

LMC Program Review Year 3 Update 2019-2020

Instructional Unit Name: PHYSICS

Introduction

In 2017-2018, all departments/programs completed a Comprehensive Program Review (CPR), in which goals were set for the 2017-2022 program years. Los Medanos College (College) is now in year three of a five-year review cycle. New to this program review cycle is the passage of the State's [Vision for Success](#) plan which establishes system-wide goals that can only be attained by each department contributing to college-level goals aligned with the state plan. Toward that end, the [Contra Costa Community College District Strategic Plan \(CCCD Strategic Plan\)](#) adopted by the Governing Board at its June 2019, meeting, aligns with the *Vision for Success* and plans are underway to ensure that the *Los Medanos College Educational Master Plan (LMC EMP)* also supports college and state goals. The intent is to direct College efforts toward a singular and coordinated set of goals.

The *Vision for Success* directs each college to increase degree and certificate completion and increase student transfers, improve time to completion, increase job placement in field of study, narrow achievement gaps and establishes targeted goals in five primary areas as follows:

Goal #1 Increase by 20 percent the number of CCC students annually who acquire associates degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job.

Goal #2 Increase by 35 percent the number of CCC students' system-wide transferring annually to a UC or CSU.

GOAL #3 Decrease the average number of units accumulated by CCC students earning associate's degrees, from approximately 87 total units (the most recent system-wide average) to 79 total units—the average among the quintile of colleges showing the strongest performance on this measure

GOAL #4 Increase the percent of exiting CTE students who report being employed in their field of study, from the most recent statewide average of 69 percent to an improved rate of 76 percent—the average among the quintile of colleges showing the strongest performance on this measure in the most recent administration of the CTE Outcomes Survey.

Goal #5 Reduce equity gaps across all of the above measure through faster improvements among traditionally underrepresented groups as identified by the college.

The College can only meet its local and state goals with the contribution of each department's efforts. As noted, the intent is to direct College efforts towards a singular and coordinated set of goals to garner greater efficiencies and avoid duplication of effort.

The *Program Review Year 3 Update* includes five components with specified timeframes (not in chronological order) for draft and completion:

Item 1. Program Update (October 1 – October 31)

Provide an update to the department’s 2017-18 CPR

Item 2. Setting the Vision for Success Goals 2021-22 (November 1 – November 27)

Department/program alignment of goals, action steps, timeline, responsible party and next steps – all tied to the *Vision for Success* indicators. For ease of reference, the *Vision for Success* indicators are included in this section.

Item 3. Assessment Date and Effectiveness (August 26 – September 30)

Status report on the review and assessment of courses and next steps

Item 4. Course Outline Updates (August 26 – September 30)

Status report on the review and assessment of Course Outline of Records and next steps

Item 5. Resource Needs (February 1 – February 28)

Resource needs to meet goals, if any.

The table below shows a list of the above components in chronological order. The intent is to complete sections of Program Review by these dates to better assess and inform the process.

Date	Program Review Update Component
August 26 – September 30	Item 3. Assessment Date and Effectiveness Status report on the review and assessment of courses and next steps.
August 26 – September 30	Item 4. Status report on the review and assessment of Course Outline of Records and next steps.
October 1 – October 31	Item 1. Provide an update to the department’s 2017-18 CPR
November 1 – November 27	Item 2. Department/program alignment of goals, action steps, timeline, responsible party and next steps – aligned with the <i>Vision for Success</i> indicators.
February 1 – February 8	Item 5. Resource Needs

1. Program Update (Oct 1 – Oct 31)

1a. Provide any important changes or updates within your program since your last CPR. (New degrees, new curriculum, staffing changes, etc.)

Physics hired an additional full-time faculty member for the Pittsburg Campus, Bob Moore.

Kurt Crowder (Physics) transferred to the Brentwood Campus effective Fall 2020.

1b. Please address the following enrollment data provided for your program.

1.b.1. What are the enrollment trends over the past 3 years, beginning with Fall 2017? (Please address census enrollment, census fill rate, and productivity (Ftes/Ftef))

Level 1	Level 2	Level 3	Census Enrollm..	Census Fill Rate	Ftes/Ftef
2017-2018	PHYS		564	80.8%	15.0
2018-2019	PHYS		567	87.2%	14.8
2019-2020	PHYS		303	88.1%	15.2
Grand Total			1,434	84.8%	15.0

In Physics, the Census Enrollment and the Census Fill Rate are increasing which indicates an increase in student demand. This is confirmed by reviewing data from 2015-2016 and 2016-2017. Productivity is holding steady around 15.0.

1.b.2. What does the data suggest in terms of future needs/directions?

In Physics, the data indicates that student demand for Physics is increasing. With the current Census Fill Rate below 90%, the current number of course offerings in physics has a little room for growth. At some point in the future, however, additional sections of Physics may need to be added to meet increased demand (and the new Brentwood Center will provide room for growth).

