

Peralta Community College District



Annual Program Update

College of Alameda

Physics Department

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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: PHYSICS

Date: October 16, 2016

Program Type:

Instructional

Student Services

Administrative Unit

(circle the answer)

College or District Mission Statement: The Mission of College of Alameda to serve the educational needs of its diverse community by providing comprehensive and flexible programs and resources that empower students to achieve their goals.

Program Mission: To integrate problem-solving with a firm conceptual foundation and laboratory exercises. Students spend time working with other students in class, discussing physics concepts and solving problems together.

Date of Last Comprehensive Program Review: November 14, 2015; previous annual program update (APU) was completed September 19, 2014.

II. Reporting Progress on Attainment of Program Goals

Program Goal (As reported in the most recent 2015 program review; cut and paste the goal from the program review document)	Which institutional goals will be advanced upon completion? (See Appendix A for specific college goals; see Appendix B for specific PCCD goals)	Progress on goal	Explanation and Comments (If a goal is revised, please explain and describe the revision. Describe the impediments or detail what can be improved.)
Assessment “Continue SLO assessments, especially assessment of Physics 4B at end of Fall 2015 semester.” (2015 Program Review)	1. PCCD Strategic Goals: A-D 2. College Goals: 1-5	Completed: Fall 2015 Ongoing: SLO assessment for PHYS 10, PHYS 4A, PHYS 4B, and PHYS 4C is ongoing. The next completion is scheduled to occur during Fall 2016.	
Curriculum “In Spring 2016: Complete curricular materials for PHYS 4ABC. Complete updates of course outlines. Continue investigating AS-T degree. New physics faculty member may want to expand courses.” (2015 Program Review)	1. PCCD Strategic Goals: A-D 2. College Goals: 1-5	Ongoing: The Physics Curriculum Review is attached to the 2015 program review. Course outlines, learning outcomes and program outcomes are assessed on an annual basis. Investigation into an AS-T degree and new course offerings continues. A new, full-time physics faculty member is scheduled to be hired Spring 2017.	
Instruction “Introduce PHYS 10 as optional online or hybrid course beginning Fall 2016.” (2015 Program Review)	1. PCCD Strategic Goals: A-D 2. College Goals: 1-5	Completed: PHYS 10 is currently being offered online (section 42908) during Fall 2016.	Depending on enrollment and student success, online offerings of PHYS 10 may continue and/or expand to include a hybrid option.

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). The following demographic statistics are specific to the Physics Department for the Fall 2015 and Spring 2016 semesters.

Age Fall 2015

Total Head Count	Below 16	16-18	19-24	25-29	30-34	35-54	55-64	65 & Above	Average Age
87	0	4	53	15	8	7	0	0	24

Age Spring 2016

Total Head Count	Below 16	16-18	19-24	25-29	30-34	35-54	55-64	65 & Above	Average Age
124	0	5	63	33	13	10	0	0	25

Gender Fall 2015

CAMPUS	GENDER	Headcount	TERM
Alameda	Female	29	2015 Fall
Alameda	Male	55	2015 Fall
Alameda	Unknown	3	2015 Fall

Gender Spring 2016

CAMPUS	GENDER	Headcount	TERM
Alameda	Female	42	2016 Spring
Alameda	Male	81	2016 Spring
Alameda	Unknown	1	2016 Spring

Ethnicity Fall 2015

CAMPUS	TERM	Ethnic Group	Headcount	% Of
Alameda	2015 Fall	Asian	37	37
Alameda	2015 Fall	White	20	20
Alameda	2015 Fall	Hispanic / Latino	12	12
Alameda	2015 Fall	Black / African American	9	9
Alameda	2015 Fall	Two or More	6	6
Alameda	2015 Fall	Unknown / NR	3	3

