Status: **Reviewed**

Entry #: 237

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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
2020-2021

Are you completing a comprehensive or annual PRP?
Annual

Department Name
Earth, Space, and Environmental Sciences

Discipline Name
Oceanography (OCN)

Department Chair Name
Sean Figg

Division Name
Mathematics, Science and Engineering

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

Discipline Mission statement
The mission of the Oceanography Program at Palomar College is to fulfill the general education physical science requirement for degree or transfer. The Oceanography Program offers students the opportunity to study the dynamic processes and interconnections that affect Earth's marine systems including the study of geological, chemical, physical, and biological oceanography. Further, the Oceanography Program seeks to help students develop an understanding of the ocean's influence on humans as well as their impact on the ocean environment. Students who successfully complete the program will be able to make informed and responsible decisions regarding the oceans and its resources.

(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 TOP coded as vocational (CTE/CE)?
No

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

Use the link to provided to help answer the staffing questions below. This form requires a login and password to access. Please use your Palomar email and password to log in.

Link: Permanent Employees Staff Count

Full-time Faculty (total number of FT faculty in your discipline)
1

Full-time Faculty (FTEF)
1.20

Part-time faculty (FTEF)
1.80

Classified and other permanent staff positions that support this discipline
Abigail Corona, Academic Department Assistant, (10%)
Tony Kopec, Instructional Support Assistant IV, (10%)

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

PROGRAM INFORMATION

In this section you are asked to consider your programs, their learning outcomes, the annual number of completions, goals for completions and enrollment and efficiency trends.

PROGRAM LEARNING OUTCOMES

Begin this section by reviewing the Program Review reports for programs and courses in Nuventive Improve (TracDat). All active course and program learning outcomes should be systematically assessed over a 3-year cycle. First, look at program learning outcomes.

- **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.

How do they align with employer and transfer expectations?
Oceanography is a two-course (OCN 100 lecture and lab) discipline. It does not lead to a degree or certificate but does support General Education requirements for graduation as follows:

OCN courses support General Education/Institutional Learning Outcomes in four primary areas:
written communication, inquiry & analysis, creative/critical/analytical thinking, and civic knowledge & engagement.

OCN100 lecture and lab can be used to fully satisfy CSU-General Education transfer requirements in Area B1, Scientific Inquiry and
Quantitative Reasoning in Physical Science and the IGETC transfer requirements for UC in Area 5A, Physical Sciences.

Program Information Summary

Consider your program outcome assessments, completions, and enrollment/efficiency trends, as well as other internal and external factors.

How have these factors contributed to the success of your program(s)?
The OCN 100 course has been a popular course for students to complete their General Education requirements for over 20 years. From the past five years of data, the OCN discipline Fall WSCH/FTEF averages 636, well above the desired College efficiency goal of 525 and the current college efficiency of 484.

How have these factors presented challenges for your program(s)?
The OCN 100 lecture and lab courses regularly fill and usually generate Wait Lists as well so enrollment is strong. Probably the biggest challenge to the discipline at this point is the loss of full-time faculty to retirements: Patricia Deen in Fall 2018 and Al Trujillo in Spring 2020. Although there is currently an excellent pool of adjunct faculty, they do teach at other colleges and thus we complete for their availability. This presents challenges in continuity of the teaching of the lecture and lab courses, course development/updates, and logistics/safety on field trips. Maintaining the quality of the OCN 100 lecture and lab courses will continue to be a challenge until a full-time faculty member is hired to help off-set the loss created by the two retirements. Hiring a full-time faculty member will also help to bring the College in compliance with AB1725.

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?
68.0%

Why did you choose this standard?
Students perceive that science courses are more difficult than other classes. From what our students tell us, the most common reasons are that science courses are "difficult" and they have a lot of vocabulary. Many students who are "math phobic" enroll in Oceanography for their General Education science requirements to avoid the obvious math found in physics and chemistry; they are shocked to learn that "math is the universal language of science." This generates an apprehension that in turn affects student performance, the age-old "I'm not very good at science" excuse produces students who are self-limiting. By slightly "lowering the bar" we can generate student confidence and success.

That being said, success rates for the Oceanography discipline increased from 65% (Fall 2014) and 67% (Fall 2015) to a fairly stable average of 70% from Fall 2016 to Fall 2019. This exceeds our Discipline Course Success Rate of 68% and is compliant 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 Report (MARCH 2020), the campus-wide Stretch Goal for the college is 71%. The Oceanography discipline has achieved this goal in Fall 2016 and has been within the 70% standard for the past four years so it is considered to be an achievable goal.

