Program Review and Planning 2019-2020

OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review is about documenting the plans you have for improving student success in your program and sharing that information with the 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 our new Guided Pathways plan, this review becomes even more crucial for the success of our students and college.

We are using the Strengths, Opportunities, Aspirations, Results (SOAR) strategic planning technique to help us focus on our current strengths and opportunities, create a vision of future aspirations, and consider the results of this approach.

BASIC PROGRAM INFORMATION

Academic Year
2019-2020

Are you completing a comprehensive or annual PRP?
Annual

Department Name
Earth, Space, and Environmental Sciences

Discipline Name
Earth Sciences (ES)

Department Chair Name
Wing Cheung

Division Name
Mathematics, Science and Engineering

Website address for your discipline
https://www2.palomar.edu/pages/earthscience/

Discipline Mission statement
The Earth Science Program at Palomar College functions as a multiple mission program. Through our ES 100 and ES 115
courses, we promote earth science literacy and fulfill the general education natural and physical science requirements for degree or transfer. Specifically, the ES 100 course is an approved course for transfer into the CSU San Marcos Liberal Studies Elementary Subject Matter (ESM) option. Producing well-educated science students who pursue teaching careers will ultimately improve K-12 science instruction. Additionally, the ES 100 lecture and lab courses may also be used to satisfy course requirements for the A.A. in
Anthropology for Transfer (A.A.-T).

The Earth Science curriculum is designed to provide the fundamental knowledge and skills to students interested in increasing
their understanding of the complex interactions among Earth's geosphere, hydrosphere, atmosphere, and biosphere. The
curriculum also includes the connection of humans to Earth for natural resources and the impact of Earth processes (such as
earthquakes, volcanic activity, and other natural hazards) on the distribution and development of human

populations. The
influence of human activities on Earth's surface processes is also addressed. The overall mission of the program is to develop
an Earth-science-literate community that is aware of current and accurate scientific understanding of our planet. Such a
population is critical to the promotion of Earth stewardship, sound public policy, and expanded international cooperation.

(click here for information on how to create a mission statement)

Does your discipline have at least one degree or certificate associated with it?
No

Are any of your programs vocational (CTE/CE)?
No

Please list the names and positions of everyone who helped to complete this document.
Dr. Lisa Yon, Professor, ESES Dept.

Full-time faculty (FTEF)
0.8

Part-time faculty (FTEF)
0

Classified & other staff positions that support this discipline
Brenda Morris, ADA, 20% workload
Tony Kopec, Instructional Support Assistant IV, 10%

Additional hourly staff that support this discipline and/or department
None

PROGRAM INFORMATION

PROGRAM OUTCOMES

Begin this section by reviewing the Program Review reports for courses and programs in TracDat. All active course and program outcomes should be systematically assessed over a 3-year cycle.

- **Program** = Leads to a degree or certificate
- **Discipline** = A group of courses within a discipline

*Programs will be able to complete program completion and outcome questions.

Depending on the degree or transfer goals of our students, they have the choice of three different GE pathways:

- Associate Degree GE Requirements
- CSU GE Requirements
- IGETC Requirements

Palomar College has identified a set of General Education/Institutional Learning Outcomes, which represent the overall set of abilities and qualities a student graduating from Palomar should possess.Click here for a link to Palomar's GE/ILOs.

The Chancellor's Office Vision for Success stresses the importance of reducing equity gaps through faster improvements of underrepresented groups.

ACCJC also requires that colleges establish institutional and program level standards in the area of success rates. These standards represent the lowest success rate 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.

Click on this link to review the course success rates (A, B, C, or Credit) for your discipline.

In this section we will identify a course success rate standards and a stretch goal (what you would like to move toward) for programs.

Course Success Rates by gender, age, ethnicity, special population, location, and modality (You can access the Student Equity Plan on the SSEC website https://www2.palomar.edu/pages/ssec/)

COURSE INFORMATION

COURSE SUCCESS AND RETENTION

What is your program's standard for Discipline COURSE Success Rate?
70.0%

Why did you choose this standard?
We consider 70% to be an appropriate standard for disciplice course success rate, which is consistent with SLO rates.This is also consistent with the College's institutional standard of 70%.

What is your Stretch goal for COURSE success rates?
71.0%

How did you decide upon the goal?
According to Palomar's Accreditation Midterm Report (MARCH 2019), the campus-wide Stretch Goal for the college is 71%. Although the college has not yet achieved that goal, the Earth Science discipline has met the success rate Stretch Goal of 71% twice (Fall 2013 and Fall 2016) so it seems to be an overall achievable goal for the Earth Science discipline.

Gender: Why do you think gender differences exist? What do you need to help close the gap?
Gender is a difficult group to evaluate since the data is self-reported and students may identify outside of their birth gender. That being said, there appears to be no real difference in retention rates between females at 93% and males at 92% over the five years of data. Success rates, however, do show a distinct difference with females showing an average success rate of 71% opposed to the average success rate for males being only 65%. One could speculate that females are more focused, show more attention to detail, are better organized, etc. which is very much an "old-school" style of thinking. Without knowing for sure what affected these students and their performance, there is no clear path to closing the gap other than making sure that all students (regardless of gender identification) recognize the rigors associated with a college education.