Ethnicity Spring 2016

CAMPUS	TERM	Ethnic Group	Headcount	% Of
Alameda	2016 Spring	Asian	54	54
Alameda	2016 Spring	White	34	34
Alameda	2016 Spring	Hispanic / Latino	18	18
Alameda	2016 Spring	Black / African American	8	8
Alameda	2016 Spring	Unknown / NR	6	6
Alameda	2016 Spring	Two or More	4	4

Education Level Fall 2015

CAMPUS	TERM	Education Level	Headcount	% Of
Alameda	2015 Fall	Received HS Diploma	37	37
Alameda	2015 Fall	Foreign Secondary School Grad	15	15
Alameda	2015 Fall	Received Bachelor Degree or higher	14	14
Alameda	2015 Fall	Spec Admit enrolled in K-12	6	6
Alameda	2015 Fall	Current enrolled in Adult School	5	5
Alameda	2015 Fall	Not Indicated	2	2
Alameda	2015 Fall	Passed GED or HS Cert of Equivalent	2	2
Alameda	2015 Fall	Rcvd Cert of CA HS Proficiency	2	2
Alameda	2015 Fall	Received Associate Degree	2	2
Alameda	2015 Fall	Not a grad of HS/not enrolled in HS	1	1
Alameda	2015 Fall	Unknown / unreported	1	1

Education Level Spring 2016

CAMPUS	TERM	Education Level	Headcount	% Of
Alameda	2016 Spring	Received HS Diploma	48	48
Alameda	2016 Spring	Spec Admit enrolled in K-12	25	25
Alameda	2016 Spring	Foreign Secondary School Grad	20	20
Alameda	2016 Spring	Received Bachelor Degree or higher	10	10
Alameda	2016 Spring	Received Associate Degree	6	6
Alameda	2016 Spring	Passed GED or HS Cert of Equivalent	5	5
Alameda	2016 Spring	Rcvd Cert of CA HS Proficiency	4	4
Alameda	2016 Spring	Not Indicated	3	3
Alameda	2016 Spring	Unknown / unreported	3	3

Education Goal Fall 2015

CAMPUS	TERM	Education Goal	Headcount	% Of
Alameda	2015 Fall	Transfer to 4yr without AA degree	28	28
Alameda	2015 Fall	Obtain AA-Transfer to 4 year	24	24
Alameda	2015 Fall	4yr college student taking courses	14	14
Alameda	2015 Fall	Advance in current job/career	6	6
Alameda	2015 Fall	Undecided on goal	6	6
Alameda	2015 Fall	Educational Development	4	4
Alameda	2015 Fall	Prepare for new career	2	2
Alameda	2015 Fall	Discover career interests	1	1
Alameda	2015 Fall	Improve basic skills(Eng,Rd,M)	1	1
Alameda	2015 Fall	Not Indicated	1	1

Education Goal Spring 2016

CAMPUS	TERM	Education Goal	Headcount	% Of
Alameda	2016 Spring	Obtain AA-Transfer to 4 year	39	39
Alameda	2016 Spring	Transfer to 4yr without AA degree	35	35
Alameda	2016 Spring	Undecided on goal	23	23
Alameda	2016 Spring	Prepare for new career	5	5
Alameda	2016 Spring	Discover career interests	4	4
Alameda	2016 Spring	Educational Development	4	4
Alameda	2016 Spring	Not Indicated	4	4
Alameda	2016 Spring	4yr college student taking courses	3	3
Alameda	2016 Spring	Improve basic skills(Eng,Rd,M)	2	2
Alameda	2016 Spring	Uncollected / unreported	2	2
Alameda	2016 Spring	Complete credits for HS Dpl/GED	1	1
Alameda	2016 Spring	Earn a voc cert w/out transfer	1	1

Alameda	2016 Spring	Obtain 2yr AA w/out transfer	1	1
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Enrollment Status Fall 2015

CAMPUS	TERM	Enrollment Status	Headcount	% Of
Alameda	2015 Fall	Continuing Student	41	41
Alameda	2015 Fall	First Time Transfer Student	17	17
Alameda	2015 Fall	Returning Student	14	14
Alameda	2015 Fall	First-Time Student	12	12
Alameda	2015 Fall	Special Admit	3	3

