 - HUMAN ANATOMY	37	66		38	65		38	63	
DAY	37	66		38	65		38	63	
BIOL 20A - HUMAN ANATOMY & PHYS	97			113			101		
DAY	97			113			101		
BIOL 20B - HUMAN ANATOMY & PHYS		53			76			67	
DAY		53			76			67	
BIOL 24 - BASIC HUMN ANAT/PHYS	47	70	67	57	67	70	47	63	67
DAY	47	70	67	57	67	70	47	63	67
BIOL 27 - HUMAN SEXUALITY		109	53		119	105	19	81	69
DAY		109	53		119	105	19	81	69
BIOL 28 - HUMAN NUTRITION	94	213	174	107	201	96	113	191	157
DAY	94	213	174	107	201	96	113	191	157
BIOL 3 - MICROBIOLOGY		132	132		130	129		113	117
DAY		132	132		130	129		113	117
BIOL 4 - HUMAN PHYSIOLOGY		67	31		57	30		56	33
DAY		67	31		57	30		56	33
BIOL 40 - INFECTIOUS DISEASES			20			26			18
EVENING			20			26			18
BIOL 41 - AIDS: FACTS & ISSUES			8			4			9
EVENING			8			4			9
BIOL 49 - I/S - BIOLOGICAL SCIENCES	3	6			5	7	0	6	7
EVENING	3	6			5	7	0	6	7
BIOL 72A - BIOTECH: GOOD LAB PRACTICES					14			22	
DAY					14			22	
BIOL 72B - BIOTECH: CLEAN ROOM					14			20	
DAY					14			20	
BIOL 72C - BIOTECH: PCR					12			23	
DAY					12			23	
BIOL 72D - BIOTECH : QUALITY CONTROL					16			21	
DAY					16			21	
BIOL 74 - SCIENTIFIC COMMUNICATION					10			11	
EVENING					10			11	
BIOL 75 - FUNDAMENTALS/BIOTECH	25	23	17		21	19	18	35	15
DAY	25	23	17		21	19	18	35	15
BIOL 76 - BIOMANUFACTURING	27	24			20	24		34	29
DAY	27	24			20	24		34	29
HLTOC 201 - MED TERMINOLOGY I	45				51			59	
DAY	45				51			59	
HLTOC 202 - MED TERMINOLOGY II		33				46			40
DAY		33				46			40
EVENING									
Grand Total	205	1068	858	245	1224	976	260	1190	960

- Recommendations and priorities.

A new Science or STEM building would allow us the space required to meet student demand for courses.

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: Average is 69.74%

	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	AVG
Success%	74.07%	68.72%	66.34%	73.40%	66.34%	67.98%	72.79%	68.95%	69.11%	69.74%

Department/discipline course completion rates: Average is 72.01%

BIOL/HTLOC	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	AVG
Success%	77.07%	72.43%	69.63%	80.08%	66.53%	69.67%	74.13%	69.76%	68.81%	72.01%