Age: Why do you think age differences exist? What do you need to help close the gap?
As students must report their actual birthday, data related to age can be considered reliable and not surprising. Although retention across the three age categories presented (19 and under, 20 to 24, 25 to 49) averages 92%, the 20-24 age range is slightly lower at 91%. What is truly not surprising is the success rates: 19 and under at 68%, ages 20-24 at 66%, but 80% for ages 25 to 49. Typically an older student has

developed better study habits, better life skills and time management skills, and often has a better understanding of the value of their education. I would suggest that students need to be better educated on the rigors of college and the importance of time management. Younger students are more familiar with the high school model of education where the majority of work is completed during a seven-hour school day in which classes meet daily. They are often unprepared for the college setting where the majority of the work occurs outside of the scheduled class time and the motivation to complete the assigned work must come from the student themselves. Typical college-level science courses require a commitment of at least nine hours of work per week outside of the classroom, but many students appear unready to make that kind of time investment.

Ethnicity: Why do you think ethnicity differences exist? What do you need to help close the gap?
Ethnicity is another factor which could be misleading as the data is self-reported and the current societal trends encourage people to embrace their ancestral/cultural roots. This can be clearly seen in the multi-ethnicity category which I do not recall in previous PRP reports. That being said, I can see from the data and from my own contact with students in the classroom that some students typically fall below the norm. In this case, success rates for Hispanic students average 61% compared to overall course success rates of 70%. There are many factors that could be at work here. If one were to speculate, in an attempt to provide guidance to improve performance, some factors could relate to adequate preparation for some students such as the language and critical thinking skills required for college-level sciences classes.Current limited access to data does not allow us to evaluate English Language Learners (ELL) students as we have done in the past, but prior data has suggested that ELL students have lower success rates. Students considering enrollment in college-level science courses need to be properly advised that college-level English and Math skills provide the best preparation for success in these courses.

COURSE OUTCOMES

How have you improved course-level assessment methods since the last PRP?
Results from assessments show that overall students are meeting the assessment goals. There are no plans at this time to change assessment methods.

Summarize the major findings of your course outcomes assessments.
Although students meet course assessment goals, this is a simple snapshot of just a few of the topics covered within the course. Even overall course success at an average of 70% is misleading since this does not reflect a typical bell curve distribution. More and more we are seeing a trend toward a bimodal distribution of with almost equal amounts of A/B grades compared to D/F and a lesser number of students in the C range.

This section is intentionally blank for annual PRPs. Please click "Next" to continue.

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Program Goals

In the previous sections, you identified opportunities for improvement. Using these opportunities, develop 3-year SMART goals for your department. Goals should be Specific, Measurable, Attainable, Relevant, Time-Specific. Ensure your goals align with the mission of your department and/or the College's strategic plan.

Please list all discipline goals for this three-year planning cycle. Click here for previous PRPs and goal information.

Goals

Goal 1

Brief Description
Expansion of Earth Science offerings to include ES 100 Lab

Is this a new or existing goal?
Existing

Goal Status
Ongoing

How will you complete this goal?
We are awaiting approval from the College to be able to expand offerings to include the already approved ES 100 lab. We propose that offering the Earth Science lecture/lab at the Rancho Bernardo campus provides a viable option.

Outcome(s) expected (qualitative/quantitative)
With the offering of the ES 100 lab course, students pursuing majors in Liberal Studies (Elementary Subject Matter credential) and those students in the Anthropology A.A.-T degree program will be able to satisfy their course requirements by completing the ES 100 lecture/lab combination.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?
The overall mission of the Earth Science discipline is to promote earth science literacy while providing students the opportunity to fulfill the general education physical or natural science requirements for degree or transfer. The ES 100 lecture/lab combo specifically satisfies course requirements for the A.A.-T in Anthropology and transfer into the CSU San Marcos Liberal Studies Elementary Subject Matter (ESM) option. This is also in alignment with the College mission statement wherein the College specifically states that it supports and encourages students who are pursuing transfer-readiness.

Expected Goal Completion Date
2/1/2021

STAFFING AND RESOURCE NEEDS

Instructions

1. Refer to Strategic Plan.
2. See Data.
3. See career info (In PRP)

Are you requesting additional full-time faculty?
No

Are you requesting additional Staff, CAST or AA?
No

RESOURCE REQUESTS AND BUDGET ALLOCATION REVIEW

Budget Analysis: This section should be completed by department chairs by the end of September.

Are there areas in your budget where there has been a historical surplus (See three year trend)?
No

Are there processes that need to be examined to ensure we are being the most efficient with

funding?
No

Are there ongoing needs in your department budget that you currently do not have the resources for?
No

Do you have non-general fund sources of funding?
No

One Time Needs

For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY PERKINS AND STRONG WORKFORCE GUIDELINES (on the left menu of the web page.)

Please check with your department chair on the availability for this cycle.

Do you have one-time funding requests?
No

Review

Chair Review

Chair Comments
Thanks for your effort on this document, Lisa.

Chair Name
Catherine Jain

Chair Sign Date
10/28/2019

Dean Review

Strengths and successes of the discipline as evidenced by the data and analysis:
I appreciate the thorough evaluation of success metrics among DI populations. You do mention that you see lower success rates among Hispanic students, there may be resources available in the STEM Center to help assist your students. I recommend reaching out to the STEM Center and/or referring students there.

Areas of Concern, if any:

Recommendations for improvement:

Dean Name
Nichol Roe

Dean Sign Date
12/19/2019

IPC Review

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

Areas of Concern, if any:

Recommendations for improvement:

IPC Reviewer(s) **IPC Review Date**

Vice President Review

Strengths and successes of the discipline as evidenced by the data and analysis:
Agree with dean evaluation. Appreciate the discussion.

Areas of Concern, if any:

Recommendations for improvement:

Vice President Name
Jack S. Kahn Ph.D.

Vice President Sign Date
1/30/2020