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| **Discipline: Astronomy** | **Date 01/26/15** |
| **Instructional Discipline Reviewed (Each discipline is required to complete a Program Review.)** | **Add Date   (00/00/0000)** |

**DEFINITION**

Program Review and Planning is the means by which faculty, staff, and/or administrators complete a self-evaluation of an academic discipline, program, or service.  The self-evaluation includes an analysis of both quantitative and qualitative data on how the academic discipline, program, or service is supporting the mission and strategic planning of Palomar College in meeting the educational and career interests of students.  Through the review of and reflection on key program elements, such as program data and student learning outcomes, Program Review and Planning defines the curriculum changes, staffing levels, activities, and/or strategies necessary to continue to improve the academic discipline, program, or service in support of student success.  The Program Review and Planning process also ensures short-term and long-term planning and identification of the resources necessary to implement identified goals and priorities.  (ACCJC Standard I.B3; AB-1725, 10+1)

**Purpose of Program Review and Planning:**

Program Review and Planning for Years 2 and 3 provides a “check-in” on the Year 1 Comprehensive PRP. The PRP documents the vision and planning for a program or discipline. It also provides information for the development of the College’s Strategic Plan goals and annual objectives, documents overarching themes/issues occurring across academic programs and instruction, identifies the needs for resource allocations, and identifies department needs for developing the annual Staffing Plan update.

[**Palomar College Mission**](http://www.palomar.edu/about/goals.aspx)

Our mission is to provide an engaging teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals. As a comprehensive community college, we support and encourage students who are pursuing transfer-readiness, general education, basic skills, career and technical training, aesthetic and cultural enrichment, and lifelong education. We are committed to helping our students achieve the learning outcomes necessary to contribute as individuals and global citizens living responsibly, effectively, and creatively in an interdependent and ever-changing world.

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| **List everyone who participated in completing this Program Review and Planning Document.**  **Mark Lane** |

**STEP I. Evaluation of Program & SLOAC Data.** In this section, examine and analyze updated program data, the results of SLOACs, and other factors that could influence your program/discipline’s plans for the current year. Consider trends and any changes in the data as they relate to this year’s analysis.

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| 1. **Analysis of Program Data. Review and comment on any significant changes or noted concerns since last year’s PRP.**   **(For enrollment, WSCH, & FTEF data, use Fall term data only).**   * + Enrollment, Enrollment Load, WSCH, and FTEF (<http://www.palomar.edu/irp/PRP_WSCH_FTEF_Load.xlsx>) **(Use Fall term data only).**   + Course Success and Retention rates (<http://www.palomar.edu/irp/PRP_Success_Retention.xlsx>**). Note, this file is very large and there will be a delay both when you open the file and again when you initiate the first search.**   + Degrees and Certificates (<http://www.palomar.edu/irp/PRP_Degrees_Certs.xlsx>).   Enrollment data for the 2013/14 academic year shows a slight year-over-year increase in astronomy enrollment. However since we increased the number of seats by 20% but only increased the enrollment by 13% the overall Census Load percentage dropped compared to the previous year. The 2013/14 Census Load was the lowest in the six years of available data but only down 5.3% from the highest point in 2010/11.  Our FTES and WSCH numbers have increased a bit to the highest they have been since the Fall 2010/11 term. Part of the decline in FTEF in the recent past was due to Jim Pesavento's sabbatical where we relied on adjuncts to help cover the course offerings. Jim returned for one last academic year before his retirement so we have had a bump on the FTEF numbers. Our ratio of Part-time/Total FTEF is high due to a 60% release needed for Mark Lane to serve as Planetarium Director. This along with Jim Pesavento's retirement in Spring 2014 will keep us relying on adjuncts for a few years until a full-time replacement for Jim is hired.  There has been a steady decline in Pass Rates since the highest point in the Fall 2009/10 term. Overall our Pass Rate for the Fall 2013/14 term was 49.9% compared to the high of 58.8% in 2009/10 - a drop of nearly 9%. Retention rates have also declined by 6.2% from the maxiumum in 2009/10. This is unexplainble since the faculty teaching the astronomy courses has remained fairly consistent and the course delivery and assessment has remaind conssistent. To explore this I compared my class averages for the two semesters (09/10 and 13/14) and the overall class averages for all of my sections were nearly identical. Since I do not have numbers for the other instructors I can't explore this any further. I suspect that part of this decline in Pass Rate is partly due to the increased number of students who are being encouraged to enter the Community College system who are underprepared for a fairly rigorous course like astronomy.  A bright spot is that we increased the number of Astronomy AA Degrees by 33%! Okay, so we went from 3 certificates in 2011/12 to 4 degrees in 2013/14, but keep in mind that astronomy is highly specialized and not many students attempt an AA degree in astronomy at the community college level. Most students finish their lower division work and move on to the University level without bothering to complete an AA degree in Astronomy (an AA alone is not very useful, although it is a potential stepping stone on their way to a PhD.) Two of the degrees that were earned are students that are currently attending UCSD working on their BS in Astronomy. One student from 2011/12 is now working to get MS Degree in astronomy. I am proud to say that all three graduates are women. |