Enrollment Status Spring 2016

CAMPUS	TERM	Enrollment Status	Headcount	% Of
Alameda	2016 Spring	Continuing Student	71	71
Alameda	2016 Spring	Returning Student	21	21
Alameda	2016 Spring	First Time Transfer Student	20	20
Alameda	2016 Spring	First-Time Student	8	8
Alameda	2016 Spring	Special Admit	4	4

The demographic breakdown of the physics student population varies in some areas compared to the overall college population. This may suggest some access issues.

Although more females make up the overall college population, significantly more males are enrolled in physics courses than females. Also, the percentage of African American students enrolled in physics courses is lower when compared to the overall college population. Providing opportunities that target our female and African American populations may be beneficial to address this issue. Ongoing program assessment and subsequent improvements are necessary to ensure overall student success and accomplishment of college, department, and student goals. Since the majority of our students plan on transferring and/or are undecided, a visible and measurable commitment to student support and achievement is essential.

B. Enrollment (sections, course enrollment, productivity, # of student contacts, etc.)

Subject Overview - Fall 2015

Fall`15 Alameda

SUB	SECT	CENSUS	ENRL	FTES RESD	FTES NONR	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL	PROD
PHYS	3	87	87	12.87	4.43	17.30	0.96	0.00	0.38	1.34	12.90 

Green:when productivity is 15 and above **Yellow:**productivity between 10 and 15 **Red:** productivity below 10

Subject Overview - Spring 2016

Spring`16 Alameda

SUB	SECT	CENSUS	ENRL	FTES RESD	FTES NONR	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL	PROD
PHYS	3	124	124	19.90	4.93	24.83	0.59	0.00	0.53	1.12	22.17 

Green:when productivity is 15 and above **Yellow:**productivity between 10 and 15 **Red:** productivity below 10

Term Courses – Fall 2015

Fall`15 Alameda PHYS

CATALOG	CATL DESCR	SECT	CENSUS	ENRL	FTES RESD	FTES NONR	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL	AVG ENRL	AVG FTES	AVG FTEF	PROD
PHYS:10	INTRO TO PHYSICS	1	30	30	4.00	0.00	4.00	0.27	0.00	0.00	0.27	30.00	4.00	0.27	15.00
PHYS:4A	GEN PHYSICS W/CALCULUS	1	19	19	2.80	1.63	4.43	0.27	0.00	0.38	0.65	19.00	4.43	0.65	6.85
PHYS:4B	GEN PHYSICS W/CALCULUS	1	38	38	6.07	2.80	8.87	0.43	0.00	0.00	0.43	38.00	8.87	0.43	20.78
Grand Total		3	87	87	12.87	4.43	17.30	0.96	0.00	0.38	1.34	29.00	5.77	0.45	12.90




Term Courses – Spring 2016

Spring`16 Alameda PHYS

CATALOG	CATL DESCR	SECT	CENSUS	ENRL	FTES RESD	FTES NONR	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL	AVG ENRL	AVG FTES	AVG FTEF	PROD
PHYS:10	INTRO TO PHYSICS	1	41	41	5.20	0.27	5.47	0.17	0.00	0.10	0.27	41.00	5.47	0.27	20.50
PHYS:4A	GEN PHYSICS W/CALCULUS	1	35	35	7.23	0.93	8.17	0.00	0.00	0.43	0.43	35.00	8.17	0.43	19.14
PHYS:4C	GEN PHYSICS W/CALCULUS	1	48	48	7.47	3.73	11.20	0.43	0.00	0.00	0.43	48.00	11.20	0.43	26.25
Grand Total		3	124	124	19.90	4.93	24.83	0.59	0.00	0.53	1.12	41.00	8.28	0.37	22.17