1c. Provide a brief update of your program's goals as listed in your **(CPR)** 2017- 2018. Given these goals, please provide a brief update on: (a) Goals completed since their submission in 2018, and the impact of that completion on program effectiveness; (b) Goals abandoned with an explanation of why they were abandoned and (c) Goals still in progress or modified to be achieved by 2021-2022. Please include action steps, timeline, and responsible parties.

Goals	Completed/ Abandoned/ In Progress/ Modified	Impact/ Explain/ Action Steps	Timeline/ Responsible Parties
Goal 1: Increase the number of course sections to relieve overcrowding in	In Progress	In FA 2019, there were 3 sections of PHYS 15 and among them there were 21 seats available. Both sections of PHYS 40 were full whereas both sections of PHYS 41 had seats available (total = 13). The sole section of	Kurt Crowder Bob Moore Jeanne Bonner

<p>the PHYS 40 sequence and in PHYS 15</p>		<p>PHYS 42 had 5 seats available. More sections of PHYS 40 are needed.</p>	
<p>Goal 2: Hire another full-time Physics professor</p>	<p>Completed</p>	<p>Bob Moore was hired.</p>	
<p>Goal 3: Acquire \$3000 for a one-time purchase of equipment to replace older equipment, augmenting existing equipment to address increased class sizes, and for repairing broken equipment.</p>	<p>In Progress</p>	<p>Update: Bob Moore applied for and received an LMC Foundation mini-grant for some new charge/mass ratio equipment</p>	<p>Kurt Crowder Bob Moore Jeanne Bonner</p>
<p>Goal 4: Obtain a dedicated budget for buying, repairing and maintaining equipment at the Brentwood Center.</p>	<p>In Progress</p>	<p>The purchase of some new equipment has been approved for the opening of the new Brentwood Center</p>	<p>Kurt Crowder Bob Moore Jeanne Bonner</p>

For CTE programs only:

1c. Community and Labor Market Needs (Link Ed Code [78016](#), Title 5, [51022](#))

N/A

1d. Advisory Board Update and Analysis (CTE related only) Include dates of Advisory Board meetings in 2018-2019, and those completed or planned in 2019-2020.

N/A

2. Setting Vision for Success Goals for 2021-22 (Nov 1—Nov 27)

The *Vision for Success* directs each college to increase degree and certificate completion and increase student transfers, improve time to completion, increase job placement in field of study, narrow achievement gaps and establishes targeted goals in five primary areas. The College can only meet its local and state goals with the contribution of each department’s efforts. As noted, the intent is to direct College efforts towards a singular and coordinated set of goals to garner greater efficiencies and avoid duplication of effort.

2a. The following table lists the *Vision for Success* indicators that we must align to as a college and as a district. Please look at your program data (Tableau) for each of the following *Vision for Success* indicators. Please address all indicators that are relevant to your program, set your program goal, indicate the action steps, timeline and responsible parties to achieve program goals.

Vision for Success Indicators and ACCJC Indicator	Program Set Goals for 2021-2022	Action Steps	Timeline	Responsible Parties	Notes
Course Success	PHYS 77.4% PHYSC 74.5%				
Degrees (AA, AS, ADT)	PHYS 9.6				
Certificates of Achievement	N/A				
Unit Reduction	N/A				
CTE Jobs	N/A				

2b. The Vision for Success Goal 5—Equity. The College has identified three disproportionately impacted (DI) populations: African-American, economically disadvantage students (low income), and foster youth students. The College’s goal is to reduce the equity achievement gap on course success for disproportionately impacted (DI) student populations. Please look at your program data (Tableau) for each of the following DI population. Please pick one or more DI populations that are relevant to your program, set your program goal, indicate the action steps, timeline and responsible parties to achieve program goals.

Course Success by DI Population	Program Set Goals for 2021-2022	Action Steps	Timeline	Responsible Parties	Notes
African American	77%	The goal was set by taking the average of the last 3 years and adding 2%. Action Steps:	ongoing	Kurt Crowder Bob Moore	

		Zero Textbook Cost (ZTC) options EOPS MESA interactions AEW (AcademicExcellence Workshops)		Jeanne Bonner	
Low Income	82%	The goal was set by taking the average of the last 3 years and adding 2%. Action Steps: Zero Textbook Cost (ZTC) options EOPS MESA interactions AEW (AcademicExcellence Workshops)	ongoing	Kurt Crowder Bob Moore Jeanne Bonner	
Foster Youth	78%	The goal was set by taking the average of the last 3 years and adding 2%. Action Steps: Encourage group work and community-building (the laboratory work especially assists with this goal)	ongoing	Kurt Crowder Bob Moore Jeanne Bonner	

3. Assessment Update and Effectiveness (August 26-Sept 30)

- a. Please review the data provided on assessment status of courses in your discipline in Cycle 2 (2017/18-2020/21), if there were any courses that were not assessed in Cohorts 1 and 2, please (a) list them, (b) explain why they were not assessed, (b) when are you going to assess them, and (c) who is going to assess them.

