



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

Chemistry

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

Discipline Name

Chemistry (CHEM)

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

Department Chair Name

Jennifer Zabzdyr

Department Chair email

jzabzdyr@palomar.edu

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

Jennifer Zabzdyr, Department Chair
Heriberto Rivera, Professor

Website address for your discipline

<https://www.palomar.edu/chemistry/>

Discipline Mission statement

The mission of the Palomar College Chemistry Department is to support student learning for success. Our primary goal is preparing our diverse student population for the pursuit of Bachelor degrees in Chemistry, as well as other Natural Science degrees with which they may enter the workplace. We provide students with the fundamental concepts, knowledge, and laboratory techniques in a healthy and safe environment.

[\(Click here for information on how to create a mission statement.\)](#)

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

List all degrees and certificates offered within this discipline.

AS

Certificate of Achievement

AA, AS, ADT, Certificates, etc.

BASIC PROGRAM INFORMATION: 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)?

8

Enter a number.

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

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

189.55

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.)

276.83

Link: [FTEF Data](#)

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

1 ADA, 12 months, 33%

3 ISA-IV, 12 months, 100%

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

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

2 Student Workers, 10 hours per week each

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 well do your program's learning outcomes communicate the scope and depth of the degree/certificate offered? Please explain.

(1) Chemical Lab Technique: Successful students will be able to set up and execute general and intermediate chemical reactions in the lab using a chemical technique.

(2) Application of the Scientific Method: Successful students will be able to apply the scientific method by stating a question, performing experiments and/or analyzing a data presentation.

Problem solving using the scientific method and being capable of using chemical lab techniques are key requirements of a degree of any type in chemistry. They are necessary skills for transfer students to have, so that they are prepared for the more advanced upper division chemistry coursework.

How do they align with employer and transfer expectations?

Proficiency at general chemistry and organic chemistry lab techniques are prerequisites for upper division coursework at a university, as is the ability to use the scientific method to solve general and organic chemistry problems.

Describe your program's plan for assessing program learning outcomes.

(1) Chemical Lab Technique: Laboratory Students will prepare specifically-selected, written lab reports for which a rubric will be followed. The instructor will observe student technique/performance and evaluate it against a standard protocol.

Successful students will score 70% or higher.

(2) Scientific Method: In laboratory classes, students will prepare specifically-selected, written lab reports for which a rubric will be followed. The instructor will observe student technique/performance and evaluate it against a standard protocol. In lecture classes, students will be evaluated using embedded questions on final exams.

Successful students

will score 70% or higher. Students in the final course in the program (CHEM 221) will be given a comprehensive

(national), final examination administered by the American Chemical Society and evaluate it against the national score

results. Successful students will score in the 60th percentile or higher on the ACS exam.

Summarize the major findings of your program outcomes assessments.

(1) Chemical lab technique: At the last assessment, 79% of students scored 70% or higher.

(2) Scientific method: At the last assessment, 79% of students scored in the 60th percentile or higher on the ACS exam

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. This year, our funding formula has also changed reflecting this emphasis, providing additional funding as a function of the number of completions.

In this section, you will reflect upon the number of completions students earned for EACH degree/certificate you offer. As required for accreditation, you are also asked to set a standard which represents the lowest acceptable number of completions and a stretch goal for increasing the number of awards.

Link: [Program Completions](#)

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

2016-17: 2 AS Degrees and 2 Certificates of Achievement

2018-19: 2 AS Degrees and 2 Certificates of Achievement

2019-20: 2 AS Degrees and 2 Certificates of Achievement

2020-21: 1 AS Degrees and 3 Certificates of Achievement

2021-22: 6 AS Degrees and 5 Certificates of Achievement

Have your program completions Increased, decreased, or stayed the same over the last 5 years?

☒ Increased ☐ Stayed the same ☐ Decreased

Choose one

What factors have influenced your completion trends?

Students are encouraged by their professors and counselors to apply for the degrees for which they qualify.

Our accrediting body, ACCJC, and the Federal Department of Education requires that colleges establish standards and goals for student success and completion.

A program-set standard for completion represents the lowest number of program completion you deem acceptable for your program. In other words, if you were to notice a drop below the set standard, you would seek further information to examine why this occurred and strategies to increase completions.

A program stretch goal for completions is the number of completions you aspire to award for each program in your discipline.

To determine your stretch goal, consider the number of annual completions you typically award over time, then consider strategies or efforts you are making to increase completions in your program. Then identify the NUMBER you want to set as your goal.

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.

Our program outcome assessments lead us to believe that our program is successful in preparing the chemistry student to transfer as a chemistry major to a 4-year school. Our enrollment and efficiency is following the trends of the college as a whole.

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

The number of completions do not reflect the success of our program. We have many students complete our program to fulfill transfer requirements for their major, but only a small number petition for the degree.

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?

60.0%

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?

Chemistry is a challenging subject so 60% is a realistic success rate.

What is your stretch goal for course success rates?

65.0%

How did you decide upon the goal?

