2022-23 Instructional Program Review and Planning

OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review and Planning is about evaluating and assessing programs and documenting plans for improving student success rates. Through review of and reflection on key program elements, Program Review and Planning identifies program strengths and strategies necessary to improve the academic discipline, program, and/or services to support student success.

The College also uses Program Review and Planning as the conduit to request resources (human, technology, facilities and funding) to further help improve and support programs.

BASIC PROGRAM INFORMATION

Academic Year

2022-23

Are you completing a comprehensive or annual PRP?

Annual

Division Name

Mathematics, Science and Engineering

Department Name

Earth, Space, and Environmental Sciences

Choose your department. If you don't see it, you may add it by typing it in the box.

Discipline Name

Oceanography (OCN)

Choose your discipline. If you don't see it, you may add it by typing it in the box.

Department Chair Name

Catherine Jain

Department Chair email

cjain@palomar.edu

Please list the names and positions of everyone who helped to complete this document.

Nina Shmorhun (Professor, Oceanography & Geology)
Sean Figg (Professor, Geology)

Website address for your discipline

https://www.palomar.edu/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?
○ Yes ⊙ No

Are any of your programs TOP coded as vocational (CTE/CE)?
○ Yes ⊙ No

BASIC PROGRAM NFORMATION: FACULTY AND STAFFING RESOURCES

In this section, you will identify how many faculty and staff support your discipline's programs. This information is considered when you request permanent staff and faculty hires. It is also useful as you evaluate your program and the human resources and talent you have to support our students.

To help you answer questions in this section, you will need the links shown in red.

Enter the number of permanent or full-time faculty support your discipline (program)?

1

Enter a number.

Link: [Permanent Faculty and Staff Count](#)

For this past fall semester, what was your Full-time FTEF assigned to teach classes?

0.60

Link: [FTEF Data](#)

For this past fall semester, what was your Part-time FTEF assigned to teach classes? (Part-time FTEF = PT hourly and overload.)

1.60

Link: [FTEF Data](#)

List the classified and other permanent staff positions that support this discipline. If possible, include number of months and percentage workload.

Abigail Corona, Academic Department Assistant, 6.67%
Tony Kopec, Instructional Support Assistant IV, 2%

Link: [Permanent Faculty and Staff Count](#)

List additional hourly staff that support this discipline and/or department. Include weekly hours.

None

PROGRAM INFORMATION

In this section, you are asked to consider and evaluate your programs, including their program 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](). 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 discipline: Oceanography 100 (lecture) and Oceanography 100L (lab). As a discipline, Oceanography lecture/lab course may be used to satisfy Associate Degree General Education requirements Area B (Natural Sciences), as well as CSU-GE Area B (Scientific Inquiry and Quantitative Reasoning) transfer requirements or IGETC Area 5 (Physical Science) transfer requirements.   Oceanography discipline learning outcomes align with transfer expectations, workforce development, and associate degree completion, driven by the belief that students should be provided (and have access to) with a well-rounded and interdisciplinary education, regardless of their chosen course of study. This aligns with Palomar College's Mission Statement--to prepare students to engage locally and globally.   Throughout the Oceanography discipline, students are encouraged to diversify their skillset, engage with the material outside the classroom, and challenge themselves to think thoughtfully and critically.

Program Information Summary

In this section you are asked to evaluate your programs by considering their program learning outcome assessments, the annual number of completions, goals for completions, enrollment and efficiency trends and any other internal or external factors that had an impact on your program.

What factors have contributed to the success of your program(s)? Describe how they have contributed.

Oceanography is a dual course (OCN 100 lecture and lab) discipline (not a program) thus there are no program learning
outcome assessments.

OCN 100 lecture and laboratory remain a popular course in the Department of ESES because it is a highly sought after course to fulfill a science requirement. Long-term success of the OCN discipline can be attributed to the hiring of a new full-time faculty member, and 3 dedicated part-time faculty members. The newly hired full-time faculty member brings in thoughtful and engaging curriculum to amplify the ongoing OCN discipline.

What factors have presented challenges for your program(s)? Describe the impact of these challenges.

Probably the biggest challenge to the OCN discipline at this point is the loss of full-time faculty to retirements: Patricia
Deen (Dec. 2018), Al Trujillo (May 2020), and Lisa Yon (June 2022). One full-time position was filled in August of 2022, with the hiring of Nina Shmorhun. Currently, 50% of OCN courses are taught by part-time faculty. However, their availability is dependent on their teaching loads at other colleges.

Maintaining the quality of the OCN 100 lecture and lab courses will continue to be a challenge for a single full-time faculty member until a new full-time faculty member is hired to help off-set the loss created by the three retirements. Hiring a full-time faculty member will also help to bring the College in compliance with AB1725.

COURSE INFORMATION

In this section, you will review how students perform in the courses you offer as part of your program. The Chancellor's Office Vision for Success goals focus on eliminating equity gaps and increasing timely completions. Examining, reflecting upon, and developing strategies to improve course success rates is one way to help the college meet its Vision for Success Goals and support our students in reaching theirs.

Data are provided to help you examine differences in course success rates (C or better) across student demographic categories (e.g., gender) and course type (e.g., face-to-face, online).

After you complete your review of course success data, you are asked about the assessment of student learning outcomes at the course level, progress you have made in these assessments, and changes you have implemented as a result.

COURSE SUCCESS AND RETENTION

ACCJC also requires that colleges establish institutional and program level standards and stretch goals for course success rates.

Program-set standards for course success rates represent the lowest success rate deemed acceptable by your discipline. 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. The College's institution-set standard for course success rates is 70%

Program-set stretch goals for course success rates represent the success rates you aspire your students to achieve.

The data includes overall success (% C or better) and retention rates (% No Ws) . The data tables include course 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/)

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

70.0%

The College's institutional standard for course success rate is 70%.To access college success rates. Click on the link below.

Link: Course Success Rate Information

UPDATE 9/26/2022: The Course data links are under construction and will be operational shortly. This note will be removed when then link becomes functional again. Apologies for the inconvenience.

Why did you choose this standard?

The standard for course success rate of 70% was chosen because it is the goal for the Department of ESES and Palomar College's institutional standard.

What is your stretch goal for course success rates?

76.0%

How did you decide upon the goal?

Looking at the Course Success Rate Information Data, we believe that a 76% course success rate is attainable with our current retention rate data.

In addition, we have implemented a new full-time faculty member, a new laboratory manual (LTC), and the restarting of the OCN Lab at the Rancho Bernardo Education Center.

COURSE STUDENT LEARNING OUTCOMES (SLOs)

Summarize the major findings of your course level student learning outcomes assessments.

Students are able to successfully pass the course assessments with success rates averaging at or above the minimum
assessment pass rate of 70%. This means that for both OCN 100 Lecture and OCN 100 Lab, the assessments are
being met. After the assessment results have been compiled, the OCN instructors meet to brainstorm best practices, share proven strategies for retention and engagement, and consider discipline-wide changes about classroom 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.

Course level SLOs can be accessed through Nuventive Improve

Excluding courses that haven't been offered in the last three years, do you confirm that all of your courses have been assessed in the last three years.

⊙ Yes ○ No

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 O*net Link below) Are there any new or emerging careers? If so, how would the new or emerging careers impact your future planning?

Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary

Atmospheric and Space Scientists

Geoscientists, Except Hydrologists and Geographers

Life, Physical, and Social Science Technicians, All Other

Geological Technicians, except Hydrologic Technicians

For San Diego specifically, the region is designated as a "Blue Tech" or Ocean Tech cluster. Blue Tech jobs include

technologically advanced activities and methods used to solve water-related issues as well as traditional maritime jobs.

Students interested in pursuing a Blue Tech career would be encouraged to pursue coursework in additional science-related fields (e.g., computer science, cybersecurity).

Link: https://www.onetonline.org/

What are the associated knowledge, skills, abilities (KSA's) needed for the occupations listed above? (click examples in the link above to get ideas)

The KSAs needed for employment in any of the above fields align with introductory 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.S. 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/skills to enable them to continue their education at other 4-year institutions or enter into the workforce. 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?
○ Yes ⊙ No

Do you want more information about or need assistance integrating work-based learning into your program?
○ Yes ⊙ 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 College's Women in STEM, Palomar's, meetings with local high school counselors, on-campus/off-campus demonstrations, and other off-campus events such as research presentations at Scripps Institute of Oceanography, and working partnerships with San Diego-based non-profit organizations.

For example: regular meetings with community partners, connections with local High Schools, dual enrollment, Universities, business partnerships, Palomar events (i.e.Tarde de Famiila, House of Humanities), and/or community groups (i.e. chamber, associations, non-profits.

PROGRAM GOALS

Progress on Prior PRP Goals

In the most recent PRP cycle, you identied a set of goals Provide an update to your most recent PRP goals.

Click here for previous PRPs with goal information.

Prior PRP Goals

Goal 1

Brief Description

Hire a new full-time interdisciplinary oceanography/geology instructor.

Goal Status
⊙ Completed ○ Ongoing ○ No longer a goal

Add any comments related to your work on prior goal (e.g., success, challenges, reasons for eliminating a goal). Describe Outcomes, if any.

A new full-time oceanography/geology faculty member was hired in August 2022 (Nina Shmorhun). Even though 1 full-time oceanographer was hired, another full-time oceanographer is needed to fill the loss of 3 full-time faculty members since 2018.

Goal 2

Brief Description

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

Goal Status
⊙ Completed ○ Ongoing ○ No longer a goal

Add any comments related to your work on prior goal (e.g., success, challenges, reasons for eliminating a goal). Describe Outcomes, if any.

OCN 100 Lab students are able to be added to the waitlist upon registration into the course. As a result, enrollment numbers have increased.

The Strategic Plan 2022 includes the College's Vision for Success (VfS) outcomes. Review the VfS goals and reflect on how your unit supports these outcomes. Identify one strategy your unit will implement to help the college meet these outcomes.

Increase OCN lecture and laboratory enrollment rates. This aligns with Goals 1 and 2 of Palomar College's Strategic Plan 2022. OCN Faculty are hoping to increase DEIAA and community partnerships/outreach. This aligns with goal 3 of the 2022 Strategic Plan.

Click here to access the Strategic Plan 2022.

Describe any changes to your goals or three-year plan as a result of this annual update.

With the turnover in OCN full-time faculty, the discipline is working on establishing new goals to help outline the direction of the OCN discipline.

Additionally, new full-time faculty member are working with the Department to align goals and implement new goals to assess discipline needs.

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 five parts:

PART 1: Staffing Needs (Faculty and Additional Staff)

PART 2: Budget Review

PART 3: Technology Needs

PART 4: Facilities Needs

PART 5: One Time Request for Other Needs (NonTechnology Equipment, Supplies, Operating Expenses, Travel)

Reflect upon the three year plan you created above, your current operations, and any upcoming factors (retirements, changes in legislation, and changes in policies or procedures) that will impact your unit. How will you allocate resources to implement your plan? Describe additional resources needed to improve the effectiveness of your unit/program. All resource requests must be aligned with the College's Strategic Plan 2022.

Summarize any reallocation/re-organization of resources you are making based upon your three-year plan, your current operations, and any other factors (e.g., legislation). Describe the impact of the reallocation of

resources to your unit.

NOTE: All requests listed in the PRP will be reviewed by deans and supervisors, then forwarded to the appropriate review group for prioritization. A resource requests approved to move forward in the review process does NOT guarantee a position or funding.

PART 1: STAFFING NEEDS

Requests for faculty will follow the prioritization process currently in place in the Faculty Position Prioritization committee, which reports to the Education, Equity, and Student Success Council. Requests for new staff positions will be prioritized at the division level and reviewed at Exec.

Are you requestiong additional full-time faculty?
⦿ Yes ○ No

REQUEST FOR ADDITIONAL FULL-TIME FACULTY

Faculty Request 1

Title of Full-Time Faculty position you are requesting

Assistant Professor of Geology and Oceanography (Earth Science)

How will this faculty position help meet district (Guided Pathways, Strategic Plan, Strategic Enrollment Management etc.), department and/or discipline goals? Please be sure to tie this back to your PRP goals and three year plan.

The success of district goals such as Guided Pathways and SEM relies on disciplines providing excellence in learning opportunities (consistent standards/quality of instruction as well as curriculum development) which, in turn, leads to enhanced student retention and success.

Between 2018 and 2022, the Oceanography discipline lost all three full-time faculty to retirement. Only one of those positions was replaced with the hire of Nina Shmorhun, who started in August 2022. Hiring another full-time faculty member remains a priority and PRP goal. Currently, 50% of Oceanography 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 of part-time faculty who often go on to other jobs, thus necessitating an ongoing 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 student retention and success levels.

District goals also include increasing student access to educational opportunities through increased offerings at satellite campuses. Oceanography expanded lecture and lab offerings to the Rancho Bernardo Center (RBEC) in 2018. During the COVID-19 pandemic, these classes were taught online. Most of the lab materials require updating with the continuation of face-to-face instruction. 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. The current full-time oceanographer meets regularly with the part-time faculty teaching at RBEC to evaluate and update lab materials.

In addition, geology is preparing to expand to the Fallbrook Education center. There are two full-time faculty members across the geology and oceanography disciplines. Nina Shmorhun was hired to teach oceanography along with some geology courses. We are understaffed full-time and part-time instructors, resulting in Nina being 100% FTEF in oceanography. With the increase in online geology sections and the planned expansion to Fallbrook, an additional full-time faculty is needed to support the oceanography discipline.

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.

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.

There were three, full-time oceanographer positions open last year; the part-time pool has significantly dropped with the recent hiring and turnover at other colleges. As a result, e are not seeing the same number of part-time applicants at Palomar College as we have in the past.

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, Al Trujillo, and Lisa Yon, 50% of Oceanography courses are taught by full-time faculty. Part-time faculty teach 67% of oceanography lectures and 33% of oceanography labs, figures that are far below goal set by AB 1725.
Considering the academic role that Nina Shmorhun served in Geology, her current full-time position (teaching 100% Oceanography courses in Fall 2022) significantly reduced the part-time pool for Oceanography and Geology, as part-time instructors (Sara Beck) also teach in the Geology program.

We are 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. Currently both full-time Oceanography and Geology instructors (Nina Shmorhun and Sean Figg) co-lead the Spring field course.

Logistics and safety also play a role in staffing of OCN 100 lab sections. With the retirement of Patty Deen, Al
Trujillo, and Lisa Yon, 50% of the lab offerings are gone. In the past, six OCN 100 Lab sections were available, now there are only three OCN 100 Lab sections.

With the retirement of Lisa Yon, a new OCN laboratory was implemented (ZTC) by Nina Shmorhun, but considerable training time must be spent with part-time faculty to ensure proper set-up of labs (safety is a priority with labs such as Seawater Chemistry) and the logistics of field trips. As part-time faculty members move on to new jobs, this again necessitates an on-going cycle of hiring, training, and evaluation; this 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. With the retirement of Professor Patty Deen in December 2018, Al Trujillo in May 2020, and Lisa Yon in June 2022, there was a crucial need for a replacement full-time faculty member who can teach across Oceanography and Geology disciplines. A new full-time faculty member was hired in August 2022 (Nina Shmorhun) to teach across the Oceanography and Geology disciplines. However, with the lack of Oceanography instructors and demand for course offerings, Nina Shmorhun is 100% FTE in Oceanography and unable to teach Geology courses until there are more faculty.

Thus, we are understaffed with only 2 full-time faculty members across both Oceanography and Geology disciplines.
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 Education Center, 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.

Refer to data and other analysis earlier in this document.

Is your department affected by faculty on reassigned time? If so, please discuss.

No.

Are you requesting AA, CAST for Classified Staff?
○ Yes ⊙ No

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for fiscal year 2019, 2020, 2021. 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 budet considerations you would like your dean/supervisor to be aware of for the upcoming year?

○ Yes ⊙ No

PARTS 3, 4 and 5 – TECHNOLOGY, FACILITIES AND OTHER NEEDS

1. One-Time Fund Requests. Through the PRP process the college implements an approach for prioritizing ad allocating one-time needs/requests. Prioritization takes place through the appropriate groups, leadership, and the Budget Committee. The executive team and Resource Allocation Committee consider various sources for funding PRP requests. Resource requests also inform the larger planning process like Scheduled Maintenance Plans, Staffing Plans, and institutional strategic planning.

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

If you are a CTE program and think you may qualify for CTE funds for your PRP request(s), you are STRONGLY encouraged to answer the call for Perkins/Strong Workforce grant applications in February. Contact the Dean of CTEE for additional information.

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. Requests for technology and facilities are assessed by the Deans and then, if appropriate forwarded to the proper institutional group (e.g., technology review committee, or facilities) for review and feedback.

PART 3: TECHNOLOGY NEEDS

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

PART 4: FACILITIES REQUESTS

Do you have resource needs that require physical space or modification to physical space?
○ Yes ⊙ No
Please include only those facilities requests that could be accomplished within a one-year time frame and/or under a $75,000 estimated amount. Other facilities needs, such as buildings or remodels, should come through the long-range facilities planning process.

PART 5: 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?
⊙ Yes ○ No

Requests

Item 1

What are you requesting?

Purchase Oceanography equipment for Oceanography lecture and laboratory courses:

1) Water Wave Channel Tank
2) Digital Microscope
3) Seafloor Simulation Kits
4) Glassware

The above list, while not exhaustive, addresses the immediate needs of the Oceanography discipline.

Provide a detailed description of the the request. Inlude in your response:

a. Description of the need? (e.g., SLO/SAO Assessment, PRP data analysis)

Update Oceanography equipment, supplies, and materials for Oceanography lecture and laboratory courses.

With the hiring of a new full-time faculty member, new supplies need to be purchased to replace outdated materials. Equipment and supplies have not been updated in over a decade. Additionally, there are insufficient equipment and materials to cover the amount of students for each course. For example, lack of digital microscopes limit ability of faculty to project marine sediments and microorganisms to students; students are limited to photos.

The purchase of a water wave channel tank allows for a deeper dive into ocean wave and current propagation. Currently, students are limited to studying aforementioned processes by videos, animations, or 2-D images. The purchase of a wave tank, and other requested materials, would allow for faculty members to dive deeper, and provide a hands-on approach, to complex concepts taught in Oceanography courses.

b. Who will be impacted by its implementation? (e.g., individual, groups, members of department)

Students, members of department, and community will be positively impacted by implementation.

Students will be most impacted as they will directly be able to use newly purchased supplies in Lecture and Laboratory courses.

c. What are the expected outcomes or impacts or implementation?

Student Impact: increased participation in Oceanography discipline, further engagement of students with course materials, diversify student opportunities in the classroom, implement strategies to address students unique learning needs, increase access to discipline, increased creativity in STEM teaching practices.

Community Impact: increased Oceanography participation in the community (e.g., portability of materials allows for use at off-campus recruitment events).

Faculty Impact: Materials aid in completion of course student learning outcomes (SLO's), hands-on approach to student learning, can be used across classrooms (e.g., easily moved from NS-131 to NS-136 for teaching purposes), adapted across disciplines (e.g., can be used in Geology courses).

d. Timeline of implementation

Purchase by Fall 2023 with plan to implement equipment, supplies, and materials for Oceanography courses by Fall 2023.

What is the anticipated cost for this request? If any, list ongoing costs for the request (additional equipment, support, maintenance, etc.).

Water Wave Channel Tank ($3,500); Seafloor Simulation Kit ($175 each/5 requested); Glassware ($1,000); Projection microscope ($1,500)

Do you already have a budget for this request?

No

What PRP plan goal/objective does this request align with?

The purchase of new materials align with ESES Department and Oceanography discipline goals. Additionally, they align with Palomar College's Strategic Plan.

What Strategic Plan 2022 Goal/Objective does this request align with?

☐ 1:1	☐ 1:2	☑ 1:3	☐ 1:4
☑ 1:5	☐ 2:1	☑ 2:2	☑ 2:3
☑ 2:4	☐ 3:1	☐ 3:2	☐ 3:3
☑ 3:4	☐ 3:5	☐ 4:1	☐ 4:2
☑ 4:3	☐ 5:1	☐ 5:2	

Refer to the Palomar College [STRATEGIC PLAN 2022](#)

If you have multiple requests for facilities and had to prioritize, what number would you give this? (1 = Highest)

1

What impacts will this request have on the facilities/institution (e.g.,water/electrical/ADA compliance, changes to a facility)?

No direct impacts.

Will you accept partial funding?
⊙ Yes ○ No

Budget Category

Non-technology Equipment (acct 600010 and per unit cost is >$500)

Please upload a copy of the quote, if available.
Water Wave Channel Tank.pdf

Seafloor Simulation Kit.pdf

Digital Stereomicroscope.pdf

Digital Microscope.pdf

☑ **I confirm that all full-time faculty in this discipline have reviewed the PRP. The form is complete and ready to be submitted.**

Enter your email address to receive a copy of the PRP to keep for your records.

nshmorhun@palomar.edu