Course	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	AVG
BIOL 10 - INTRO TO BIOLOGY	90.63%	72.88%	59.26%	78.13%	63.78%	67.20%	80.95%	59.09%	62.09%	70.4%
BIOL 11 - PRIN OF BIOLOGY	NA	NA	NA	NA	44.55%	63.64%	NA	73.08%	85.71%	66.7%
BIOL 1A - GENERAL BIOLOGY	NA	70.27%	76.67%	NA	92.31%	82.35%	NA	70.00%	75.00%	77.8%
BIOL 1B - GENERAL BIOLOGY	NA	95.45%	83.33%	NA	79.17%	88.46%	NA	78.13%	87.10%	85.3%
BIOL 2 - HUMAN ANATOMY	NA	75.00%	81.82%	NA	63.16%	78.46%	NA	72.97%	82.54%	75.7%
BIOL 20A - HUMAN ANATOMY & PHYS	NA	59.57%	NA	NA	69.91%	NA	NA	63.37%	NA	64.3%
BIOL 20B - HUMAN ANATOMY & PHYS	NA	NA	71.70%	NA	NA	82.89%	NA	NA	83.58%	79.4%
BIOL 24 - BASIC HUMN ANAT/PHYS	63.83%	77.61%	60.61%	87.50%	69.70%	47.14%	70.21%	57.14%	53.03%	65.2%
BIOL 27 - HUMAN SEXUALITY	NA	59.43%	49.06%	NA	50.42%	40.95%	42.11%	53.09%	49.28%	49.2%
BIOL 28 - HUMAN NUTRITION	74.47%	71.63%	67.82%	77.36%	62.50%	78.13%	76.79%	67.54%	59.46%	70.6%
BIOL 3 - MICROBIOLOGY	NA	78.46%	85.50%	NA	80.00%	79.84%	NA	81.25%	77.78%	80.5%
BIOL 4 - HUMAN PHYSIOLOGY	NA	92.42%	87.10%	NA	89.47%	86.67%	NA	94.64%	84.85%	89.2%
BIOL 40 - INFECTIOUS DISEASES	NA	NA	75.00%	NA	NA	73.08%	NA	NA	66.67%	71.6%
BIOL 41 - AIDS: FACTS & ISSUES	NA	NA	62.50%	NA	NA	100.00%	NA	NA	77.78%	80.1%
BIOL 49 - I/S - BIOLOGICAL SCIENCES	NA	100.00%	100.00%	NA	#####	100.00%	NA	#####	100.00%	100.0%
BIOL 72A - BIOTECH: GOOD LAB PRACTICES	NA	NA	NA	NA	78.57%	NA	NA	90.91%	NA	84.7%
BIOL 72B - BIOTECH: CLEAN ROOM	NA	NA	NA	NA	71.43%	NA	NA	#####	NA	85.7%
BIOL 72C - BIOTECH: PCR	NA	NA	NA	NA	83.33%	NA	NA	91.30%	NA	87.3%
BIOL 72D - BIOTECH : QUALITY CONTROL	NA	NA	NA	NA	75.00%	NA	NA	95.24%	NA	85.1%
BIOL 74 - SCIENTIFIC COMMUNICATION	NA	NA	NA	NA	60.00%	NA	NA	#####	NA	80.0%
BIOL 75 - FUNDAMENTALS/BIOTECH	NA	72.00%	69.57%	80.00%	71.43%	84.21%	77.78%	54.29%	73.33%	72.8%
BIOL 76 - BIOMANUFACTURING	NA	55.56%	54.17%	NA	70.00%	70.83%	NA	70.59%	68.97%	65.0%
HLTOC 201 - MED TERMINOLOGY I	NA	74.42%	NA	NA	68.63%	NA	NA	63.79%	NA	68.9%
HLTOC 202 - MED TERMINOLOGY II	NA	NA	42.42%	NA	NA	56.52%	NA	NA	67.50%	55.5%
Grand Total	77.07%	72.43%	69.63%	80.08%	66.53%	69.67%	74.13%	69.76%	68.81%	72.0%

College Name Award Type	Academic Year			
	2012-2013	2013-2014	2014-2015	Total
Berkeley City College	23	1	8	32
College of Alameda	1	4		5
Laney College	30	31	64	125
AS		2	4	6
BIOL		2	4	6
CA	30	15	28	73
BIOL	30	15	28	73
CP		14	32	46
BIOL		14	32	46
Total	54	36	72	162

Discussion:

Department completion is generally higher than the college-wide average. Completion is variable over semesters and different courses, but overall good.

- 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?

College course completion standard; Average for the College is 56.79% for 100% DE

Grand Total for Laney	70.05%	57.60%	50.86%	57.64%	51.30%	54.86%	62.58%	54.77%	51.44%	56.79%
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Department/discipline Distance Education (100% online) course completion rates: Average is 69.5%

100% DE	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	AVG
BIOL	75.00%	76.39%	61.95%	83.33%	52.94%	63.64%	85.19%	72.79%	60.19%	70.2%
BIOL 11 - PRIN OF BIOLOGY	NA	NA	NA	NA	44.55%	63.64%	NA	73.08%	85.71%	66.8%
BIOL 28 - HUMAN NUTRITION	75.00%	76.39%	61.95%	83.33%	69.23%	NA	85.19%	72.41%	47.06%	71.3%
HLTOC	NA	74.42%	42.42%	NA	68.63%	56.52%	NA	63.79%	67.50%	62.2%
HLTOC 201 - MED TERMINOLOGY I	NA	74.42%	NA	NA	68.63%	NA	NA	63.79%	NA	69.0%
HLTOC 202 - MED TERMINOLOGY II	NA	NA	42.42%	NA	NA	56.52%	NA	NA	67.50%	55.5%
Grand Total	75.00%	75.65%	57.53%	83.33%	56.86%	59.49%	85.19%	70.10%	62.24%	69.5%

