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| **Discipline: Computer Science** | **Date 2/3/15**  |
| **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.****Anthony Smith****Richard Stegman** |

**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>).

EnrollmentCSCI enrollment at census increased again in 2013/14, from 1,392 in 2012/13 to 1,455 in 2013/14. This continues the clear trend of CSCI enrollments increasing each year. We expect CSCI enrollment to continue to increase.Census load percentage for CSCI was 92.8%, much higher than the 85.2% for the campus overall.Course Success and RetentionLittle change in CSCI overall passing rates last year, are still a few percentage points lower than for the college overall. This is understandable as CSCI is a very technical discipline. Notable that unlike the college, CSCI Distance Education pass rates are not always lower than Evening and Day rates.CSCI retention rates overall are also a few percentage points lower than the college as a whole, probably for the reason noted above. Notable that CSCI retention is similar across Day, Evening and Distance Education, whereas for the college Distance Education retention is always worst.Gender has no effect on pass or retention rates in CSCI, as is to be expected.Degrees and CertificatesThe number of degrees and certificates awarded in CSCI remains small, as expected. The goal of potential CSCI majors is instead to transfer into a four-year Computer Science program. |

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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/>

During the 2014-2015 academic year, the CSCI discipline will assess the following discipline courses:CSCI 112, 230 – assessed during Fall 2014CSCI 114 – to be assessed during Spring 2015(This leaves CSCI 235 as the only course never assessed, but is not offered Spring 2015.)Exams, homework assignments, or computer programming assignments are used to assess the success of course SLOs.Most CSCI courses assessed indicated overwhelming success in meeting the learning outcomes: CSCI 110, CSCI 112, CSCI 212, CSCI 132, CSCI 261, CSCI 210, CSCI 220, CSCI 222. Most of the core computer science courses are represented within this grouping. Additionally, we have noted that only a single SLO is attached to many of our courses and we need to assess more key areas in these courses.There are 4 CSCI program-level SLOs. We plan to evaluate one of these program SLOs per year, beginning 2016. |

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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.**

N/A1. **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.**

N/A |

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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.)**

No significant changes or concerns here since last year’s PRP. Software Engineer remains one of the occupations projected for the fastest rate of growth and to add the most new jobs in the state of California. If anything, the demand for graduates with skills in Computer Science has improved past expectations and forecasts.Excellent job prospects are expected for applicants with at least bachelor’s degree in computer engineering or computer science and with practical work experience. |

**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.**

Around Fall 2013 it was decided that students entering the CSCI ‘flagship’ CSCI 210 Data Structures class did not have sufficient preparation in computer programming. Therefore it became the goal of the CSCI discipline to increase enrollment and success rate in the CSCI 210 Data Structures by increasing the programming course requirements before entering CSCI 210 Data Structures. The CSCI curriculum was updated to implement the plan:2013-14 was the last year of the ‘old’ CSCI curriculum, with the core sequence of CSCI 108 to CSCI 110 removed from the program and replaced by CSCI 112 and CSCI 114. This represents a significant change to the CSCI discipline.Noted concernsThe scheduling, staffing, and success and retention rates of the new classes are all considerable concerns for 2014/15 and later. For example, enrollment and waitlist data indicate, that while more of the initial CSCI courses were offered than ever before (CSCI 112), classes for Spring 2015 were completely filled and many, many students had to be turned away. Computer Science (CSCI) classes were in such demand for the Spring 2015 semester we had to turn away dozens of students. Unfortunately, we simply cannot find enough qualified adjuncts to teach our classes as the technical requirements for Computer Science adjuncts is very, very high. The last time we hired a Computer Science instructor was about 17 years ago. Yes, it’s been a generation. Let's hope the Computer Science discipline can get to the top of the hiring list. 2015 Updated CSCI GoalsGoal 1: To offer a curriculum that appropriately attracts students and contributes to the overall excellence of Palomar College’s educational programs.Goal 2: To assist students in mastering a core of knowledge and skills to match their educational objectives.Goal 3: To provide and implement a curriculum that is relevant and compatible with current technology and which supports the goals and meets the needs of students interested in preparation for involvement in the field of Computer Science.Goal 4: To evaluate our own performance in terms of our contribution to student learning and success.Goal 5: To share in the Palomar College funding resources in an appropriate and equitable manner that provides the Computer Science program with the financial capability to continually upgrade and maintain its laboratory environments in a status which effectively meets the need to provide compatibility with the constant and rapid change that is occurring in the world of computer technology.Goal 6: To hire and support excellent faculty, staff, and student workers.Goal 7: To provide CSIS faculty the opportunity to remain current in their field. |