Section Details – Fall 2015




Fall 15 Alameda PHYS

ID	CATALOG	CATL DESCR	ATTEN	CENSUS	FTES RESD	FTES NONR	FTES TOTL	FTEF CONT	FTEF EXSV	FTEF TEMP	FTEF TOTL	PROD
1154241064	PHYS:4A	GEN PHYSICS W/CALCULUS	W	19	2.80	1.63	4.43	0.27	0.00	0.38	0.65	 6.85
1154241131	PHYS:4B	GEN PHYSICS W/CALCULUS	W	38	6.07	2.80	8.87	0.43	0.00	0.00	0.43	 20.78
1154241133	PHYS:10	INTRO TO PHYSICS	W	30	4.00	0.00	4.00	0.27	0.00	0.00	0.27	 15.00
Grand Total				87	12.87	4.43	17.30	0.96	0.00	0.38	1.34	12.90

Green:when productivity is 15 and above **Yellow:**productivity between 10 and 15 **Red:** productivity below 10

Section Details – Spring 2016

Spring`16 Alameda PHYS

ID	CATALOG	CATL DESCR	ATTEN	CENSUS	FTE RESD	FTE NONR	FTE TOTL	FTE CONT	FTE EXSV	FTE TEMP	FTE TOTL	PROD
1162221263	PHYS:4A	GEN PHYSICS W/CALCULUS	W	35	7.23	0.93	8.17	0.00	0.00	0.43	0.43	 19.14
1162221265	PHYS:10	INTRO TO PHYSICS	W	41	5.20	0.27	5.47	0.17	0.00	0.10	0.27	 20.50
1162221266	PHYS:4C	GEN PHYSICS W/CALCULUS	W	48	7.47	3.73	11.20	0.43	0.00	0.00	0.43	 26.25
Grand Total				124	19.90	4.93	24.83	0.59	0.00	0.53	1.12	22.17

Green:when productivity is 15 and above **Yellow:**productivity between 10 and 15 **Red:** productivity below 10

As mentioned in the 2015 program review, Physics course offerings have expanded throughout the district. Physics courses are relatively productive compared to college-wide averages.

C. Student Success (retention and completion rates, # of student contacts, etc.).

Retention and Success by Course - Fall 2015

Retention by Course

TER M	CAMPU S	SUBJEC T	CATALO G	CATL DESCR	RETN	CENSUS	RETN %
F15	Alameda	PHYS	10	INTRO TO PHYSICS	17	30	56.7%
F15	Alameda	PHYS	4A	GEN PHYSICS W/CALCULUS	13	19	68.4%
F15	Alameda	PHYS	4B	GEN PHYSICS W/CALCULUS	34	38	89.5%

Retained = A, B, C, D, F, MW, IP, I, RD, PS, NP
 Census Enrollment = Dropped after census or didn't drop
 Retention Rate = Retained / Census Enrollment
 Retained is not unduplicated and includes all courses per student

Success by Course

TER M	CAMPU S	SUBJEC T	CATALO G	CATL DESCR	GRADED	SUCC	SUCC %	WDRW	WDRW %
F15	Alameda	PHYS	10	INTRO TO PHYSICS	30	16	53.3%	13	43.3%
F15	Alameda	PHYS	4A	GEN PHYSICS W/CALCULUS	19	12	63.2%	6	31.6%
F15	Alameda	PHYS	4B	GEN PHYSICS W/CALCULUS	38	28	73.7%	4	10.5%

Total Graded = any grade, including W
 Success = A, B, C, or Pass
 Success Rate = Success / Total Graded
 Withdraw = Withdraw from class
 Withdraw Rate = Withdraw / Total Graded

Retention and Success by Course - Spring 2016

Retention by Course

TER M	CAMPU S	SUBJEC T	CATALO G	CATL DESCR	RETN	CENSUS	RETN %
S16	Alameda	PHYS	10	INTRO TO PHYSICS	24	41	58.5%
S16	Alameda	PHYS	4A	GEN PHYSICS W/CALCULUS	18	35	51.4%
S16	Alameda	PHYS	4C	GEN PHYSICS W/CALCULUS	41	48	85.4%