Course	2014 Spring	2015 Spring
BIOL 77 - BUSINESS & REGULATORY PRACTICE	70.83%	60.00%

Discussion:

Our DE completion appears to be significantly better than the college-wide average. Our instructors are well-trained and evaluated regularly.

- 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?

We do not currently offer any Hybrid courses

- 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? How do you assess the overall effectiveness of Distance Education/hybrid course?

For BIOL 11, the online instructor for BIOL 11 and the brick and mortar instructors for BIOL 10 share information via meetings as well as having access to the moodle shells associated with both the online BIOL 11 class and supportive shell for the BIOL 10. We share exam questions, practice quizzes, assignments and supplemental videos to ensure students are receiving the same information.

- 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?

Overall, our retention is higher than the College average, but by about 1%.

College retention standard; Average is 82.17%

LANEY	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	average
Retention%	84.30%	83.71%	79.07%	84.20%	81.31%	79.46%	84.68%	81.53%	81.25%	82.17

Discipline, department, or program retention rates; Average is 83.52%

Course	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring	AVG
BIOL 10 - INTRO TO BIOLOGY	96.88%	88.14%	81.48%	89.06%	82.70%	82.80%	98.41%	77.27%	80.77%	86.39%
BIOL 11 - PRIN OF BIOLOGY	NA	NA	NA	NA	57.43%	72.73%	NA	76.92%	85.71%	73.20%
BIOL 1A - GENERAL BIOLOGY	NA	78.38%	83.33%	NA	92.31%	85.29%	NA	73.33%	75.00%	81.27%
BIOL 1B - GENERAL BIOLOGY	NA	100.00%	83.33%	NA	87.50%	88.46%	NA	84.38%	93.55%	89.54%
BIOL 2 - HUMAN ANATOMY	NA	86.11%	86.36%	NA	71.05%	83.08%	NA	75.68%	82.54%	80.80%
BIOL 20A - HUMAN ANATOMY & PHYS	NA	84.04%	NA	NA	83.19%	NA	NA	80.20%	NA	82.48%
BIOL 20B - HUMAN ANATOMY & PHYS	NA	NA	83.02%	NA	NA	89.47%	NA	NA	86.57%	86.35%
BIOL 24 - BASIC HUMN ANAT/PHYS	80.85%	83.58%	77.27%	96.43%	86.36%	60.00%	89.36%	84.13%	66.67%	80.52%
BIOL 27 - HUMAN SEXUALITY	NA	86.79%	90.57%	NA	76.47%	66.67%	84.21%	80.25%	71.01%	79.42%
BIOL 28 - HUMAN NUTRITION	78.72%	86.06%	79.31%	83.96%	81.00%	89.58%	80.36%	83.25%	85.81%	83.12%
BIOL 3 - MICROBIOLOGY	NA	86.15%	89.31%	NA	86.92%	86.05%	NA	88.39%	88.89%	87.62%
BIOL 4 - HUMAN PHYSIOLOGY	NA	96.97%	93.55%	NA	91.23%	90.00%	NA	94.64%	84.85%	91.87%
BIOL 40 - INFECTIOUS DISEASES	NA	NA	90.00%	NA	NA	80.77%	NA	NA	66.67%	79.15%
BIOL 41 - AIDS: FACTS & ISSUES	NA	NA	75.00%	NA	NA	100%	NA	NA	77.78%	84.26%
BIOL 49 - I/S - BIOLOGICAL SCIENCES	NA	100.00%	100.00%	NA	100. %	100%	NA	100%	100%	100.00%
BIOL 72A - BIOTECH: GOOD LAB PRAC	NA	NA	NA	NA	78.57%	NA	NA	90.91%	NA	84.74%
BIOL 72B - BIOTECH: CLEAN ROOM	NA	NA	NA	NA	78.57%	NA	NA	100%	NA	89.29%
BIOL 72C - BIOTECH: PCR	NA	NA	NA	NA	91.67%	NA	NA	91.30%	NA	91.49%
BIOL 72D - BIOTECH : QUALITY CONT	NA	NA	NA	NA	100%	NA	NA	100%	NA	100.00%
BIOL 74 - SCIENTIFIC COMM	NA	NA	NA	NA	70.00%	NA	NA	100%	NA	85.00%
BIOL 75 - FUNDAMENTALS/BIOTECH	NA	80.00%	73.91%	93.33%	71.43%	84.21%	77.78%	65.71%	73.33%	77.46%
BIOL 76 - BIOMANUFACTURING	NA	62.96%	58.33%	NA	75.00%	79.17%	NA	76.47%	79.31%	71.87%
HLTOC 201 - MED TERMINOLOGY I	NA	79.07%	NA	NA	72.55%	NA	NA	70.69%	NA	74.10%
HLTOC 202 - MED TERMINOLOGY II	NA	NA	57.58%	NA	NA	56.52%	NA	NA	77.50%	63.87%
Grand Total	84.88%	85.88%	82.01%	88.80%	80.20%	80.02%	86.49%	81.89%	81.56%	83.52%