It is also important to note that the average retention rate over the past six years has been steadily increasing from 89% in Fall 2014 to the most recent value of 94% for Fall 2019. This implies that students are "sticking" with the courses and the motivation appears to be present to "do well"; this trend has also been noted in other ESES disciplines.

Part of the barrier to increasing success rates may lie in student ability to invest appropriate time in course engagement. A trend has been noticed over the past four years where retention rates between full-time and part-time have been deviating from each other. In Fall 2015, retention rates for full-time (89%) were almost identical to part-time (88%). Since that time, however, the part-time retention has stayed the same (averaging 88%) while the full-time retention has steadily increased to a value of almost 98% for Fall 2019 (averaging 94% over the four years). In that same time frame, success rates for full-time students averages 73% while for part-time students the average success rate is 65%. This trend is seen in other ESES disciplines as well suggesting that if students are being challenged by time commitments outside of the classroom, they may not have sufficient time to invest in course engagement.

When or Where: Why do you think differences based on when or where the course is offered exists? What do you need to help close the gap?
Oceanography 100 Lecture is primarily offered on the Main Campus in prime-time morning time blocks, which are some of the most popular classes for students (classes fill with wait lists). Evening courses (1-2 per semester) are often offered at satellite campuses such as Escondido or Rancho Bernardo and, although smaller class sizes, the retention rates for evening classes (94%) are similar to the Main Campus daytime offerings (retention rates average 93% for much larger sample size). Success rates for evening classes are slightly higher (73%) than daytime offerings (67%) which may be attributable to either the "more personal" smaller class size of the evening class or perhaps more mature students in the evening sections.

One area where there is a distinct difference is in the online offerings of Oceanography 100 lecture. The online sections have a lower retention (87%) with a correspondingly lower success rate as well (63%). This trend can be noticed campus-wide; online courses as a whole typically have lower retention and lower success rates. Students select the online course for the "freedom" it offers in terms of scheduling, however many students are unaware of the rigors and time commitment involved in an online course. The only way to close this gap may be to require students to complete an assessment prior to enrolling in an online course so that they are better prepared to be successful.

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. For the discipline as a whole (lecture and lab) there is no real difference between male and female retention rates (both at 91%) and success rates (females 70%, males 69%). Even within the separate courses, there is no distinct difference: for OCN lab retention rates are similar (male 91%, female 92%) as well as the success rates (male 81%, female 82%). Oceanography lecture shows a similar trend with retention rates the same at 91% for both genders. Success rates in the lab (male 66%, female 68%) are similar to the lecture. Success rates in the lab are slightly lower than the lecture due to the nature of the course. Regular attendance in lecture is not as strong a factor in course success compared to the lab. A student missing a lecture can easily "catch up" on the missed work. A student missing a lab session has fully missed the opportunity to earn points for that material if they cannot attend a make-up session in another lab meeting.

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. Over a five year period, retention across the three age categories presented is very similar: 90% in the 25 to 49 age group, 91% in the 20 to 24 age group, and 92% in the 19 and under age group. What is not surprising is the success rates: 19 and under at 66%, ages 20-24 at 65%, but 70% 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. One could suggest that young, first-time college 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. However, as a Hispanic-serving institution, it is not surprising that the majority of the students enrolled in the Oceanography courses are Hispanic and that enrollment numbers have been increasing over the past five years. Students identifying as White are the next largest group with steady enrollment numbers. Asian and Black/African American students each comprise a small (8% each) of the students enrolled in the Oceanography courses. Students identifying as "multi-ethnicity" account for approximately 16% of the students enrolled. Retention rates range from 96% (Asian), 93% (White), 90% (Hispanic), 87% (Multi-Ethnicity) to 82% (Black/African American).
Success rates track the retention rates with Asian students (83%), White (76%), Hispanic & Multi-Ethnicity (61%) and Black/African American (43%).

Closing this gap is difficult and complicated; factors may be related to cultural differences (i.e. value of an education) or perhaps social differences (family commitments, work commitments). There are many factors that could be at work here and one blanket solution is not going to work for all.

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. I have personal observations of students enrolled in the Oceanography lab classes spending a good portion of the lab period translating the lab manual directions from English to Spanish.

Special Populations: Why do you think special population differences exist? What do you need to help close the gap?
In terms of "special populations" no data exists for foster youth for the Oceanography courses (lecture or lab).
For veterans, there is limited data for students enrolled in the Oceanography lecture (none for the Oceanography lab). In general, students who are veterans show no distinct difference in either retention or success rates compared to the general population.