Retained = A, B, C, D, F, MW, IP, I, RD, PS, NP
 Census Enrollment = Dropped after census or didn't drop
 Retention Rate = Retained / Census Enrollment
 Retained is not unduplicated and includes all courses per student

Success by Course

TER M	CAMPU S	SUBJEC T	CATALO G	CATL DESCR	GRADED	SUCC	SUCC %	WDRW	WDRW %
S16	Alameda	PHYS	10	INTRO TO PHYSICS	39	18	46.2%	15	38.5%
S16	Alameda	PHYS	4A	GEN PHYSICS W/CALCULUS	35	18	51.4%	17	48.6%
S16	Alameda	PHYS	4C	GEN PHYSICS W/CALCULUS	48	41	85.4%	7	14.6%

Total Graded = any grade, including W
 Success = A, B, C, or Pass
 Success Rate = Success / Total Graded
 Withdraw = Withdraw from class
 Withdraw Rate = Withdraw / Total Graded

Overall, retention rates have not varied significantly from Fall 2015 to Spring 2016. Math prerequisites have consistently aided in student success rates. For example, Physics 4A, B, and C have a higher successes rate than the college-wide average.

D. Student Success in Distance Education/Hybrid classes versus face-to-face classes (if applicable). *Data is not available.*

E. Other program specific data or unplanned events that reflect significant change in the program. *Data is not available.*

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?

Overall, retention rates have not varied significantly from Fall 2015 to Spring 2016. Math prerequisites have consistently aided in student success rates. For example, Physics 4A, B, and C have a higher success rate than the college-wide average. Sufficient data is needed to determine performance gaps and/or disproportionate achievement rates for impacted students. The demographic breakdown of the physics student population varies in some areas compared to the overall college population. This may suggest some access issues.

Although more females make up the overall college population, significantly more males are enrolled in physics courses than females. Also, the percentage of African American students enrolled in physics courses is lower when compared to the overall college population. Providing opportunities that target our female and African American populations may be beneficial to address this issue. Ongoing program assessment and subsequent improvements are necessary to ensure overall student success and accomplishment of college, department, and student goals. Since the majority of our students plan on transferring and/or are undecided, a visible and measurable commitment to student support and achievement is essential.

- 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?

The purpose of SSSP is, “to increase California community college student access and success through the provision of core matriculation services with the goal of providing students with the support services necessary to assist them in achieving their education goal and identified course of student.” The purpose of the Equity Plan is, “to close achievement gaps in access and success in underrepresented student groups, as identified in local student equity plans. Research based focus on identifying gaps in student success especially for targeted student groups through the provision of specialized support/services.”

The CoA Physics Department has worked closely with the Counseling Department, other district Physics Departments, and other area disciplines to coordinate course offerings. This collaboration ensures access to these courses with minimal overlap. The department is also committed to working with outside programs and organizations committed to student equity and basic skills.

V. Curriculum and Assessment Status

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

No significant changes were made since the most recent program review. Research and discussion surrounding an AS-T degree continues.

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

The decision to create an AS-T is based on the SLOs and program goals.

- 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.

All SLOs for all courses were assessed during the three-year cycle from 2012-12 to 2014-15. All assessments for PHYS 10, PHYS4A, and PHYS4C have consistently met or exceeded goals.

“Summary of the Assessment Cycle Results in 2012-13, 2013-14, and 2014-15, and the SLO Assessment & Alignment Summary, and the At-a-Glance Participating Area Alignment. In addition, attached is a preliminary report for Assessment Cycle Details for PHYS 4B General Physics with Calculus, 2015-16.” (2015 Program Review)

In PHYS 4B, the most demanding course in the sequence, assessments fell below the goals for two Student Learning Outcomes.

- □ In both semesters surveyed (Fall 2013 and Fall 2014), students had difficulty with simple questions that required a conceptual understanding of magnetic flux.
- Performance was mixed on a multi-step problem involving magnetic fields. In Fall 2013, students met goals; in Fall 2014, they did not.

Improvement 1.

In Fall 2015, Patti Tsai presented conceptual questions on worksheets, quiz questions, and problems on Exam 2 to lead students to distinguish between electric charge (the source of electric fields), electric field, and electric flux. Scores on a comparable conceptual question regarding electric fields on Exam 2 met goals! These data have been submitted as findings for 2015-16.

Improvement 2.

In Fall 2015, Patti Tsai presented analytical problems on worksheets, quiz questions, and questions on Exam 2 to lead students to distinguish between electric field generated by enclosed charge, electric field calculated through superposition, electric flux, and electric potential. Scores on a comparable multistep analytic problem regarding electric fields on Exam 2 met goals. These data have been submitted as preliminary findings for 2015-16.

Improvement 3.

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.

Plan 1.

In Fall 2015, Patti Tsai is working on similar modifications on curricular materials regarding magnetism. The conceptual question of magnetic flux will be comparable to the conceptual problem on electric flux. The analytical problem involving magnetic flux may be more challenging than the analytical problem involving electric flux. She will compare the results with student performance on electricity at the end of the semester.

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

We have been offering Physics 10 only in the online format. In Spring 2011, Patti Tsai taught Physics 10 online at COA while teaching the same course face-to-face at Laney College. Although this cannot be considered to be a representative sample, the online class had

higher student performance and lower retention. This is at least in part due to self-selection. Online students must assume responsibility to remain in a class, whereas in a face-to-face class, students may believe that just showing up for class will be enough to succeed.

- *Describe assessment results for courses with multiple sections. Are there similar results in each section? N/A*
- *Describe your discipline, department or program participation in assessment of institutional level outcomes (ILOs).*

Student Learning Outcomes for all classes have been mapped to Institutional Learning Outcomes.

- 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?

Meaningful dialogue concerning course and program outcomes occurs during department meetings and regular email communication.

- 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).

The following page contains evidence of the most recent summary reports from TaskStream of PHYS 10, PHYS 4A, PHYS 4B, and PHYS 4C. Note: PHYS 4C was not offered during Fall 2016 and therefore was not included in the Spring 2016 assessment report. The summary below is from the Spring 2015 assessment of PHYS 4C.

Physics instructors endeavor to integrate problem-solving with a firm conceptual foundation and laboratory exercises. Students spend time working with other students in class, discussing physics concepts and solving problems together. Patti Tsai had developed a set of curricular materials for Physics 4ABC, based on work done in the Physics Education Research community. Our new, full-time instructor may need to adapt and/or alter this curriculum.