- Which has the discipline, department, or program done to improve course completion and retention rates? What is planned for the next three years?

The majority of our courses have retention rates in the 80%. Our Medical Terminology course had two semesters with very low retention, however, that rate increased drastically last spring. Our overall rate would be much higher if we did not include those two semesters.

- 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?

The department is prepared to finalize our AS-T in Biology. All of our courses that are eligible for C-ID descriptors have either been approved or are conditionally approved and will be updated to match. We are also looking into the AS-T for Allied Health Professionals and will be working with the Chemistry department to develop a strategy for this degrees development. We will be replacing the existing Science degree with the Allied Health degree once finalized.

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 6

Part-time faculty headcount 6

Total FTEF faculty for the discipline, department, or program _____

Full-time/part-time faculty ratio _____

Classified staff headcount 1

- Describe your current utilization of facilities and equipment.

We use half of the upper level of the B building. B200 and B267 are shared office space for instructors. B205 is the lab technician's office. B204 and the associated anterooms are for laboratory preparation, storage, and dishwashing. B210 is a large lecture room. Recently there has been a college trend to use this large lecture room for other courses outside the Biology department, and we believe that, regardless of class size, Biology should maintain its historic priority for use of this room. We routinely move large (and large quantities) of models into the lecture room from the labs for use in critical thinking activities. Holding these activities in a room far from the labs would make these activities so central to our program nearly impossible. B201, 202, 203, and 207 are laboratory rooms, which often double as lecture rooms. B201 and 202 are for general biology, B203 is for microbiology and B207 is for anatomy and physiology. The rooms are used for day and evening courses. Even when classes are not scheduled we typically have instructors holding office hours in lab rooms so that students have access to the models and other equipment. Instructors often hold office hours or review sessions on Fridays when no other labs are scheduled. Our Biomanufacturing program uses the B201 and A237 labs.

We have a great deal of equipment that is used in preparation and performance of laboratories. The autoclave (sterilizer) and other equipment used in preparation of labs are in B205. B205 is also used to store items used in classrooms. The laboratory rooms store some items, such as computers, small pieces of equipment, models, and specimens. Our growing Biomanufacturing program requires more space not only for teaching but also to maintain proper function of the equipment.

Each year it gets more difficult to sustain operation because of rising costs. We need \$25,000 per year to purchase consumable supplies and models for our courses. And an additional 20,000 per year for biomanufacturing supplies and equipment.

- 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.

Our lab technician will be retiring in at the end of this semester, and the department has assessed its needs for this role. We have determined that a newly negotiated classified position for a science lab coordinator fits our needs. The department has grown substantially in the decades since our current technician was hired, including the addition of certificates and degrees in biomanufacturing. This area is specifically addressed in the new job description, whereas the old job description did not require a skill set that fit biotech courses (also see Form D justifications). We are also nearing the local-level completion of our transfer degree in biology, and need more lab support in this area. We will need to hire this replacement in time to be trained in certain skills and procedures by our current technician. We are still making a request for a second lab technician, a to serve our night sections, as has been the case for many years. We also require student workers to help the technician and coordinator with basic tasks.

