

Peralta Community College District



Annual Program Update Template

Final Version: May 20, 2017

Introduction and Directions

The Peralta Community College District has an institutional effective process which consists of the following components: a District-wide Strategic Plan which is updated every six years; Comprehensive Program Reviews which are completed every three years; and Annual Program Updates (APUs) which are completed in non-program review years. While there are individualized Program Review Handbooks for Instructional units, Counseling, CTE, Library Services, Student Services, Administrative units, and District Service Centers, there is one Annual Program Update template for use by everyone at the colleges which is completed in the Fall semester of non-program review years.

The Annual Program Update is intended to primarily focus upon planning and institutional effectiveness by requesting that everyone report upon the progress they are making in attaining the goals (outcomes) and program improvement objectives described in the most recent program review document. The Annual Program Update is therefore a document which reflects continuous quality improvement. Additionally, the Annual Program Update provides a vehicle in which to identify and request additional resources that support reaching the stated goals (outcomes) and program improvement objectives in the unit's program review.

Throughout this document, the term "program" is used to refer to all of these terms: discipline, department, program, administrative unit, or unit.

The following items are required in order to complete the Annual Program Update document at the colleges:

- [The most recently completed comprehensive Program Review document.](#)
- Any comments or feedback provided during the program review validation process.
- College Goals
- [Institution Set Standards \(Institutional Standards that are reported annually to ACCJC\)](#)
- [College Institutional Effectiveness Indicators \(reported to the State Chancellor's Office annually\)](#)
- College SSSP plan
- [College Equity Plan](#)
- [College Basic Skills Plan](#)
- [PCCD Strategic Goals and Annual Institutional Objectives](#)
- Data profiles which include but are not limited to disaggregated demographics (age, gender, ethnicity, special populations), enrollment, productivity, student success metrics (retention, completion, etc.), and comparisons of Distance Education versus face-to-face classes.

I. Program Information

Program Name: Engineering

Date: 10/20/2017

Program Type: Instructional

College or District Mission Statement:

Laney College, located in downtown Oakland, California, is a diverse, urban community college committed to student learning. Our learner-centered college provides access to quality transfer and career- technical education, foundation skills and support services. These educational opportunities respond to the cultural, economic, social, and workforce needs of the greater Bay Area and increase community partnerships and global awareness.

Program Mission:

The Laney College Engineering Department's mission is to develop and cultivate students' ability to think critically, problem solve, and communicate innovative ideas. Through a foundational knowledge in math, science, and engineering and hands on experience with modern technology students will be provided with the skills necessary to succeed upon transferring or entering the workforce.

Date of Last Comprehensive Program Review: N/A

Date of Comprehensive Program Review Validation: N/A

II. Reporting Progress on Attainment of Program Goals or Administrative Unit Outcomes

There has been no previous program review for engineering, and thus the table below has been left blank.

Program Goal or Administrative Unit Outcome (AUO) (As reported in the most recent program review; cut and paste the goal or AUO from the program review document)	Which institutional goals will be advanced upon completion? (circle all that apply)	Progress on goal or AUO attainment (choose option & date)	Explanation and Comments (If a goal or AUO is Revised , please explain and describe the revision. Describe the impediments or detail what can be improved.)
<u>Assessment</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	
<u>Curriculum (if applicable)</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	
<u>Instruction (if applicable)</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	

<u>Student Success and Student Equity</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	
<u>Professional Development, Institutional and Professional Engagement, and Partnerships</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	
<u>Other Program Improvement Objectives or Administrative Unit Outcomes</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	
<u>Other Program Improvement Objectives or Administrative Unit Outcomes</u>	1. PCCD Strategic Goals Choose an item. Choose an item. 2. College Goals: Choose an item. Choose an item.	Choose an item. Select Date.	

III. Data Trend Analysis

Please review and reflect upon the data for your program. Then describe any significant changes in the following items and discuss what the changes mean to your program. Focus upon the most recent year and/or the years since your last comprehensive program review.