Organizational Area	Summary Results										
College of Alameda AMS » Full Course Listing PHYS 10 Introduction to Physics View Assessment Cycle Detail by Outcome	<p>Overall Statistics</p> <ul style="list-style-type: none"> • 100% (3/3) outcomes were included • 100% (3/3) of outcomes included have at least one measure specified • 67% (2/3) of outcomes included have measures with findings specified <table border="1" data-bbox="604 342 1982 699"> <thead> <tr> <th data-bbox="604 342 1297 391">3 Total Measures (Includes measures that do not have findings)</th> <th data-bbox="1297 342 1982 391">2 Total Measures with Findings</th> </tr> <tr> <th data-bbox="604 391 1297 415">Measure Type/Method</th> <th data-bbox="1297 391 1982 415">Successful Performance Target Met?</th> </tr> </thead> <tbody> <tr> <td data-bbox="604 415 1297 537"> Student Artifact 1 (33%) Exam 2 (67%) Portfolio 0 (0%) Other 0 (0%) Total Direct 3 (100%) </td> <td data-bbox="1297 415 1982 537"> Not Met 0 (0%) Met 2 (100%) Exceeded 0 (0%) Unspecified 0 (0%) </td> </tr> <tr> <td data-bbox="604 537 1297 626"> Survey 0 (0%) Focus Group 0 (0%) Interview 0 (0%) Other 0 (0%) Total Indirect 0 (0%) </td> <td></td> </tr> <tr> <td data-bbox="604 626 1297 699"> Unspecified 0 (0%) </td> <td></td> </tr> </tbody> </table>	3 Total Measures (Includes measures that do not have findings)	2 Total Measures with Findings	Measure Type/Method	Successful Performance Target Met?	Student Artifact 1 (33%) Exam 2 (67%) Portfolio 0 (0%) Other 0 (0%) Total Direct 3 (100%)	Not Met 0 (0%) Met 2 (100%) Exceeded 0 (0%) Unspecified 0 (0%)	Survey 0 (0%) Focus Group 0 (0%) Interview 0 (0%) Other 0 (0%) Total Indirect 0 (0%)		Unspecified 0 (0%)	
3 Total Measures (Includes measures that do not have findings)	2 Total Measures with Findings										
Measure Type/Method	Successful Performance Target Met?										
Student Artifact 1 (33%) Exam 2 (67%) Portfolio 0 (0%) Other 0 (0%) Total Direct 3 (100%)	Not Met 0 (0%) Met 2 (100%) Exceeded 0 (0%) Unspecified 0 (0%)										
Survey 0 (0%) Focus Group 0 (0%) Interview 0 (0%) Other 0 (0%) Total Indirect 0 (0%)											
Unspecified 0 (0%)											

Organizational Area	Summary Results										
College of Alameda AMS » Full Course Listing PHYS 4A General Physics with Calculus View Assessment Cycle Detail by Outcome	<p>Overall Statistics</p> <ul style="list-style-type: none"> • 100% (3/3) outcomes were included • 100% (3/3) of outcomes included have at least one measure specified • 100% (3/3) of outcomes included have measures with findings specified <table border="1" data-bbox="604 945 1982 1302"> <thead> <tr> <th data-bbox="604 945 1297 993">4 Total Measures (Includes measures that do not have findings)</th> <th data-bbox="1297 945 1982 993">3 Total Measures with Findings</th> </tr> <tr> <th data-bbox="604 993 1297 1018">Measure Type/Method</th> <th data-bbox="1297 993 1982 1018">Successful Performance Target Met?</th> </tr> </thead> <tbody> <tr> <td data-bbox="604 1018 1297 1140"> Student Artifact 1 (25%) Exam 3 (75%) Portfolio 0 (0%) Other 0 (0%) Total Direct 4 (100%) </td> <td data-bbox="1297 1018 1982 1140"> Not Met 0 (0%) Met 3 (100%) Exceeded 0 (0%) Unspecified 0 (0%) </td> </tr> <tr> <td data-bbox="604 1140 1297 1229"> Survey 0 (0%) Focus Group 0 (0%) Interview 0 (0%) Other 0 (0%) Total Indirect 0 (0%) </td> <td></td> </tr> <tr> <td data-bbox="604 1229 1297 1302"> Unspecified 0 (0%) </td> <td></td> </tr> </tbody> </table>	4 Total Measures (Includes measures that do not have findings)	3 Total Measures with Findings	Measure Type/Method	Successful Performance Target Met?	Student Artifact 1 (25%) Exam 3 (75%) Portfolio 0 (0%) Other 0 (0%) Total Direct 4 (100%)	Not Met 0 (0%) Met 3 (100%) Exceeded 0 (0%) Unspecified 0 (0%)	Survey 0 (0%) Focus Group 0 (0%) Interview 0 (0%) Other 0 (0%) Total Indirect 0 (0%)		Unspecified 0 (0%)	
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Unspecified 0 (0%)												