- 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.

We need a new Science building or STEM center with more and more useful technology in the classrooms. We are doing very well as a department, but could do much better (see data above).

- 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.

We need a new Science building or STEM center with more and better-designed space. We are doing very well as a department, but could do much better (see data above).

We have added a facilities request to identify space for a grant-funded clean room to serve the growing biomanufacturing program. We plan to continue pursuing our major goals, including a new science building (or STEM center), additional biology tutoring hours, and additional f/t faculty positions.

Lab preparation space is desperately needed. The lab technician regularly runs short of space to put all the lab set-ups and still have space to do work. We also run short of supplies such as glassware, but even with the recent renovations we do not have room to store more glassware. There is currently no prep space at all for biomanufacturing. More efficiently designed preparation space in a new building could solve these issues. We also require \$25,000 per year to purchase consumable supplies and models for our courses.

- Please complete the Comprehensive Instructional Program Review Prioritized Resource Requests Template included in Appendix A.

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.

We are a very active department, with all full-time faculty participating in a variety of ways at the college and district levels.

- Rebecca Bailey – long-time department chair, recent ISE co-chair, new Assessment co-Coordinator, Institutional Effectiveness Committee member, Program Review Validation co-developer and participant, currently chairing 1 TRC committee
 - Rajeev Banerjee – long-time faculty senate representative, sat on many hiring committees and is currently on 4 TRC committees
 - Leslie Blackie – long-time Biomanufacturing Program Coordinator, Laney CTE committee chair, Co chair District CTE committee, currently on 2 TRC committees, Budget Advisory Committee
 - Amy Bohorquez – former curriculum committee chair and CIPD co-chair, active member of curriculum committee, overseeing transition to CurricUNET META for the district, Sustainable Peralta member, currently on 3 TRC committees
 - Doug Bruce – Biomanufacturing Lab Manager, Sustainable Peralta committee member
 - Laurie Allen-Requa – new faculty this semester, represented biology at writing institute (assessment related activity) over the summer
- Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations.

Our faculty are involved in partnerships and in the community. Some faculty live in Oakland and participate in neighborhood gatherings, support local businesses, and engage in Lake Merritt clean up. Specifically for the Biomanufacturing program, faculty have had tours and networking events with Impax Laboratories, Berkeley-Emeryville Bioscience (BE BIO), Bay Area Life Tech (BALT),

Biolytic, Nutel, CLSA (formerly Bay Bio) CMC Biologics, Genentech, Biorad, Kelly Scientific, Aerotek, Penumbra, and Parenteral Drug Association. We have participated with Biolink Depot and Bayer to receive donations for the Laney Biomanufacturing program

- Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.

In our non-majors course (BIOL 10), adjunct faculty have help in updating/editing our lab manual as well as participated in the discussion of how to best assess the course. Adjunct faculty are welcomed to participate in departmental activities and share in discussions at meetings each semester.

9. 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.

Most faculty are very comfortable with classroom and other technology, but will need training as new technology becomes available. Our faculty are excellent, and like all faculty can benefit from ongoing workshops on instruction and cultural sensitivity.

- How do you train new instructors in the use of Distance Education platforms? Is this sufficient?

New instructors take the courses offered through the district to improve their online teaching skills. Current/previous instructors work with new faculty to help them with all courses, including DE. Our data presented above shows we do well with DE and this is sufficient.

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).
- Then fill out the goal setting template included in Appendix B. which aligns your discipline, department or program goals to the college mission statement and goals and the PCCD strategic goals and institutional objectives.

- **Goal 1. Curriculum:**

Activities and Rationale: The department has done very well with keeping curriculum up to date and relevant over the years. We will continue to maintain currency of our Course Outlines of Record and include more specific assessment methods in our CORs.

- **Goal 2. Assessment:**

Activities and Rationale: The department has been a campus leader in assessment. We will continue to assess SLOs in all our courses, and will look more specifically at DE vs. face-to-face and multiple-section courses.

- **Goal 3. Instruction:**

Activities and Rationale: Each semester, many of our courses draw more students than we can serve. We want to open more sections of our courses. To make this possible, our goal is to have a new Science building or STEM center to accommodate our needs and better serve our students and increase their success.