COURSE LEARNING OUTCOMES

How have you improved course-level assessment methods since the last PRP?
The course assessment methods that have been deemed valid have high participation rates from all oceanography instructors. The results show that students are meeting the assessment goals, so there wasn't any consideration about improving the assessment methods.

Summarize the major findings of your course outcomes assessments.
Students are able to successfully pass the course assessments with success rates varying from 70% to a high of 96%, where the minimum assessment pass rate is equal to 70% This means that for both Ocean 100 Lecture and Ocean 100 Lab, the assessments are being met. After the assessment results have been compiled, the Oceanography 100 Lecture instructors meet to brainstorm best practices, share proven strategies for retention and engagement, and consider program-wide changes about pedagogy as a result of this reflection. By sharing the ways in which various instructors teach each SLO content area, there is an effort to ensure quality and consistency of instruction. In fact, some of these successful teaching techniques have been adopted by other instructors within the discipline. In this way, the SLO assessments have improved our courses and program.

Regarding the assessment scores for Ocean 100 Lecture, the likely reason for the high assessment score for the third SLO assessment on middle latitude marine productivity is due to the fact that it was the most recent topic covered of the three SLO topics, all of which were assessed during the final exam in the course. In all three SLO assessments, slightly different content covered by various instructors may have resulted in the range of scores on the assessment. For example, some of our newly hired adjunct faculty had very low assessment scores, which will likely improve as these instructors gain experience in teaching this subject matter. It is also noted that online sections had some of the highest assessment scores overall, but the data shows that this is already changing as Oceanography 100 Online class sizes have increased from 32 to 42 students.

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

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

CAREER AND LABOR MARKET DATA

The Chancellor's Office Vision for Success stresses the importance of increasing the percent of exiting students who report being employed in their field of study. It is important for us to consider how ***all*** of our programs connect to future careers.

Go to this website https://www.onetonline.org/ and enter your discipline in the bubble on the top right for ideas about potential occupations. Click on an example to see more detail.

What kinds of careers are available for people who complete your programs (and/or transfer)? (Refer to link above) Are there any new or emerging careers and if so how would the new or emerging careers impact your future planning?
25-1051.00 Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
19-2021.00 Atmospheric and Space Scientists
19-2042.00 Geoscientists, Except Hydrologists and Geographers
19-4099.00 Life, Physical, and Social Science Technicians, All Other
19-4041.02 Geological Sample Test Technicians

New or emerging careers: One potential area of employment is with aquaria and other public outreach organizations that explain oceanography to the general public.

What are the associated knowledge, skills, abilities (KSA's) needed for the occupations listed above? (click examples in the link above to get ideas)
In essence, the KSAs needed for employment in any of the above fields are basic oceanographic knowledge (e.g. the geological, chemical, physical, and biological elements that control the oceans), as well as general scientific skills and abilities. Further, an advanced degree (M.Sc. or Ph.D) are required for most jobs involving oceanography.

More specifically, knowledge needed includes:
Education and Training
English Language
Mathematics
Computers and Electronics
Physics
Chemistry
Geology
Biology

Skills needed include:
Speaking
Reading Comprehension
Instructing
Problem Solving Using Scientific Principles
Active Listening

Abilities needed include:
Oral Expression
Speech Clarity
Oral Comprehension
Written Comprehension
Deductive Reasoning

How does your program help students build these KSA's?
By completing courses in oceanography at Palomar College, successful students have a basic background in science and fundamental oceanographic concepts to enable them to continue their education at other 4-year institutions. Many of these KSAs are fundamental items (English Language, Speech Clarity, Reading Comprehension) that a student learns in a variety of classes while obtaining a college degree.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-word experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning.

Have you incorporated work based learning (work experience, internships, and/or service learning) into your program?
No

Do you want more information about or need assistance integrating work-based learning into your program?
No

How do you engage with the community to keep them apprised of opportunities in your program?
Through various outreach opportunities, such as Palomar's STEM Conference, Palomar's Active Learning Leaders (ALL) Conference, meetings with local high school counselors, and other off-campus events such as talks at the Birch Aquarium at Scripps.

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
Hire a new full-time interdisciplinary oceanography/geology instructor to replace Patty Deen, who retired in December 2018 and Al Trujillo, who retired in May 2020.

Is this a new or existing goal?
Existing

Goal Status
Ongoing

How will you complete this goal?
Assess status of program and complete Staffing and Resources section of this PRP.

