

Program Review & Planning (PRP)

PART 1: BASIC PROGRAM INFORMATION

Program Review is a self-study of your discipline. It is about documenting the plans you have for improving student success in your program and sharing that information with the college community. Through the review of and reflection on key program elements, program review and planning identifies program strengths as well as strategies necessary to improve the academic discipline, program, or service to support student success. With that in mind, please answer the following questions:

Discipline Name:	Physics
Department Name:	Physics & Engineering
Division Name:	Math, Natural Health, and Computer Sciences

Please list all participants in this Program Review:

Name	Position
Daniel Finkenthal	Professor/Chair

Number of Full Time faculty	4	Number of Part Time Faculty	12
------------------------------------	---	------------------------------------	----

Please list the Classified positions (and their FTE) that support this discipline:

One 20% Academic Department Assistance and One 50% Lab Technician

What additional hourly staff support this discipline and/or department:

None

Discipline mission statement ([click here for information on how to create a mission statement](#)):

The Department has not developed an agreed on mission statement for this discipline. This will be a goal for the coming year. Previous PRP's presented the following:
 The mission of Physics Program is to prepare students for transfer in various Physics and related fields of study at four-year-universities by educating them in fundamental concepts, knowledge, critical thinking, and hands-on skills using university and industry standard equipment and laboratory techniques and skills of physics.

List any new degrees and certificates offered within this discipline since your last comprehensive review:

Discipline Level Data: <https://sharepoint2.palomar.edu/sites/IRPA/SitePages/PRP%20Summary%20Source.aspx>

PART 2: PROGRAM REFLECTION

1. Program Analysis:

Reflect upon and provide an analysis of your summary data.

Overall the program performance has been pretty flat over the years with slight upward trend. Comparing year 2014 to year 2016, WSCH improved from 2270 to 2366 (4% gain), and WSCH/FTEF improved from 426 to 439 (3% gain). However, enrollments fell from 690 to 636 (8% decline) and Fill Rate also dropped 86% to 82% (6% decline).

The Physics program is divided into three main areas: 1) the 230/231 series is for majors including engineering students; 2) the 120/200 series is for non-majors including biology and chemistry; and 3) the 100/101 series is physics for general education. The performance of these three areas varies substantially in both WSCH, FTEF, fill rate, and success rate.

Averaging over the last five years, the most successful area is the Physics 120/200 (Non-Majors) series which captured the majority of our program enrollment (329), had the greatest fill rate (96%), WSCH (1088), and WSSH/FTEF (482). It also had the greatest success rate (80%) and retention rate (91%). The Part-Time/Total FTEF has been 58% for this program.

Where we continue to struggle is our 230/231 (Majors) series. Average enrollment has been only 184, fill rate of 78%, WSCH of 659, WSSH/FTEF of 362, **only 34% success rate**, and 79% retention rate. The Part-Time/Total FTEF has been a low 30% for this program.

Last Fall (2017) our majors program had only 139 students enrolled. By comparison, Mira-Costa College had 308 students enrolled in the their majors series last Fall, and Miramar had 347. We have also been told by colleagues at those colleges that many of the students enrolled in the majors courses live in the Palomar District.

There are several structural reasons for low department efficiency including space and scheduling. For example, despite having a 48-student enrollment cap our majors courses are assigned to a room with 36-student capacity. The department has also been required to teach an additional 230 and 231 section limited to 24 students as an attempt to improve success rates in those classes, and those classes ran even when enrollment was less than 10 students.

Our overall program success rate has been 63% averaged over the last five years. This rate is being dragged down by the low 34% success rate of our Majors program.

2. Standards:

ACCJC requires that colleges establish institutional and program level standards in the area of course success rates. These standards represent the lowest success rate (% A, B, C, or Credit) deemed acceptable by the College. In other words, if you were to notice a drop below the rate, you would seek further information to examine why the drop occurred and strategies to address the rate.

Discipline Level Course Success Rate:

- A. The College's institutional standard for course success rate is 70%.**
- B. Review your discipline's course success rates over the past five years.**
- C. Identify the minimum acceptable course success rate for your discipline. When setting this rate, consider the level of curriculum (e.g., basic skills, AA, Transfer) and other factors that influence success**

Standard for Discipline Course Success Rate:	70%
Why?	
We believe the College's institutional standard is applicable to our program as a whole.	

3. Program Update:

Describe your proudest moments or achievements related to student success and outcomes.
Our proudest achievements continue to be the reported success of our transfer students upon matriculation, graduation, and career success. I am also proud to have recruited several highly qualified new part time faculty and provided a professionally rewarding and nurturing environment for them. I am happy to report the number of women teaching in our department has gone from zero to three, and that this is already having a positive impact on the attitudes and success of our students.