VI. 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)
Full-time physics (or physics/astronomy) faculty member, effective Spring 2017.	Yes	“Full-time physics (or physics/astronomy) faculty member.” (2015 Program Review)	No	A new full-time physics faculty member is required after Patti Tsai retired at the end of Spring 2016. A search committee was formed but was unable to successfully hire a new faculty member for Fall 2016. The process has continued for anticipated hire in Spring 2017.	1-5	A-D
Physics instructional aide and coordinator for faculty evaluations.	Yes	“Physics instructional aide; coordinator for faculty evaluations.” (2015 Program Review)	No	An instructional aide is needed to trouble shoot equipment and to set up laboratory experiments. Additionally, a staff member is needed to coordinate faculty evaluations as needed.	1-5	A-D

- **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)
Laboratory equipment for Physics 4B	Yes	“Laboratory equipment for Physics 4B.” (2015 Program Review)	No	Equipment is needed for Physics 4B. Patti Tsai was borrowing equipment from UC Berkeley Physics Department.	1-2	A, C, D

- **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)
Additional storage room	Yes	“Additional Stockroom space.” (2015 Program Review)	No	Additional storage is needed to maintain and organize equipment and supplies.	1-2	A, C, D
Relocate back to main CoA campus	Yes	“Move back to main campus!” (2015 Program Review)	No	Physics courses were relocated to 860 Atlantic Ave. This was designed to be a temporary relocation as a new building was constructed. Although the facilities at the satellite campus are adequate (with the exception of Internet access), consolidating these locations is necessary. Students already face transportation hurdles to come to CoA; having PHYS courses at the main campus will mitigate these challenges.	1-5	A-D

Approved by the District Academic Senate, May 20, 2016; Endorsed by the Planning and Budgeting Council, May 27, 2016

Appendix A

College of Alameda Institutional Learning Outcomes

1. Solve problems and make decisions in life and work using critical thinking, quantitative reasoning, community resources, and civil engagement.
2. Use technology and written and oral communication to discover, develop, and relate critical ideas in multiple environments.
3. Exhibit aesthetic reflection to promote, participate and contribute to human development, expression, creativity, and curiosity.
4. Engage in respectful interpersonal communications, acknowledging ideas and values of diverse individuals that represent different ethnic, racial, cultural, and gender expressions.
5. Accept personal, civic, social and environmental responsibility in order to become a productive local and global community member

Appendix B

District-College Strategic Goals & Institutional Objectives

Strategic Focus: Our focus this year will be on student success in the core educational areas of basic skills/ESOL (English for speakers of other languages), transfer, and CTE (career technical education) by encouraging accountability, outcomes assessment, innovation and collaboration while spending within an established budget.

Strategic Goals	
<p>A: Advance Student Access, Equity, and Success</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 19,355 RES FTES.</p> <p>A.2 Student Success: Increase students’ participation in SSSP eligible activities by 50%, with specific emphasis on expanding orientations, assessments, academic advising and student educational plans.</p> <p>A.3 Student Success: Using baseline data, increase student engagement in activities such as student governance, student life activities, Student leadership development, service learning programs, learning communities, student employment, etc.</p> <p>A.4 Student Equity Planning: Address the achievement gap through fully developing and implementing the student success and equity plans at each campus.</p>
<p>B: Engage and Leverage Partners</p>	<p>B.1 Partnerships: Develop a District-wide database that represents our current strategic partnerships and relationships.</p>

	<p>B.2. Partnerships: Expand partnerships with K-12 institutions, community based organizations, four-year institutions, local government, and regional industries and businesses.</p>
<p>C: Build Programs of Distinction</p>	<p>C.1 Student Success: Develop a District-wide first year experience/student success program.</p> <p>C.2 Student Success: Develop an innovative student success program at each college.</p>
<p>D: Strengthen Accountability, Innovation and Collaboration</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.</p> <p>D.2 Institutional Leadership and Governance: Evaluate and update policies and administrative procedures and the PBIM participatory governance structure.</p>