Course	Reason course was not assessed	When course will be assessed	Faculty Responsible for Course Assessment
PHYS 15	assessment data collected and report will be written ASAP	ASAP (Fall 2019)	Kurt Crowder
PHYS 35	assessment data collected and report will be written ASAP	ASAP (Fall 2019)	Kurt Crowder
PHYS 36	assessment data collected and report will be written ASAP	ASAP (Fall 2019)	Kurt Crowder
PHYS 40	assessment data collected and report will be written ASAP	ASAP (Fall 2019)	Kurt Crowder and Bob Moore

- b. Discuss the results of any outcomes assessments (e.g. CSLO) performed this year. What changes, if any, are planned to improve student success?

This year (2019-2020) our department has scheduled the assessment of Chem 25, Engin 25, Engin 38, Phys 37, and Phys 41.

A part-time instructor, Trevor Gonzalinajec, is teaching the only section of Phys 37. This is his first time teaching this course, so he will provide a fresh insight about improving student success. Kurt Crowder will work with Trevor to assess this course.

Phys 41 is taught by our newest full-time physics instructor, Robert (Bob) Moore. He will also have a new perspective on the teaching and learning that happens in Phys 41. Kurt Crowder will assist Bob with assessing this course.

4. Course Outline of Record Updates (August 26 – Sept 30)

Please review the data provided on the status of COORs in your discipline. (Note: These data do not reflect courses submitted after May 2019. For each COOR that has *not* been updated since May 2019, please indicate the faculty member responsible for submitting the updated COOR to the Curriculum Committee by **November 1, 2019**.)

Course	Faculty Responsible for COOR Update
PHYS 15	Kurt Crowder and Robert Moore
PHYS 35	Kurt Crowder and Robert Moore
PHYS 36	Kurt Crowder and Robert Moore
PHYS 40	Kurt Crowder and Robert Moore

Impact of Resource Allocation

If you have received funding via the Resource Allocation Process, you will be asked by the Office of Business Services how the resource helped you in achieving your program goals.

5. Resource Needs (Feb 1 – Feb 28)

Resource needs to meet goals, if any. If there are no requests, this section may be skipped.

Faculty/Staff Resource Request			
Department/Unit Goal - Reference #		Strategic Goal and/or Objective - Reference #	
Department/Unit Name		Position Name/Classification	FTE
Position Type	Funding Duration	Funding Source	Est. Salary & Benefits
<input type="checkbox"/> Faculty R/T <input type="checkbox"/> Classified <input type="checkbox"/> Manager <input type="checkbox"/> Student	<input type="checkbox"/> On-going/Permanent <input type="checkbox"/> One-time	<input type="checkbox"/> Operations (Fund 11) <input type="checkbox"/> Other <input type="text"/>	
Justification:			

Operating Resource Request		
Department/Unit Goal - Reference #	Strategic Goal and/or Objective - Reference #	
Physical Science/Physics/Goal #3	Vision for Success Goal #5-- Equity	
Department/Unit Name	Resource Type	
Physical Science/Physics	<input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Supplies <input type="checkbox"/> Service/Contract	<input checked="" type="checkbox"/> IT Hardware/Software <input type="checkbox"/> Facility Improvement <input type="checkbox"/> Other
General Description	Est. Expense	
Laptops to support physics experiments (labs)—qty 8	\$8,000 (est.)	
Justification:		

The physics program uses computer-interfaced equipment for labs. Existing laptops used for labs are many years old (some are obsolescent and unreliable) and we need to begin replacing them. A set of 8 laptops for physics would at least allow 8 working groups to operate the Pasco lab equipment (which requires a computer interface). This would also support the increased enrollments for physics (particularly Phys-40). We have been sharing laptops with Engineering (when feasible) and if Engineering is allowed to purchase more of them, that purchase would also generally support the need in physics. Without an infusion of new computer hardware we are at risk of not being able to run important lab experiments. Please note that while this is in line with the spirit and purpose of program goal #3, it goes beyond the stated budgetary amount listed in that goal.

There is an equity component to this request. Students who have not had significant access or training in use of computers for data analysis are affected disproportionately when we cannot integrate this as part of our lab program.

<u>Professional Development Resource Request</u>	
Department/Unit Goal - Reference #	Strategic Goal and/or Objective - Reference #
Department/Unit Name	Resource Type
	<input type="checkbox"/> Conference/Meeting <input type="checkbox"/> Materials/Supplies <input type="checkbox"/> Online Learning <input type="checkbox"/> IT Hardware/Software <input type="checkbox"/> Other
General Description	Est. Expense
Justification:	