- **Goal 4. Student Success:**

Activities and Rationale: We need a college researcher or district research to help us determine our equity issues in the department, so we can clarify achievement gaps and form an action plan for greater student success.

- **Goal 5. Professional Development, Community, Institutional and Professional Engagement and Partnerships:**

Activities and Rationale: Full-time faculty participate at a high level at the college. We will continue to do this, and work with our new f/t faculty to find appropriate ways for them to increase participation.

- Please complete the Comprehensive Instructional Program Review Integrated Goal Setting Template included in Appendix B. Appendices

Appendix A

Comprehensive Instructional Program Review
Prioritized Resource Requests Summary for Additional (New) Resources

College: Laney

Discipline, Department or Program: Biology

Contact Person: Rebecca Bailey

Date: October 30, 2015

Resource Category	Description	Priority Ranking (1 – 5, etc.)	Estimated Cost	Justification (page # in the program review narrative report)
Human Resources: Faculty				
Human Resources: Classified	Lab Coordinator (to replace retiring lab technician), night technician	1		p. 12
Human Resources: Student Workers	Student workers each semester (including summer) to help lab technician with clean-up and maintaining labs	5		p. 12
Technology	New laptops to replace those several years old that do not properly run our updated software	3		p. 4
Equipment	See equipment listed on request forms, includes requests not fulfilled previously and new requests. Includes service contract for the department’s two autoclaves – this would be a yearly expense (otherwise the college must pay for service on an emergency basis).	2		This includes basic lab equipment and models, see request forms
Supplies	\$25,000 per year to accommodate growing costs of running labs, including lab supplies and models	2		p. 11, 12
Facilities	New science building/STEM center	4		p. 7, 12
Professional Development				
Other (specify)				

Appendix B

**PCCD Program Review
Alignment of Goals Template**

College: Laney

Discipline, Department or Program: Biology

Contact Person: Rebecca Bailey

Date: October 30, 2015

Discipline, Department or Program Goal	College Goal	PCCD Goal and Institutional Objective
<p>1. The department has done very well with keeping curriculum up to date and relevant over the years. We will continue to maintain currency of our Course Outlines of Record and include more specific assessment methods in our CORs.</p>	<p>#2 Accreditation: Ensure a collaborative process to successfully complete the necessary actions that lead to the reaffirmation of Laney College’s accreditation on an unconditional (non- warning) status.</p>	<p>A. Advance Student Access, Equity, and Success C. Build Programs of Distinction</p>
<p>2. The department has been a campus leader in assessment. We will continue to assess SLOs in all our courses, and will look more specifically at DE vs. face-to-face and multiple-section courses.</p>	<p>#3 Assessment: Ensure completion of the Assessment cycle for SLOs and PLOs.</p>	<p>A. Advance Student Access, Equity, and Success</p>
<p>3. Each semester, many of our courses draw more students than we can serve. We want to open more sections of our courses. To make this possible, our goal is to have a new Science building or STEM center to accommodate our needs and better serve our students and increase their success.</p>	<p>#4 Resources: Increase, develop and manage the College’s resource capacity in the areas of facilities, technology, personnel, finances and public and private partnerships, in order to advance the quality of education provided. #1 Student Success: Develop new and strengthen existing interventions and strategies to increase students’ access and success.</p>	<p>A. Advance Student Access, Equity, and Success E. Develop and Manage Resources to Advance Our Mission</p>
<p>4. We need a college researcher or district research to help us determine our equity issues in the department, so we can clarify achievement gaps and form an action plan for greater student success.</p>	<p>#1 Student Success: Develop new and strengthen existing interventions and strategies to increase students’ access and success.</p>	<p>A. Advance Student Access, Equity, and Success</p>
<p>5. Full-time faculty participate at a high level at the college. We will continue to do this, and work with our new f/t faculty to find appropriate ways for them to increase participation.</p>	<p>#2 Accreditation: Ensure a collaborative process to successfully complete the necessary actions that lead to the reaffirmation of Laney College’s accreditation on an</p>	<p>D. Strengthen Accountability, Innovation and Collaboration</p>

	unconditional (non- warning) status.	
6.		
7.		
8.		