

# 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:

<b>Discipline Name:</b>	Astronomy
<b>Department Name:</b>	Earth, Space & Environmental Sciences
<b>Division Name:</b>	MNH&S

Please list all participants in this Program Review:

Name	Position
Mark Lane	Professor of Astronomy & Planetarium Director
Scott Kardel	Assistant Professor of Astronomy & Assistant Planetarium Director

<b>Number of Full Time faculty</b>	2	<b>Number of Part Time Faculty</b>	3
------------------------------------	---	------------------------------------	---

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

ESES Department ADA (20%), Instructional Assistant IV (10%)

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

N/A

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

The mission of the Astronomy Program at Palomar College is to educate our students in the fundamental science of astronomy as a way to understand our universe. We achieve this mission by providing high quality educational opportunities in astronomy for a diverse student population who wish to achieve general education science credit, earn a two year degree in astronomy, or fulfill transfer requirements for a degree in astronomy at California universities. As one of the core STEM disciplines, our astronomy courses promote the understanding of basic science and physical processes to create a science literate society and encourage student participation in STEM disciplines and careers.

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

N/A

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.

Astronomy continues to be a popular choice for our students and it attracts healthy enrollment numbers with 93.66% of seats filled at the census date, accounting for our high retention rate of 90.9%. However our course success rate is only 47.8%. We are encouraged that this is up 3.8% from the previous year, but it is still too low. Success rate in Astronomy Lab (105L) is a robust 88.9% and Astronomy 120 is a healthy 73.7%, but Astronomy 100 continues to have a lower success rate. The 100 class is our entry level course and it rigorous enough that midway through the semester we have many students who have stopped trying. In the past we have noticed that many of these students receive financial aid and are required to stay enrolled for the semester or risk losing their aid. Sadly, there is no requirement for a passing grade to keep their financial assistance. This leads to many students completing the semester attendance while earning a failing grade. For example, we have noted that when looking at the course grades for all Astronomy 100 sections we have an overall course grade average of 68% when we exclude students who have stopped participating by the date of the final exam. However when compared to the number of passing grades (A, B, C) and failing grades (D, F) at the end of the semester, the numbers are similar to the success rates quoted in the College data. This tells us that the students who are still putting in an effort at the end of the semester are performing acceptably. Due to this discrepancy, we believe that overall GPA is a more accurate assessment for success rate. We will examine the situation further and try to find ways to boost our success rate.

### 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 agree with the institutional standard. We will examine the low course success rate further and try to find ways to boost our success rate.

### 3. Program Update:

**Describe your proudest moments or achievements related to student success and outcomes.**

It is always a pleasure to have students come to office hours who want to learn more. By student request we now have an Astronomy Club. We also have had several students who have completed coursework in astronomy and physics at Palomar who have then moved on to the university level. Several of these students have graduated with bachelor's degrees in astronomy and one is working on earning her master's degree.

### 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 focusing our attention on increasing student success rates. We have recently acquired equipment that will allow us to do more hands-on activities in the classroom - in real time - that will help students better grasp some of the fundamental concepts that are central to astronomy. We believe that hands-on activities might encourage students to do better in the course when it comes to mastering these important concepts.

### 5. Unanticipated Factors:

**Have there been any unanticipated factors that have affected the progress of your previous plan?**

N/A

### 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/>**

The results for Astronomy 100's Seasons SLO have been traditionally poor. As a result instructors have been placing extra effort on increasing student success. The SLO was assessed this fall in Professor Kardel's three sections of Astronomy 100 and 82% of students met the goal. We are also working to keep current with assessments and clear out those "red flags" on TracDat.

## 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 .**

Goal	Completed	Ongoing	No longer a goal
Incorporate equipment in the lecture setting that allows students to see live views of spectra and infrared.		X	
Modify observing platforms on the roof of the NS building to allow telescopes to be used without seeing the vibration of the building.			X

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

<b>Goal #1</b>	
<b>Program or discipline goal</b>	Incorporate equipment in the lecture setting that allows real-time, hands-on experiences related to some of the core concepts taught in our astronomy lectures.
<b>Strategies for implementation</b>	New equipment for demonstrating some difficult concepts in astronomy related to types of light and spectroscopy have been purchased. Professor Kardel has already implemented the new infrared camera as a part of his Astronomy 100 lecture class and is working to incorporate the spectroscopic camera into his sections of Astronomy 100. Professor Lane is on sabbatical this fall and will work to incorporate the use of these tools in the spring of 2018.
<b>Timeline for implementation</b>	Academic year 2017 - 18
<b>Outcome(s) expected (qualitative/quantitative)</b>	Higher success rates.
<b>Goal #2</b>	
<b>Program or discipline goal</b>	Resurrection of the Astronomy 210 class (Life in the Universe)
<b>Strategies for implementation</b>	Professor Kardel has been working to bring back the Astronomy 210 course ("Life in the Universe"). The course hasn't been taught in a decade, so he is working to create all new materials (lectures, quizzes, exams, homework assignments) for the course and to keep current on the science related to this rapidly evolving topic in astronomy.
<b>Timeline for implementation</b>	Spring, 2018
<b>Outcome(s) expected (qualitative/quantitative)</b>	Increase interest in astronomy as a major and boost our retention rates in the overall program. The added benefit of this elective course is that it offers an option that will help students achieve an AA degree in astronomy.
<b>Goal #3</b>	
<b>Program or discipline goal</b>	
<b>Strategies for implementation</b>	
<b>Timeline for implementation</b>	
<b>Outcome(s) expected (qualitative/quantitative)</b>	

**PART 4: FEEDBACK AND FOLLOW-UP**

This section is for confirming completion and providing feedback.

**Confirmation of Completion by Department Chair**

<b>Department Chair</b>	Wing Cheung
-------------------------	-------------

## ANNUAL PROGRAM REVIEW AND PLANNING

<b>Date</b>	11/4/2017
-------------	-----------

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

<b>Reviewed by Dean</b>	
<b>Reviewer(s)</b>	Margie Fritch
<b>Date</b>	
<b>1. Strengths and successes of the discipline as evidenced by the data and analysis:</b>	
Data is thorough.	
<b>2. Areas of Concern, if any:</b>	
Student success rates could be improved and SLOs need to be thoroughly documented including faculty discussions about how to improve in areas that need improvement.	
<b>3. Recommendations for improvement:</b>	

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

<b>Reviewed by Vice President</b>	
<b>Reviewer(s)</b>	Jack S. Kahn, Ph.D.
<b>Date</b>	1/18/18
<b>1. Strengths and successes of the discipline as evidenced by the data and analysis:</b>	
<ol style="list-style-type: none"> <li>1. Excellent review of data and interesting analysis</li> <li>2. What equipment will help with success rates?</li> <li>3. Goals are excellent</li> <li>4. A bit brief but some solid information throughout</li> </ol>	
<b>2. Areas of Concern, if any:</b>	
a. SLO section is incomplete- see rubric	
<b>3. Recommendations for improvement:</b>	