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| 1. **SLOACs. Using the comprehensive SLOAC reports and faculty discussions as a guide, summarize your planned SLOAC activities for courses and programs for the current academic year. Link to SLOAC resources:** <http://www2.palomar.edu/pages/sloresources/programreview/>   We have no major changes in our planned SLOAC activities. We continue to assess our courses using existing SLOAC methods. One area of trouble is our continued attempt to bring our success rate up for assessing the Astronomy 100 students on the topic of the seasons. After four years of assessment we cannot break 50% success rate. It is believed that the way we are assessing the students is part of the problem. Rather than assessing them for the comprehesive concept we are going to break it down to smaller areas of understanding. This way we can determine what area is bringing down the numbers for the concept as a whole. |

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| 1. **Other Relevant Data and Information.** 2. **Review other data and/or information that you included in last year’s assessment of your program (see Step II.C). (Examples of other data and factors include, but are not limited to: external accreditation requirements, State and Federal legislation, four-year institution directions, technology, equipment, budget, professional development opportunities). Describe other data and/or information that you have considered as part of the assessment of your program. If there is additional information you are using to assess your program this year, also describe that information here.**   The Planetarium continues to be a valuable tool to help students understand some of the basic concepts related to astronomy. When students are exposed to realistic demonstrations of the concepts covered in class, the speak of how much it helps them understand what they are being tuaght.  In the lecture setting, a move towards incorporating more technology in the classroom might serve to increase success rates. We have been exploring the idea of using clickers (or similar technology) to increase student involvement.   1. **Given this updated information, how are your current and future students impacted by your program and planning activities? Note: Analysis of data is based on both quantitative (e.g., numbers, rates, estimates, results from classroom surveys) and qualitative (e.g., advisory group minutes, observations, changes in legislation, focus groups, expert opinion) information.**   At this time we don't have numerical data to add to this report, only anecdotal comments from students. With the hiring of a new full-time faculty member we can focus more on pursuing ways to increase student success and ways to grow the astronomy program. |

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| 1. **Labor Market Data. For Career/Technical disciplines only, review and comment on any significant changes or concerns since last year’s PRP. (See Step II.D). This data is be found on the CA Employment Development website at** [**http://www.labormarketinfo.edd.ca.gov/**](http://www.labormarketinfo.edd.ca.gov/)**. Go here and search on Labor Market Information for Educators and Trainers (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=112). Click on summary data profile on right side of page to search by occupation. (Check other reliable industry or government sources on Labor Market Data websites that support findings and are relevant to Region Ten – San Diego/Imperial Counties. Include job projections and trends that may influence major curriculum revisions.)**   N/A |

**STEP II. Progress on Previous Year’s Goals and Plans** (See ”Step III - Updated Goals and Plans” in your completed 2013-14 PRP at <http://www.palomar.edu/irp/PRPCollection.htm>).