A. Student Demographics (age, gender, ethnicity, special populations). **Comments about changes:**

According to the data provided male students have outnumbered female students by about 3 to 1 for the past two years. This is a common and disappointing trend seen in engineering throughout education and industry with the American Society of Mechanical Engineers approximating that 18-20% of engineering students in the U.S. are female. Between Fall 2015 and Fall 2016 an increase in female students was seen; however the male students still outnumbered female students by more than 2 to 1. I think more efforts need to be made to increase enrollment and success of female students in engineering.

In the 2016-2017 school year the most represented ethnicity was Asian (~35%) followed by white (~23%), Hispanic/Latino (~21%), and African American (11%). The numbers are fairly consistent with the prior school year (2015-2016). When looking at the demographics of Laney College as a whole it can be seen that African American students are underrepresented in our department (11% in engineering vs. 25% in Laney College). As a community college located in Oakland, I think Laney College has a unique opportunity and responsibility to encourage the success of African American students in engineering.

Curriculum is currently being created for classes that introduce engineering but have fewer math and science prerequisites than the current engineering courses. It is the goal of offering these courses to bring more students into engineering who may not have the confidence or encouragement to pursue engineering degrees. Research has shown that more active learning environments are beneficial for both women and racial minorities- so the curriculum will focus on active learning through design projects.

B. Enrollment (sections, course enrollment, productivity, # of student contacts, etc). **Comments about changes:**

Enrollment in engineering has increased since hiring a full time faculty with a 10% increase in fall enrollment and a 27% increase in spring enrollment. The large increase in students in spring could be a result of the addition of ENGIN 35 (Statics) in the spring. With the addition of more engineering classes, enrollment is expected to increase in the future. Productivity has decreased which is likely a direct result of the increase in FTES.

C. Student Success (retention and completion rates, # of student contacts, etc.). **Comments about changes:**

The retention rate increased by 7% for both fall and spring semesters. The retention rate is between 79-86%. The success rate rose by 2% in the fall and fell by 7% in the spring. This could be due to the fact that ENGIN 35 is now taught in both the fall and the spring and thus the success rate is now more even between the fall and spring. (~74%). ENGIN 35 is the first mechanics course that most engineers take, and can be very difficult for some students. This may slightly bring down the success rate.

D. Student Success in Distance Education/Hybrid classes versus face-to-face classes (if applicable). **Comments about changes:**

N/A

E. Other program specific data or unplanned events that reflect significant change in the program.

IV. Equity

- Please review the student success data for your program and comment upon it. Do performance gaps exist in the student success or achievement rates for disproportionately impacted students, including African-American, Hispanic/Latino, Filipinos/Pacific Islanders, foster youth, veterans, students with disabilities or other groups not listed here? If differences exist, please detail the differences and describe the activities your program is making to address the differences? How will your program evaluate the effectiveness of these activities?

I was not provided with success rate data specific to certain groups, and thus am unable to this question without substantive data.

- Please review the SSSP plan, Equity plan, and Basic Skills plans at your college. How does your program address or participate in the information and activities presented in these plans? Are there resources available in these plans that can be utilized by your program or the students accessing your program?

Our only full time faculty member has put in a request with the Faculty Senate President to join the equity committee.

SSSP plan - The engineering department has introduced the 4.0 Challenge which is an effort to help students declare an educational goal (receive a 4.0) and agree to the steps necessary to achieve that goal. In response to the student joining the challenge the department is providing the support services necessary for the student to achieve their goal.

Equity plan – the equity plan lists African Americans, students who have a documented disability, and Pacific Islanders as students who are underserved in the area of math. I believe it is a reasonable assumption to assume this would also be the case for Engineering. One plan to address this is to hire more tutors to offer help for these underserved students. Additionally- more courses are being added that do not require prerequisites to introduce students to engineering and prepare them for upper level engineering courses.

V. Curriculum and Assessment Status

- What curricular, pedagogical or other changes has your department made since the most recent program review?

Curriculum has been updated for ENGIN 22, ENGIN 35, ENGIN 45, and ENGIN 77. Curriculum for a new course- ENGIN 36 – Mechanics of Materials was created and approved by the curriculum committee. Curriculum for other new courses is in progress including ENGIN 10- Introduction to Engineering and ENGIN 47 - Dynamics. There is an effort to make learning more active and involve hands on activities whenever possible. Most of the engineering classes have been updated to involve use of the FabLab.

- Were these changes based on assessment of student learning outcomes at the course or program level? Please identify the assessment. If s. If assessment was not used, describe the basis for the change. For example, Title 5 requirements, certifications requirements, etc.

The basis for the change is based on pedagogical studies showing that active learning is more effective. Additionally the availability of new resources such as the FabLab has made it possible to incorporate more hands on activities into engineering courses.

- Attach a summary depicting the program's progress on assessment of course and program level outcomes (SLOs and PLOs). Please evaluate your program's progress on assessment. What are the plans for further assessments in the upcoming academic year? Please include a timeline and/or assessment plan for the future.

To my knowledge no assessments have been made. In the upcoming academic year we will work to assess SLOs and PLOs.

- What does your program do to ensure that meaningful dialogue takes place in both shaping and assessing course and program level outcomes? Where can one find the evidence of the dialogue?

There is only one full time faculty in our department who is in charge of shaping and assessing course and program level outcomes. She is requesting funds to attend a conference to help build a network of other engineering instructors at other colleges who she can have meaningful dialogue with regarding outcomes for engineering courses. Dialogue takes place with the Dean of CTE as well as the staff of the FabLab of ways to shape curriculum to meet student needs.

- Describe your plans for improvement projects based upon the assessment results. Attach evidence (the assessment report from TaskStream, departmental meeting notes, or the assessment spreadsheet showing these results).

N/A – no assessment results

VI. Additional Questions

A. For CTE:

- Please describe any recommendations resulting from advisory committee meetings that have occurred since your last program review.
N/A
- Did you receive Strong Workforce Funds? Please briefly describe your progress in meeting the state mandated metrics.
No.
- Is your discipline/department/program working with a Deputy Sector Navigator? If so, in which sector? Briefly describe your discipline/department/program's work with the Deputy Sector Navigator.
N/A
- Is your discipline/department/program currently participating in any grants? Please discuss your progress in meeting the stated goals in the grant.
N/A

B. For Counseling:

- What has the counseling department done to improve course completion and retention rates? What is planned for the future?
- What has the counseling department done to improve SSSP counseling services? Please discuss your progress in improving SSSP counseling services.

C. For Library Services:

- Please describe any changes in the library services, collections or instructional programs since the last program review or annual program update and fill in the information below.

	This Academic Year:	Previous Academic Year(s)	Explanation of Changes
Library Open Hours Per Week			
Library Visits (gate count)			
Other Library Usage			

	This Academic Year	Previous Academic Years (s)	Explanation of Changes
Total Library Materials Expenditures			
Total Print Book Collection (titles)			
Total E-book Collection (titles)			
Total Database Subscriptions			
Total Media Collection (titles)			
Total Print Periodical Subscriptions			
General Circulation Transactions			
Reserve Circulation Transactions			

In-house circulation Transactions (optional)			
Media Circulation Transactions (optional)			
E-book Circulation Transactions- Describe – (optional)			
Other Circulations Transactions – Describe – (optional)			
Total Circulation Transactions			

D. For Student Services and/or Administrative Units:

- Briefly describe the results of any student satisfaction surveys or college surveys that included evaluation and/or input about the effectiveness of the services provided by your unit. How has this information informed unit planning and goal setting?

- Briefly describe any changes that have impacted the work of your unit.

VII. New Resource Needs Not Covered by Current Budget

Human Resources: If you are requesting new or additional positions, in any job classification, please explain how new positions will contribute to increased student success.

Human Resource Request(s)	Already Requested in Recent Program Review?	Program Goal (cut and paste from program review)	Connected to Assessment Results and Plans?	Contribution to Student Success	Alignment with College Goal (list the goal)	Alignment with PCCD Goal (A, B, C, D, or E) (list the goal)
Part time faculty	N/A	N/A	N/A	We are planning on offering more courses in engineering and it is going to reach the point where our only full time faculty cannot teach all of the classes that are offered.	LC: Provide Pathways to Careers, Degrees, Certificates/Transfer	A: Advance Student Access, Equity & Success
Student workers-tutors	N/A	N/A	N/A	Tutors are necessary to help prevent students from falling behind in their classes. There is currently one student tutor who is funded through the UC Davis Avenue E program; however, this funding source will not be available next year.	LC: Provide Pathways to Careers, Degrees, Certificates/Transfer	A: Advance Student Access, Equity & Success

- **Technology and Equipment:** How will the new technology or equipment contribute to student success?