**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.)** |
| --- | --- | --- | --- | --- | --- | --- |
| **a1.**  | **Computer Message Board Software** | **600010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$450** |
| **a2.**  |  |  |  |  |  |  |
| **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.)** |
| --- | --- | --- | --- | --- | --- | --- |
| **b1.**  | **Apple iPad (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Computer Science faculty must have easy, convenient, lightweight access at all times to the Blackboard website, Palomar email, and all other Palomar online resources to support in-house and online classes as well as all other department functions.**  | **$3,000** |
| **b2.**  | **Laptops (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Computer Science faculty must have the ability to perform heavy-duty content creation at all times working with the Blackboard website, Palomar email, and all other Palomar online resources to support in-house and online classes as well as all other department functions.** | **$7,00** |
| **b3.**  | **Faculty Office Computers (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Updated faculty computers are required for all aspects of faculty involvement in the department.** | **$15,000** |
| **b4.**  | **Computer Message Board - iMac with Retina 5K display and Built-in VESA Mount Adapter** | **600010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$3,000** |
| **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.)** |
| --- | --- | --- | --- | --- | --- | --- |
| **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.)** |
| --- | --- | --- | --- | --- | --- | --- |
| **d1.**  | **Brochures & Outreach Cards for Computer Science Program Information** | **500010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$2,200** |
| **d2.**  | **Color Posters Adhesive 50’ Linear Foot Vinyl Adhesive** | **500010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$400** |
| **d3.**  |  |  |  |  |  |  |
| **d4.**  |  |  |  |  |  |  |
| **d5.** |  |  |  |  |  |  |

**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)** |
| --- | --- | --- | --- | --- | --- | --- |
| **e1.**  |  |  |  |  |  |  |
| **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)** |
| --- | --- | --- | --- | --- | --- | --- |
| **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.)** |
| --- | --- | --- | --- | --- | --- | --- |
| **1.**  | **Apple iPad Air (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Computer Science faculty must have easy, convenient, lightweight access at all times to the Blackboard website, Palomar email, and all other Palomar online resources to support in-house and online classes as well as all other department functions.**  | **$3,000** |
| **2.**  | **Laptops (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Computer Science faculty must have the ability to perform heavy-duty content creation at all times working with the Blackboard website, Palomar email, and all other Palomar online resources to support in-house and online classes as well as all other department functions.** | **$7,000** |
| **3.**  | **Faculty Office Computers (3)** | **600010** | **5, 7** | **3.3, 3.4** | **Updated faculty computers are required for all aspects of faculty involvement in the department.** | **$18,000** |
| **4.**  | **Brochures & Outreach Cards for Computer Science Program Information** | **500010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$1,600** |
| **5.** | **Color Posters Adhesive 50’ Linear Foot Vinyl Adhesive** | **500010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$250** |
| **6.** | **Computer Message Board - iMac with Retina 5K display and Built-in VESA Mount Adapter** | **600010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** | **$3,000** |
| **7.** | **Computer Message Board Software** | **600010** | **1, 2, 3, 5** | **1.1** | **Outreach to both current and future students.** |  |
| **8.** |  |  |  |  |  |  |
| **9.** |  |  |  |  |  | **$450** |
| **10.** |  |  |  |  |  |  |
| **11.** |  |  |  |  |  |  |
| **12.** |  |  |  |  |  |  |
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| **30.** |  |  |  |  |  |  |

**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.**  |  |  |  |  |  |  |
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| **3.**  |  |  |  |  |  |  |
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| **6.** |  |  |  |  |  |  |
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| **8.** |  |  |  |  |  |  |
| **9.** |  |  |  |  |  |  |
| **10.** |  |  |  |  |  |  |

 **Department Chair/Designee Signature Date**

 **Division Dean Signature Date**