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| **Discuss/Summarize progress on last year’s goals. Include**   1. **the impact on resources allocated and utilized;** 2. **any new developments or concerns that are affecting the program;** 3. **any new goals for the program; and** 4. **other information you would like to share.**   Goal #1 was to hire a full-time replacement for Jim Pesavento (now retired). UPDATE: I am pleased to report that the College ranked the need for a replacement full-time astronomer high enough to get us approved for hiring this academic year. We are currently going through the hiring process and interviews will begin shortly. The benefits of hiring another full-timer is that we will (1) be able to maintain our current course offerings without the heavy reliance of adjunct instructors and (2) we will have full-time help to work on ways to increase student success and ways to grow our program and (3) we will finally once again have an Assistant Director for the Planetarium to help carry the heavy work load related to our (very successful) planetarium outreach.  Goal #2 was to modify the platform on the roof of the NS Building to allow for the use of telescopes. UPDATE: This ongoing problem continues. There has been little progress toward meeting this goal. The main problem is in the design of the NS Building. While we attempted to head off the problem during construction, the architect simply did not listen to us. As a result, the NS rooftop platform vibrates causing images in the telescopes to be useless for observations and study in our Astronomy Lab classes. We are now in the process of building a new massive pier mount that will have positive dampening properties. The pier must be completely isolated from the platform. If this method does not remove the telescope vibration, a damping devise can be purchased that fits under the metal plate where the telescope base attaches. We have ten telescopes of 8 inch diameters. These can be placed on their piers when needed. A solution is still being explored but it will require an investment of funds from the College, which are listed in this PRP. In the meantime we are unable to bring the hands-on telescope component back to our astronomy program until this is resolved. |

**STEP III. Resources Requested for FY 2014-15:** Now that you have completed Steps I and II, Step III requires you to identify all additional resources you will need to achieve goals, plans and strategies for Step II. First, identify all resource needs in each budget category. You may have up to five (5) requests per budget category. Provide a meaningful rationale for each request and how it links to your Goals, Plans, and Strategies. Resource requests to simply replace budget cuts from previous years will not be considered. Negotiated items should not be included in any resources requested. PLEASE NOTE THAT ALL FUNDING ALLOCATED BY IPC IS ONE-TIME AND MUST BE SPENT WITHIN THE DEFINED TIMELINE. Requests that support more than one discipline should be included on the “Academic Department Resource Requests” PRP form only. [*Click here for examples of each budget category.*](http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf)

Prioritize within each category and then prioritize across categories in Step IV.

\*Refer to Strategic Plan 2016 Objectives at http://www.palomar.edu/strategicplanning/StrategicPlan2016-Year2.pdf

**Budget category a. Equipment (acct 600010 and per unit cost is >$500). Enter requests on lines below. Click here for examples of equipment:** [**http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf**](http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf)

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include tax, shipping, etc.)** |
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| **a1.** | **Piers for NS rooftop** | **600010** | **2** | **Aligns with mission of college** | **The NS rooftop platform vibrates causing images in the telescopes to be useless for observations and study in our Astronomy Lab classes. This has been known since the building was under construction but the architect failed to change the design. We are now in the process of building a new massive pier mount that will have positive dampening properties. The pier must be completely isolated from the platform. If this method does not remove the telescope vibration, a damping devise can be purchased that fits under the metal plate where the telescope base attaches. We have ten telescopes of 8 inch diameters. These can be placed on their piers when needed.** | **3000** |
| **a2.** | **Damping devices for NS rooftop** | **600010** | **2** | **Aligns with mission of college** | **Damping devices will be needed only if the piers listed as priority number a1 (above) do not solve the problem.** | **10000** |
| **a3.** |  |  |  |  |  |  |
| **a4.** |  |  |  |  |  |  |
| **a5.** |  |  |  |  |  |  |

**Budget category b. Technology (acct 600010, examples: computers, data projectors, document readers). Enter requests on lines below. Click here for examples of technology:** [**http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf**](http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf)

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include tax, shipping, etc.)** |
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| **b1.** | **N/A** |  |  |  |  |  |
| **b2.** |  |  |  |  |  |  |
| **b3.** |  |  |  |  |  |  |
| **b4.** |  |  |  |  |  |  |
| **b5.** |  |  |  |  |  |  |

**Budget category c. Supplies (acct 400010 and per unit cost is <$500). Enter requests on lines below. Click here for examples of supplies:** [**http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf**](http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf)

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include tax, shipping, etc.)** |
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| **c1.** |  |  |  |  |  |  |
| **c2.** |  |  |  |  |  |  |
| **c3.** |  |  |  |  |  |  |
| **c4.** |  |  |  |  |  |  |
| **c5.** |  |  |  |  |  |  |

**Budget category d. Operating Expenses (acct 500010; examples: printing, maintenance agreements, software license) Enter requests on lines below. Click here for examples of operating expense:** [**http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf**](http://www.palomar.edu/irp/2013CategoriesforPRPResourceRequests.pdf)

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already partially funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include tax, shipping, etc.)** |
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| **d1.** | **N/A** |  |  |  |  |  |
| **d2.** |  |  |  |  |  |  |
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**Budget category e. Travel Expenses for Faculty (acct 500010: faculty travel only)**

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include benefits if applicable)** |
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| **e1.** | **N/A** |  |  |  |  |  |
| **e2.** |  |  |  |  |  |  |
| **e3.** |  |  |  |  |  |  |
| **e4.** |  |  |  |  |  |  |
| **e5.** |  |  |  |  |  |  |

**Budget category f. Short-term hourly (temporary and student worker). Enter requests on lines below.**

| **Priority Number for Resource Requests** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include benefits if applicable)** |
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| **f1.** |  |  |  |  |  |  |
| **f2.** |  |  |  |  |  |  |
| **f3.** |  |  |  |  |  |  |
| **f4.** |  |  |  |  |  |  |
| **f5.** |  |  |  |  |  |  |

**STEP IV. Prioritize Resource Requests.** Now that you have completed Step III, prioritize all of your resource requests as one group; not prioritized within each budget category. This means you could have your #1 priority in technology, your #2 priority in short-term hourly, and your #3 priority in equipment, etc. If you actually have five (5) requests in each of the six (6) budget categories, you would end up with 30 prioritized requests**. IPC will not consider requests that are not prioritized.** Note that all funding allocated by IPC is one-time and must be spent within the defined timeline.

| **Priority Number for all Resource Requests in Step III** | **Resource Item Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide ~~a~~ detailed rationale for each item. Refer to your goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If item is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include tax, shipping, benefits, etc.)** |
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| **1.** | **Piers for NS rooftop** | **600010** | **2** | **Aligns with college mission statement** | **The NS rooftop platform vibrates causing images in the telescopes to be useless for observations and study in our Astronomy Lab classes. This has been known since the building was under construction but the architect failed to change the design. We are now in the process of building a new massive pier mount that will have positive dampening properties. The pier must be completely isolated from the platform. If this method does not remove the telescope vibration, a damping devise can be purchased that fits under the metal plate where the telescope base attaches. We have ten telescopes of 8 inch diameters. These can be placed on their piers when needed.** | **3000** |
| **2.** | **Damping devices for NS rooftop** | **600010** | **2** | **Aligns with college mission statement** | **Damping devices will be needed only if the piers listed as priority number a1 (above) do not solve the problem.** | **10000** |
| **3.** |  |  |  |  |  |  |
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**STEP V. Contract Position Requests.** Prioritize all contract positions you feel are needed to achieve goals, plans and strategies identified in Step II. Include all requests for Classified, CAST, and Administrator positions that either replace a vacancy due to retirements, resignations, lateral transfers, etc., or any new positions. You may request up to ten (10) positions and they must be prioritized to be considered by IPC. Please note that only these position requests will be prioritized by IPC when developing the annual Staffing Plan for Instruction.   (Do not include faculty positions.)

| **Priority Number for Contract Position Requests** | **Position Title/Category**  **Requested** | **Fund Category** | **Discipline goal addressed by this resource** | [**Strategic Plan 2016 Objective Addressed by this Resource**](http://www.palomar.edu/strategicplanning/PALOMAR_STRATEGICPLAN2016.pdf)**\*** | **Provide a detailed rationale for the each position. The rationale should refer to your discipline’s goals, plans, analysis of data, SLOACs, and the Strategic Plan. (If position is already funded, name the source and describe why it is not sufficient for future funding.)** | **Amount of Funding Requested (include benefits)** |
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| **1.** | **N/A** |  |  |  |  |  |
| **2.** |  |  |  |  |  |  |
| **3.** |  |  |  |  |  |  |
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**Department Chair/Designee Signature Date**

**Division Dean Signature Date**