Outcome(s) expected (qualitative/quantitative)
The hiring of a replacement interdisciplinary oceanography/geology instructor will ensure consistency and quality of instruction within the Oceanography and Geology Programs at Palomar College.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?
The Oceanography Program at Palomar alone offers enough classes to support 3 full-time oceanography instructors, and we are down to 2 (one of which also teaches other Earth Science disciplines). We need to hire an additional full-time interdisciplinary oceanography/geology instructor to replace Patty Deen, who retired in December, 2018. We also need to be compliant with state law, which specifies a full time to adjunct instructor ratio of 75/25% for classes taught in our discipline.

Expected Goal Completion Date
8/2/2021

Goal 2

Brief Description
Work with administration to initiate an official registration waitlist for Oceanography 100 Lab

Is this a new or existing goal?
Existing

Goal Status
Completed

How will you complete this goal?
Administration has told us that because Ocean 100 Lab has a prerequisite of enrollment in Ocean 100 Lecture, which must be verified by registration software, a waitlist cannot be generated. As sections fill before the beginning of the semester, potential students are not given the opportunity to be added to a waitlist, which gives students the false impression that the class in unavailable for them. Seats are only opened up as students drop in the pre-semester registration period. Only students who happen to check at the right time are able to register for the class. Students have complained about this and the college is no doubt losing student enrollments to what appears to be a simple, fixable software issue.

Outcome(s) expected (qualitative/quantitative)
If the registration software can be fixed, it will allow students to be on a waitlist for Ocean 100 Lab when the class fills; this will potentially increase enrollments in the lab class.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?
If we are interested in helping students graduate on time by getting the classes they need, then it seems strategically important to allow students to register for a waitlist when an Ocean 100 Lab class is full. This aligns with the department mission statement, the college strategic plan, and Guided Pathways.

Expected Goal Completion Date
6/1/2020

RESOURCES

Congratulations! You are nearing completion. In this section, you will consider the resources you need to implement your three-year program review plan and/or address any findings from your assessment of your discipline.

The section is organized into the following four parts:

PART 1: Staffing Needs (Faculty and Additional Staff)

PART 2: Budget Review

PART 3: Technology and Facilities Needs

PART 4: One Time Request for Other Needs (NonTechnology Equipment, Supplies, Operating Expenses, Travel)

PART 1: STAFFING NEEDS

Requests for faculty will follow the prioritization process currently in place in IPC, and the IPC SubCommittee. Requests for new staff positions will be prioritized at the division level and reviewed at Exec.

Are you requesting additional full-time faculty?
Yes

NOTE: If you are requesting full-time faculty, you must go back to the Labor Market section of the form to complete that section. It is required when requesting additional faculty positions.

REQUEST FOR ADDITIONAL FULL-TIME FACULTY

Faculty Request 1

Title of Full-Time Faculty position you are requesting
Interdisciplinary Oceanography/Geology Instructor

How will this faculty position help meet district (Guided Pathways, Strategic Enrollment Management etc.), department and/or discipline goals?

The success of district goals such as Guided Pathways and SEM rely on disciplines being able to provide excellence in learning opportunities (consistent standards/quality of instruction as well as curriculum development) which, in turn, leads to enhanced student retention and success. This, of course completely overlaps with discipline and department goals.

With the retirement of Patty Deen in December 2018 and Al Trujillo in May 2020, the Oceanography Program currently has one full-time faculty member, Lisa Yon. Lisa has 40% of her teaching load in oceanography and is responsible for coordinating OCN Lab schedules/activities and curriculum updates, including the update of the latest edition of the OCN 100 lab manual. However, Dr. Yon also oversees the Earth Science Program and has 60% of her teaching load in that discipline including being responsible for ES curriculum updates. As a result, 84% of the courses offered in oceanography are taught by part-time faculty. Currently, 100% of oceanography lectures and 50% of oceanography labs are taught by part-time faculty. The geology program also has only one full-time faculty member. Currently, 66% of the geology courses are taught by adjuncts. Thus, in order to maintain consistent standards/quality of instruction, considerable time is invested in the hiring, training, and evaluation part-time faculty who often go on to other jobs thus necessitating an on-going cycle of hiring, training, and evaluation. This is not an efficient way to maintain consistent standards/quality of instruction nor does it lend itself to maintaining acceptable levels of student retention and success.

District goals also include increasing student access to educational opportunities through increased offerings at satellite campuses. Beginning Fall 2018, offerings at the Rancho Bernardo Center included both an OCN lecture and lab. As there is no designated instructional support assistant at this satellite campus, the logistics of setting up labs and equipment fell to the discipline faculty. During the Fall 2018 semester, Lisa Yon spent over 20 hours setting up equipment/supplies at the Rancho Bernardo campus and meeting regularly with the part-time faculty teaching at the new campus to ensure a smooth transition. SEM goals important at the RB Center include recruitment/marketing (making students aware of the opportunities) and providing a positive classroom experience (via well-qualified faculty) with the goal of retention and success for enrolled students. A committed full-time faculty member would greatly assist in achieving this goal.

Is there a scarcity of qualified Part-Time Faculty (for example: Specialized degree/experience, emerging/rapidly changing technology, high demand)

Although our current part-time Faculty are talented instructors and show a dedication to the program, they are not a replacement for a full-time faculty member. Finding qualified part-time faculty who can teach according to designated course offerings is challenging; Lisa Yon has spent considerable time this past year reviewing applicant credentials for the part-time teaching pool in both Oceanography and Earth Science. Should an applicant be qualified, we still face challenges in scheduling due to the fact that part-time faculty fall into two categories:

- They teach for us in addition to holding a full-time job elsewhere and thus can only teach evening classes.
- They are part-time instructors at several regional colleges and thus we compete with other colleges for their hourly availability.

Currently two regional community colleges are in the process of hiring full-time replacements for their Oceanography faculty who retired within the last year. Three of our current part-time faculty have applied for these positions and we may be losing their talents as a result. A separate part-time faculty member has already informed us that they have accepted a full-time position elsewhere and will not be returning for any future teaching assignments.

Are you requesting this position for accreditation, regulatory, legislative, health and safety requirements? Please explain.
The passing of California AB 1725 set the goal of a 75:25 ratio requiring full-time faculty teach 75% of a college's offerings. In Oceanography, due to the nature of expanded teaching assignments in Earth Science and Geology, we have struggled to meet this goal. With the retirement of Patty Deen and Al Trujillo we will be looking at an average of less than 20% of Oceanography courses being taught by full-time faculty. Part-time faculty teach 100% of oceanography lectures and 50% of oceanography labs, figures that are far below goal set by AB 1725. Considering the academic role that Patty Deen served in Geology as well, the data provided by the College speaks volumes. Currently the average Full-time Equivalent Faculty in Oceanography (3.13 over six years) and Geology (1.40 over six years) indicates that typical course offerings require the equivalent of 4.5 full-time faculty members. We are clearly understaffed with only 2 full-time faculty members across both Oceanography and Geology disciplines and as the text of AB 1725 states "the quality, quantity and composition of full-time faculty have the most immediate and direct impact on the quality of instruction."

In addition to the legislative aspect, Oceanography and Geology disciplines have regularly collaborated in Regional Field Studies courses (GEOL 195), such as GEOL195B- Southern California Coast. Field courses are an essential part of any Geology Program and at Palomar College the Geology Program offers both an A.S. and A.S.-T in Geology. Participation in a Field Course is part of the graduation requirements for the A.S. degree. The nature of these field courses is such that they require two faculty members for logistical and safety reasons.

Logistics and safety also play a role in staffing of OCN 100 lab sections. With the retirement of Patty Deen and Al Trujillo, 50% of the lab offerings are now being taught by part-time faculty. Spring 2019 offerings necessitated the hiring of two new part-time faculty to teach OCN 100 lab sections. Considerable training time must be spent with these faculty to ensure proper set-up of labs (safety is a priority with labs such as Seawater Chemistry) and the logistics of field trips. About 25% of the lab meetings are field trips to regional coastal settings where students directly engage in observation of coastal processes, collect data for analysis, or learn about important topics such as mariculture or desalination. As part-time faculty members move on to new jobs, this again necessitates an on-going cycle of hiring, training, and evaluation. If the majority of teaching staff are associated with this "revolving door" scenario, the situation also places unreasonable demands on the program to maintain quality of instruction and to develop innovations in curriculum.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional career education needs for this discipline.
The Oceanography discipline has consisted of three full-time faculty since Fall 1997. Over time, however, the duties of the faculty have shifted in response to demand for increased offerings in specific Earth Science courses. Both Dr. Lisa Yon and Professor Patty Deen shifted 40-60% of their teaching load from Oceanography to Earth Science as well as to additional Geology courses including field courses. With the retirement of Professor Patty Deen in December 2018 and Al Trujillo in May 2020, there is a crucial need for a replacement full-time faculty member who can teach across Oceanography and Geology. Currently the average Full-time Equivalent Faculty in Oceanography (3.13 over six years) and Geology (1.40 over six years) indicates that typical course offerings require the equivalent of 4.5 full-time faculty members. Thus, we are understaffed with only 2 full-time faculty members across both Oceanography and Geology disciplines.