4. Program Improvement:

What areas or activities are you working on this year to improve your program? Please respond to new data as well as feedback from last year's program review.
We are recruiting and hiring highly qualified part time instructors from industry and providing a positive environment to assist in their growth as teachers. We are trying to develop a fair and equitable department structure including a policy and procedures manual. This will include an agreed upon procedure for developing class schedules and choosing assignments. We are trying to identify and adopt best practices for our courses by identifying what is working and what is not. We are working on developing a comprehensive scheduling process that schedules classes around the needs of student programs (at the division) level rather than individual departments or faculty. Improving facilities, including developing an electronics lab and securing a 48-student lecture space. We have gone from 0 to 100% compliance in conducting peer evaluations for part-time faculty.

5. Unanticipated Factors:

Have there been any unanticipated factors that have affected the progress of your previous plan?
There has been much disagreement and discord amongst the faculty in how to grow and improve the program. The department has no history or culture of collegial engagement and the lack of an established process has hurt us.

6. SLOACs:

Describe your course and program SLO activities this past year. How have you used the results of your assessments to improve your courses and programs? Refer to the SLO/PRP report – https://outcomes.palomar.edu:8443/tracdat/
Hector Garcia-Villa has been designated department facilitator. Compliance with SLO being stated on all department syllabi has been achieved. However, most class SLOs have not been assessed within the last three years. This will be a priority for the coming year.

PART 3: PROGRAM GOALS

1. Progress on Previous Year's Goals: Please list discipline goals from the previous year's reviews and provide an update by placing an "X" the appropriate status box .

ANNUAL PROGRAM REVIEW AND PLANNING

Goal	Completed	Ongoing	No longer a goal
Increase the number of offerings in 230 (Physics & Engineering Majors) series and 200 (life science majors) series.		X	
Update and modernize lab curriculum and equipment		X	
Obtain lecture rooms to hold 48 students		X	
Restructure the 120/200/121/201 curriculum to maintain transferability	X		
Update Physics 232 curriculum by adding Solid State Physics Labs		X	
Keep SI/LA program	X		

2. New Discipline Goals: Please list all discipline goals for this three-year planning cycle (including those continued from previous planning cycle):

Goal #1	
Program or discipline goal	Comply with SLO requirements
Strategies for implementation	Develop and follow assessment schedule
Timeline for implementation	Fall 2018
Outcome(s) expected (qualitative/quantitative)	Improve outcomes
Goal #2	
Program or discipline goal	Develop guided pathways and external partnerships with CSUSM, universities, and industry.
Strategies for implementation	Attend planning meetings, identify courses
Timeline for implementation	Spring 2019
Outcome(s) expected (qualitative/quantitative)	Increase enrollments and success in majors courses
Goal #3	
Program or discipline goal	Develop Department Procedures Manual and Mission Statement
Strategies for implementation	Obtain examples, solicit input, develop draft, meet to discuss, ratify
Timeline for implementation	Spring 2018
Outcome(s) expected (qualitative/quantitative)	Improve department performance and cohesion.

PART 4: FEEDBACK AND FOLLOW-UP

This section is for confirming completion and providing feedback.

Confirmation of Completion by Department Chair

Department Chair	Daniel Finkenthal
Date	February 11th, 2018

***Please email your Dean to inform them that the PRP has been completed and is ready for their review**

Reviewed by Dean

Reviewer(s)	Margie Fritch
Date	February 13, 2018

1. Strengths and successes of the discipline as evidenced by the data and analysis:

Success rate for the non-major course sequence.

2. Areas of Concern, if any:

Discourse in the department has created a negative impact for the students. Low success rate in the 230/231 sequence is alarming and needs to be addressed immediately..

3. Recommendations for improvement:

Administrative intervention strategy developed and implemented to minimize the discord within the department so that the necessary changes can be implemented to make the Physics program a viable and for degree seekers and Engineering majors.

***Please email your VP to inform them that the PRP has been completed and is ready for their review**

Reviewed by Vice President

Reviewer(s)	Jack S. Kahn, Ph.D.
Date	2/15/18

1. Strengths and successes of the discipline as evidenced by the data and analysis:

1. The data discussion is superb. I really appreciate how the data is integrated and discussed in a meaningful context.
2. Program Improvement section makes good sense- talented new grads are wonderful to have in a small program (or any I suppose)
3. Goals make good sense and connect well to other program and progress forward.

2. Areas of Concern, if any:

- a. See deans comments
- b. SLO's must be cleaned up this semester.

3. Recommendations for improvement: