Entry #: 31 - Mathematics, Science and Engineering **Status:** Submitted **Submitted:** 4/1/2024 2:01 PM

DRAFT

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.

ALL PROGRAMS WILL COMPLETE AN ANNUAL PROGRAM REVIEW FOR 2023-2024.

BASIC PROGRAM INFORMATION

Division Name
Mathematics, Science and Engineering

Department Name
Biology

Microsoft_List_ID

Discipline Name
Biology (BIOL)

Department Chair Name
Kimberly Velazquez

Department Chair email
kvelazquez@palomar.edu

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

Elizabeth Pearson: Professor
Sara Krause: Professor
Gene Gushansky: Professor
Parag Chowdhury: Professor
Richard Albistegui-Dubois: Professor
Michael Deal: Professor
Cory Lindsay: Professor
Krystal Rypien: Professor
Lesley Blanship-Williams: Professor
Matthew Doherty: Professor
Elise Lindgren: Professor
Steven King: ISA IV
Lilia Vega: ISA IV
Diep Vu: ISA IV
Christina Fuller: ISA IV

Website address for your discipline
https://www.palomar.edu/lifescience/

Discipline Mission statement

The mission of the Biology Department is to provide students with a foundation in biology that will allow them to understand and appreciate the natural world around them, think critically about biological issues, and make informed personal and societal decisions based on this knowledge. In this preparation, we are committed to providing hands-on opportunities to students so they can apply their knowledge and build written and oral communication skills to express critical thinking. We intend to make students aware of the diverse disciplines within the biological sciences, how these disciplines are interrelated, and the problems and opportunities unique to each discipline. We aim to prepare our majors students for transfer to a 4-year university programs and/or employment in various biology-related areas by educating them in the fundamental concepts, knowledge, and laboratory/ field techniques and skills used the life sciences. In addition, the department offers courses designed to prepare pre-health professional students for a variety of 2-year and 4-year allied health programs.

(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

Are any of your programs TOP coded as vocational (CTE/ CE)?

No

List all degrees and certificates offered within this discipline.

Biology AS-T
Biology Preprofessional (AS, CA)
Biology Pre-Allied Health (AS, CA)

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)?

13

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

9.4

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

22.6

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

Yesenia Zermeno-Gamble: ADA, 100%
Steven King: ISA IV, 100%
Lilia Vega: ISA IV, 100%
Diep Vu: ISA IV, 100%
Christina Fuller: ISA IV, 100%
Vacant Position: ISA IV, 100%

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

Part-time hourly workers, total hours: 70 per week

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 to confirm that you have assessed each course SLO within the past three years.

Link: Course Data

COURSE SUCCESS AND RETENTION

Have your overall course success rates increased, decreased, or stayed the same over the last 5 years?

Increased

Was this expected? Please explain.

Our course success rate increased from 66.8% in Fall 2019 to 73.1% in Fall 2023, a 6.3% increase. This was unexpected since students seemed to struggle during the online COVID instructional format and since returning to face-to-face classes.

Have your overall course retention rates increased, decreased, or stayed the same over the last 5 years?

Increased

Was this expected? Please explain.

Our course retention rate increased from 88.1% in Fall 2019 to 91.2% in Fall 2023, a 3.1% increase. This was unexpected since students seemed to struggle during the online COVID instructional format and since returning to face-to-face classes. It is noteworthy that there was a dip in retention in Fall 2020 to 82.8%, an all-time low for our department.

Are there differences in success or retention rates in the following groups? (choose all that apply)

Ethnicity

Ethnicity: What did you find and why do you think ethnicity differences exist? What do you need to help close the gap?

Success rates in Fall 2023: Hispanic students: 66%, Black students: 68%, White students 81%, Asian students 84%. This is a significant gap between Hispanic and Black students compared with White and Asian students. Success rates did increase for Hispanic students from 57.8% in Fall 2019 to 65.6% in Fall 2023 (+7.8%), and increased for Black students from 49.2% in Fall 2019 to 67.7% in Fall 2023 (+18.5%). While the upward trend is encouraging, much more needs to be done to close this achievement gap. Incorporating DEIAA into our Course Outlines of Record and course curricula is urgently important. We also need additional tutoring resources for the at-risk students, including Supplemental Instruction.

Please share methods that your department is using to improve retention and success rates in your courses. If you are focusing on a specific group like online students or a demographic group please include that information in your answer.

Faculty are holding open labs on Fridays to allow students opportunities to come study together with an instructor available to guide them and answer questions.

COURSE STUDENT LEARNING OUTCOMES (SLOs)

Excluding courses that haven't been offered in the last three years, do you confirm that all of your courses have been assessed since August 2020 (Result Summary Date)?

Yes

Upload a copy of your SLO report from Nuventive ("Report 0. Last Result Date and Action Date for All Active Course Outcomes")

2. Last Result, Action, and Follow-up Date for Each Active Course Outcome.xls
14.5 KB

PROGRAM INFORMATION

In this section, you are asked to consider and evaluate your programs, including the annual number of completions, and their program learning outcomes,

PROGRAM COMPLETIONS

Student success is at the core of what we do in assisting students in achieving their goals.

The Chancellor's Office Vision for Success stresses the importance of Program Completion as a major goal for our students. In addition, transfer and career readiness are key components of Palomar College's mission statement.

Link: Program Completions

Access the link above titled "Progam Completions" and copy and paste five years of completion data for each of your discipline's degrees and certificates.

AA/AS 2017-18 2018-19 2019-20 2020-21 2021-22
Associate in Science Degree 2 5 1 4 2
Associate in Science Degree for Transfer 9 27 41 53 45
AA/AS Total 11 32 42 57 47

Certificates of Achievement 2 7 1 5 4

Total Degrees & Certificates 13 39 43 62 51

PROGRAM LEARNING OUTCOMES

Do you confirm that all of your programs have been assessed since August 2020 (Result Summary Date)?

Yes

Upload a copy of your SLO report from Nuventive ("Report 2. Last result, action, and follow-up date for each active program outcome").

1. Most Recent Results, Actions, and Follow-up for Program Outcomes by Assessment Method.xls
6.5 KB

Program Review Reflection and Summary

In this section you are asked to evaluate your programs by considering their program learning outcome assessments, the annual number of completions, 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.

The commitment of our faculty and Instructional Support Assistants to student success is the biggest factor in the 6.3% increase in course success rate and 3.1% increase in course retention rate.

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

We have not had an Instructional Support Assistant at the Rancho Bernardo Education Center for over a year, and this has affected the success of our courses on that campus. Important labs had to be canceled when materials were not available for instructors and students. We have also had several part-time faculty who were not teaching at an acceptable level, and this was affecting the success rate of students in their courses.

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.

The following websites are for CTE related data:

- Centers of Excellence (many other data resources besides supply and demand) Password: GetLMI
- LaunchBoard
- LaunchBoard Resource Library
- Chancellor's Office Data Mart
- Career Coach-San Diego Workforce Partnership
- EDD Labor Market Info
- Career One Stop

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?

Biology encompasses a diverse range of disciplines and careers. Most of our biology majors have the goal of pursuing medical careers, biomedical research, biotechnology or careers related to zoology, botany or ecology. Unfortunately, there are few job opportunities for biology majors with an AS degree, outside of some low-paying and often temporary positions. Most biology majors need at least a baccalaureate degree, and most likely a graduate or professional degree to achieve their professional goals. Our biology curriculum for majors is aimed at preparing students for successful transfers to 4-year universities, and not for directly entering a career after completing courses at Palomar College. For the pre-allied health program, the most common careers pursued are nursing (levels from CNA to nurse practitioner), physical therapy, occupational therapy, dental assistants and hygienists. Most of these are existing careers within allied health fields. While there do seem to be some emerging careers in the O*NET database associated with allied health, these are more technician/vocational, and are not aligned with our pre-allied health program. Given the large demand for pre-allied health classes (e.g. BIOL 210, 211, 212), we do not see a need to realign our program to accommodate emerging careers.

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

Skills: Strong oral and written communication skills, organizational skills, critical thinking skills, laboratory and field research skills, quantitative skills, basic computer skills (e.g. spreadsheet and databases) and applying scientific methodologies to solve problems.

Knowledge: Basic knowledge of biology, including knowledge of organizational levels, characteristics of life; chemistry, biochemistry, metabolism, genetics, evolution, biodiversity and modern biological laboratory and field research technique. Many careers in biology are highly interdisciplinary, so students benefit by having a broad range of knowledge outside of biology, including but not limited to computer science, math, chemistry, physics, and government regulations.

Abilities: Apply biological knowledge and scientific methodologies to answer questions, collect, analyze, and present data orally and in written form, apply critical thinking and quantitative skills to solve problems, and to be an independent learner and to work both independently and collaboratively.

How does your program help students build these KSA's?

For skills and abilities, all of our courses require students to write, to think critically, to use scientific methodologies, to develop laboratory skills, to collect and analyze data, to use quantitative methods, to work alone and in groups, and to demonstrate an understanding and application of biological information.

For knowledge, the CORs for most of our courses require a basic knowledge of biological concepts, including knowledge of organizational levels, characteristics of life, chemistry, biochemistry, metabolism, genetics, evolution, biodiversity and basic biological laboratory techniques.

Hopefully, by continuing to work on SLOs we can better assess how successful students are at acquiring these KSAs. These KSAs are woven into our biology curricula and are fundamental parts of our courses.

Computers and Electronics appear as a KSA for these professions. Our programs do not have an explicit requirement for any programming or technical classes, though our lab work involves the use of computers for data analysis and report preparation. While in theory it might be good to include such a requirement, we cannot do so for the AS-T program (the curriculum is dictated elsewhere) and do not have enough room in terms of required units for the preprofessional program.

One of our main goals in stressing these KSAs is to successfully prepare students for transfer to a university program or a professional program.

The following four questions are for CTE programs only. If you are not a CTE program, please go back to the BASIC INFORMATION tab and select "no" for "Are any of your programs TOP coded as vocational (CTE/CE)?"

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

Prior Year PRP Goal 1

Brief Description

Capture more completions for pre-nursing students.

Goal Status

Ongoing

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

Prior Year PRP Goal 2

Brief Description

Re-evaluate course and program SLOs.

Goal Status

Ongoing

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

Prior Year PRP Goal 3

Brief Description

Align programs with local institutional requirements.

Goal Status

Ongoing

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

Prior Year PRP Goal 4

Brief Description

Increase and improve course offerings at north and south centers.

Goal Status

Ongoing

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

Prior Year PRP Goal 5

Brief Description

Modernize teaching technology.

Goal Status

Ongoing

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

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

Do you have any new goals you would like to add?

No

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 Vision Plan 2035.

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 requesting additional full-time faculty?

No

REQUEST FOR ADDITIONAL FULL-TIME FACULTY

Faculty Request 1

Title of Full-Time Faculty position you are requesting

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.

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

Are you requesting this position for accreditation, regulatory, legislative, health and safety requirements? Please explain.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional career education needs for this discipline.

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

Are you requesting AA, CAST for Classified Staff?

Yes

REQUEST FOR ADDITIONAL CLASSIFIED, CAST, AA

Staff, CAST, AA request 1

This year, units are asked to identify new positions only as part of the PRP process. Vacant positions will be addressed outside of the PRP process.

If you are requesting STAFF, please fully complete this section. If not, you can skip to the next resource section. Click "+Add Staff, CAST, AA request" below for each additional request.

When considering the funds required for a position, consult the HR website for position salary schedule and the Benefits Worksheet for additional costs related to benefits for the position.

Title of new position

Instructional Support Assistant IV

Is the position request for AA, CAST, or Classified staff?

Classified

Is this request for a full-time or part-time position?

Full Time

How does the position fill a critical need for current, future, or critical operations?(e.g. accreditation, health and safety, regulatory, legal mandates, institutional priorities, program trend analyses of growth/stability.)

As enrollments in biology courses at the education centers continues to increase, we would like to offer additional sections of courses and even expand our course offerings to include majors-level biology courses. An additional ISA IV is needed to meet the lab prep needs of these courses.

Does the position assist in establishing more efficient District operations through either of the following: reorganization/restructuring OR use of technology?

Is there funding that can help support the position outside of general funds?

No

Describe how this position helps implement or support your three-year PRP plan.

We conducted a survey of students in the majors-level courses at the main campus in Spring 23 and Fall 23, and 74% of students said they would have taken BIOL 200 and BIOL 201 at the Rancho Bernardo Education Center if these courses were available at that campus.

Goal 3.1: Meet enrollment goals by attracting new students and increasing the persistence of our current students.
Goal 5.1: Grow and maintain enrollment at the education centers to meet Full-Time Equivalent Student (FTES) goals and establish center status.
Goal 5.2: Invest in staffing and infrastructure to ensure students at all Palomar educational sites experience comprehensive and equitable support and services.
Goal 5.3: Develop anchor programs at each education center to meet community needs and establish the site's unique identity.

Educational Vision Plan 2035 Objective

3:1 5:1 5:2 5:3

If the position is not moved forward for prioritization, how will you address this need?

Without an additional ISA IV position we will not be able to offer majors-level biology courses at the education centers.

PART 2: BUDGET REVIEW

Request that your ADA provide you with your *Available Budget Report* and complete this section.

Review your recent Budget/Expenditure reports and consider your three-year PRP plan.

Do you have any ongoing needs or needs to augment your regular budget?

Yes

What budget considerations would you like your dean/supervisor to be aware of or to consider? Describe the need and the amount of the adjustment.

As course sections have been expanded at the education centers the need for additional lab equipment and materials has increased. In addition, we need hourly workers at the centers to assist with lab prep.

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.

1. 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

Technology Request

Technology Request 1

What are you requesting?

Set of classroom laptops and cart for Biology 200 students (30 total laptops plus cart)

Is this a request to replace technology or is it a request for new technology?

New Technology

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

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

Biology majors in BIOL 200 must use laptops to complete experiments and other lab assignments during class. Oxygen and carbon dioxide sensors, plus other lab equipment, require laptop computers to transmit data.

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

Students in Biology 200

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

Biology majors in BIOL 200 will be able use laptops to complete experiments and other lab assignments during class. Oxygen and carbon dioxide sensors, plus other lab equipment, require laptop computers to transmit data.

d. Timeline of implementation

Fall 2024

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

$50,000

Do you already have a budget for this request?

No

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

Goal #5: Modernize teaching technology. Biology majors need laptops to complete lab assignments during class.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

1:4 1:7 3:1

If you have multiple requests for technology 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)?

Standard electrical usage for charging

Will you accept partial funding?

No

PART 4: FACILITIES REQUESTS

Do you have resource needs that require physical space or modification to physical space?

Yes

Facilities Requests

Facility Request 1

What are you requesting?

New lab chairs in rooms NS-217 and NS-225.

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)

The lab chairs are ripped and broken. Wheels have been removed from all of the chairs in NS-217 and students cannot effectively move their chairs around to work in lab groups as required by the course curriculum.

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

Students

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

Students will be able move their chairs around to work in lab groups as required by the course curriculum and to meet the SLO for the scientific method and the Institutional Outcomes for critical thinking and teamwork.

d. Timeline of implementation

Fall 2024

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

60 chairs at $250 per chair = $15,000

Do you already have a budget for this request?

No

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

Goal #1: Capture more completions for pre-nursing students. BIOL 102 is taught in Room NS-217, and is a required course for all pre-nursing students.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

2:6 3:1

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)?

Goal 2.6: Ensure all physical and digital environments are accessible and usable for everyone.

Will you accept partial funding?

No

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

Requests

Item 1

What are you requesting?

Incubator for BIOL 212 at San Marcos campus

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)

This incubator is needed for preparation of all cultures required for faculty and students in BIOL 212.

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

Faculty, ISAs, students

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

Preparation of all cultures required for faculty and students in BIOL 212.

d. Timeline of implementation

Fall 2024

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

$3,209.87

Do you already have a budget for this request?

No

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

Goal #1: Capture more completions for pre-nursing students. BIOL 212 is a required course for all pre-nursing students.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

1:4 1:7 3:1

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)?

standard electrical usage

Will you accept partial funding?

No

Budget Category

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

Please upload a copy of the quote, if available.

Microbiology Incubator Quote.pdf
94.3 KB

Item 2

What are you requesting?

Lab refrigerator for Room NS-217

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)

Needed for preparation and storage of lab materials for BIOL 100, 101L, 102, 118, and 126L

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

Students, Faculty, Instruction Support Assistants

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

Preparation and storage of lab materials for BIOL 102, a required prerequisite course for all pre-nursing students.

d. Timeline of implementation

Fall 2024

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

$834.42

Do you already have a budget for this request?

No

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

Goal #1: Capture more completions for pre-nursing students. BIOL 102 is a required course for all pre-nursing students.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

1:4 1:7 3:1

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

2

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

No new impacts as it is replacing an existing refrigerator. The new one will be more energy efficient so it should result in an electrical cost savings.

Will you accept partial funding?

No

Budget Category

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

Please upload a copy of the quote, if available.

Lab Refrigerator NS-217.pdf
0.1 MB

Item 3

What are you requesting?

Oxygen and Carbon Dioxide Gas Sensors for Majors-Level Biology (BIOL 200)

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)

Needed for students to complete labs in BIOL 200.

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

Students: Biology majors

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

The gas sensors are needed for updated labs in which students will measure enzyme reaction rate and fermentation rate. These labs will provide students with experience using important lab techniques and allow them to analyze data in multiple ways. These labs will replace more outdated labs that do not provide the level of data analysis and up to date lab techniques that are necessary for biology majors to transfer to 4-year universities.

d. Timeline of implementation

Fall 2024

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

$3,367.84

Do you already have a budget for this request?

No

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

Goal #5: Modernize teaching technology. Biology majors must know how to use this lab equipment for transfer into upper-division biology courses.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

1:4 1:7 3:1

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

3

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

None

Will you accept partial funding?

No

Budget Category

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

Please upload a copy of the quote, if available.

VERNIER QUOTE CO2 Gas Sensors Bio 200.pdf
0.3 MB

VERNIER QUOTE O2 Gas Sensors Bio 200.pdf
0.3 MB

Item 4

What are you requesting?

Bacterial incubator for Room NS-235 at the San Marcos campus, BIOL 200.

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)

Incubator for BIOL 200 lab experiments in NS-235: bacteriology, bacterial conjugation, bacterial transformation

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

Students in BIOL 200 (majors biology)

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

Students in BIOL 200 need this incubator to complete required lab experiments. These experiments are required for completion of the course and for transfer to 4-year universities.

d. Timeline of implementation

Fall 2024

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

$3,209.87

Do you already have a budget for this request?

No

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

Goal #5: Modernize teaching technology.

What Educational Vision Plan 2035 Goal:Objective does this request align with?

1:4 1:7 3:1

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

4

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

Standard electrical usage

Will you accept partial funding?

No

Budget Category

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

Please upload a copy of the quote, if available.

Incubator Quote BIOL 200.pdf
94.3 KB

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

Yes

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

kvelazquez@palomar.edu

Feedback and Review

Department Chair

I confirm that the PRP is complete.

Yes

Department Chair Name

Kimberly Velazquez

Date

4/2/2024