Technology and Equipment Request(s)	Already Requested in Recent Program Review?	Program Goal (cut and paste from program review)	Connected to Assessment Results and Plans?	Contribution to Student Success	Alignment with College Goal (list the goal)	Alignment with PCCD Goal (A, B, C, D, or E) (list the goal)
Material testing equipment for Properties of Materials Lab including a furnace, hardness tester, compression testing plates, flexure testing equipment, and Jominy testing device (equipment will also be used for ENGIN 35- Statics and ENGIN 36- Mechanics of Materials)	N/A	N/A	N/A	Properties of Materials is being taught for the first time at Laney College this fall. This is a class required for most students to transfer and the lab requires a lot of important equipment. The equipment required provides students with hands on experience with the testing of materials. The lab cannot be properly taught without these materials. Several students commented on the lack of equipment in their student surveys. Note: this class has drastically increased enrollment in engineering which will be apparent in the APU for next year.	LC: Provide Pathways to Careers, Degrees, Certificates/Transfer	A: Advance Student Access, Equity & Success

Structure testing equipment for testing built trusses	N/A	N/A	N/A	This equipment will provide students with the chance to build truss bridges and then break them while observing the forces in each member. Currently in statics students learn how to calculate these forces but are not provided with a hands on activity to supplement what is learned	LC: Provide Pathways to Careers, Degrees, Certificates/Transfer	A: Advance Student Access, Equity & Success
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- **Facilities:** Has facilities maintenance and repair affected your program in the past year? How will this facilities request contribute to student success?

Facilities Resource Request(s)	Already Requested in Recent Program Review?	Program Goal (from program review)	Connected to Assessment Results and Plans?	Contribution to Student Success	Alignment with College Goal (list the goal)	Alignment with PCCD Goal (A, B, C, D, or E) (list the goal)
Engineering classroom/lab	N/A	N/A	N/A	Properties of Materials is overflowing with 35 students and there is no dedicated space to have lab. The lab is taught in two different classrooms which leads to the necessity of rolling a 400 pound piece of equipment (worth \$50,000) across	LC: Make All Facilities Clean, Safe, Functioning, Well-Equipped and Attractive	A: Advance Student Access, Equity & Success

				<p>campus twice a week. This is both unsafe and irresponsible. Additionally, labs are often held in the machine shop, which requires the students to crowd around heavy machinery which creates an unsafe environment. A safer option would be to have a dedicated engineering lab where equipment was set up in a location where students could observe and participate in all labs instead of standing around dangerous equipment.</p> <p>Engineering is a growing field, and we only expect our enrollment to increase over time as we start to offer more classes. A dedicated space is necessary for student success and safety.</p>		
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- Professional Development or Other Requests:** How will the professional develop activity contribute to student success? What professional development opportunities and contributions make to the college in the future?

Professional Development or Other Request(s)	Already Requested in Recent Program Review?	Program Goal (from program review)	Connected to Assessment Results and Plans?	Contribution to Student Success	Alignment with College Goal (list the goal)	Alignment with PCCD Goal (A, B, C, D, or E) (list the goal)
Fees and travel for one full time faculty to attend the American Society for Engineering Education conference in Salt Lake City, Utah this June	N/A	N/A	N/A	This conference will help keep our only full time faculty up to date and help her form a network of other engineering educators. Through this conference the faculty member will learn what other colleges are doing to effectively teach engineering as well as what is being done to address the lack of female and African American students in engineering.	LC: Provide Pathways to Careers, Degrees, Certificates/Transfer	A: Advance Student Access, Equity & Success

Approved by the District Academic Senate, May 20, 2016

Endorsed by the Planning and Budgeting Council, May 27, 2016

APU Review Sign-Off:

Department Chair/Faculty Lead _____ Mallory Barkdull _____

Signature _____ *Mallory Barkdull* _____

Department/Discipline _____ Engineering _____

Date __ 10/23/17 _____

Division Dean _____

Signature _____

Division Name & College _____

Date _____