Clearly hiring a full-time faculty member to support the goals across the Oceanography and Geology disciplines will enhance productivity in areas such as curriculum management including evaluation of both course and program learning outcomes. In addition, full-time faculty will be more involved in student, department, and institutional activities thus enhancing not only productivity but also the efficiency of the programs and course offerings. Full-time faculty members provide essential stability for program planning and curriculum development. They also provide levels of availability that students need outside of the classroom, such as involvement in course advisement and extracurricular activities (Geoscience Connection club, Earth Science Week activities). In addition, effectively expanding the program (Oceanography/Geology/Earth Science) to satellite campuses such as Rancho Bernardo requires the attention of full-time faculty. If College/District plans include this goal, then support and allocation of resources must be provided for the hiring of a full-time faculty member as a replacement for a retired full-time faculty member.

Is your department affected by faculty on reassigned time. If so, please discuss.
Yes; Sean Figg (Geology) is currently serving as Department Chairperson.

In the last ten years, what is the net change in number of Staff in the department? (loss vs. gain)
-2

Are you requesting new Classified, CAST or AA positions?
No

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for 2018, 2019, 2020. Consider your three-year PRP plan.

Click on the link below to access directions to the *Available Budget Report* to complete this section.

How to Request the Available Budget Report

Reflecting on your three-year PRP plan, are there any budget considerations you would like your dean/supervisor to be aware of for the upcoming year?
No

NOTE: PARTS 3 and 4 – TECHNOLOGY, FACILITIES AND OTHER NEEDS

This year the College is implementing two new processes related to resource needs coming from the PRP process.

1. One-Time Fund Requests. The college is implementing a process for prioritizing and allocating funds for one-time needs/requests tied to Program Review and Planning. Prioritization will take place through participatory governance in planning councils and the Budget Committee. Then, a recommendation will be made to Exec for funding of request utilizing various funding sources.

   For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES.

   Consider submitting one-time requests only if you have verified that you cannot fund the request using your general discretionary funds or other funds.

2. Technology and Facilities Review. From now on, ALL requests for technology will go through an institutional review process. If you request technology here, you will see a description of the process below.

PART 3: TECHNOLOGY AND FACILITIES NEEDS

Will you be requesting any technology (hardware/software) this upcoming year?
No

Do you have resource needs that require physical space or modification to physical space?
No

PART 4: OTHER ONE-TIME NEEDS

For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES. Please check with your department chair on the availability for this cycle.

Do you have one-time requests for other items (e.g., Non-Technology Equipment, Supplies, Operating Expenses, Travel) that your budget or other funding sources will NOT cover?
No

I confirm that the Program Review is complete and ready to be submitted.
Yes

Enter your email address to receive a copy of the PRP to keep for your records.
Lyon@palomar.edu

Review

Chair Review

Chair Comments

Chair Name
Sean Figg

Chair Sign Date
10/27/2020

Dean Review

Strengths and successes of the discipline as evidenced by the data and analysis:
The program had made wonderful contributions to outreach efforts and shows increasing success, retention, and enrollment rates over time. The program has also supported the expansion of course offerings to the colleges centers in an effort to expand access and increase interest.

Areas of Concern, if any:
For both the earth science and oceanography programs, the loss of two faculty from retirements will pose challenges to the sustainability of the program, especially when the program is attempting to expand to other college locations.

Recommendations for improvement:
Similar to the earth science program, I would recommend that the program find mechanisms by which it can further evaluate self reported data.

Dean Name
Patricia Menchaca

Dean Sign Date
11/4/2020

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:
strong retention rates; good collaboration with FT and PT on discussing SLOs

Areas of Concern, if any:
1. continue to stretch that course success rate
2. no WBL

Recommendations for improvement:
1. Is a best practice being applied to all sections when identified through assessment discussion?
2. Meet with dean and Nichol Roe to discuss WBL and Career Continuum and the support it may provide to your program and students.
3. Work with dean to bring Goal #2 conversation to VPI for 1:1. Agreed that this needs to be addressed.

Vice President Name
Shayla Sivert

Vice President Sign Date
1/3/2021