Recent success rates have dropped from an average of 64.4% (Fall 2015 through Fall 2019) to 60.0% (Fall 2020). This is probably due to the switch to online learning resulting from COVID. Increasing success rates up to 65% is a realistic stretch goal.

COURSE STUDENT LEARNING OUTCOMES (SLOs)

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

In our general chemistry lecture sequence, chem 110 and 115, 72% of students met the learning outcome for the courses. In the general chemistry lab sequence, chem 110L and 115L, 76% of students met the learning outcomes. In our organic chemistry sequence, chem 220 and 221, 82% and 62% of students met the learning outcomes, respectively.

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?

Chemistry teachers, chemical technicians, chemists, professors, chemical engineers, biochemical engineers, soil/plant scientists, chemical equipment operators, medical/clinical lab technologists/technicians, biochemists, biophysicists, quality control/analysis. Careers with a bright outlook include medical/clinical lab technologists/technicians, biochemists, biophysicists, and quality control analysts.

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)

Most require a minimum of a B.S. degree in chemistry or biochemistry. Some occupations require a graduate degree in chemistry or biochemistry. Knowledge, skills, and abilities will vary, but will include:

KNOWLEDGE

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

SKILLS

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Mathematics — Using mathematics to solve problems.

ABILITIES

Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.

Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

Written Comprehension — The ability to read and understand information and ideas presented in writing.

Mathematical Reasoning — The ability to choose the right mathematical methods or formulas to solve a problem.

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

KNOWLEDGE: Our program teaches students the chemistry knowledge they will need in order to transfer and pursue a more advanced degree in chemistry or biochemistry.

SKILLS: Critical thinking is a key component of all our courses and one of our program SLOs. Problem solving, using the scientific method, is emphasized in all of our classes.

ABILITIES: Oral and written communication skills are learned in the lab, through the writing of lab reports and giving oral presentations.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world 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?

We offer service-learning opportunities for our students through our chemistry club.

For example: regular meetings with community partners, connections with local High Schools, dual enrollment, Universities, business partnerships, Palomar events (i.e. Tarde de Familia, 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 identified 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

To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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.

Online learning through Covid was a challenge. Since we were not on campus, we could not use the instrumentation we had, much less begin replacing outdated equipment. After coming back to campus (2 years later), much of our instrumentation is outdated or otherwise does not work.

Goal 2**Brief Description**

To increase our presence in the community through outreach.

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.

Outreach was put on hold during Covid. When possible, we would like to resume participation in STEM conferences and other outreach events outside of Palomar with our chemistry club, such as Science Night at San Marcos Middle School. Hosting and attending events such as these cost money, including but not limited to chemicals and other materials for demos, transportation costs, and compensation for time spent prepping for the events.

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.

VFS Goal-2--Transfer. By increasing our course offerings, especially in organic chemistry, we could help students transfer sooner.

[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.

No changes.

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 requesting additional full-time faculty?

☐ Yes ☒ 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 and 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

Technology Request

Technology Request 1

What are you requesting?

ChemDraw software for our 2 organic chemistry faculty

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)

This is a necessity for organic chemistry professors and professionals and we are the only campus in North County that lacks access to ChemDraw. Without it, our faculty have had to bend over backwards and work with terrible programs to get work done. They have added hours to their own work simply because they lack access to this very basic tool.

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

Organic chemistry faculty and organic chemistry students

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

Our faculty will be much more efficient.

d. Timeline of implementation

3 months

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

Approximately \$2260 per device with a perpetual license. We currently have 2 full-time organic faculty, so \$4520.

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

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

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)?

None

Will you accept partial funding?

☒ Yes ☐ No

Technology Request 2

What are you requesting?

2-in 1 Laptop/Tablets with Stylus (32)

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)

We are endeavoring to make our labs "no-cost" courses. To do this, we no longer use lab manuals; instead we post electronic files for students to download. Unless students have a tablet, they still have the cost associated with printing the labs. If we could provide a tablet for students to use in the lab, they could download and complete the lab on the tablet, eliminating the printing costs.

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?

It would decrease the cost of the course since students would not have to print their lab activities.

d. Timeline of implementation

3 months

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

Approximately \$50000 for 32 devices, a charging cart, and adapters

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

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

If you have multiple requests for technology 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)?

None

Will you accept partial funding?

☒ 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.

Facilities Requests

Facility Request 1

What are you requesting?

Removal of a non-working fume hood in NS-140 and installation of a full-size sliding white board and 2 full-size projector screens.

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)

NS-140 is a lecture room and does not need a fume hood. The fume hood takes up wall space, so the room contains a very small white board, 1 full size projector screen, and 1 mini projector screen. The space would serve students and faculty better with a full-size white board and full-size screens.

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

All students and faculty who use that room.

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

Faculty would have better tools for lectures and students could better see the board/screen.

d. Timeline of implementation

6 months

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

Unknown

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

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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)

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

Will you accept partial funding?

☒ Yes ☐ 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 ☐ No

Requests

Item 1

What are you requesting?

Melting Point Apparatus

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)

In line with a push for equity and modernization, we need to update our equipment. We have compared equipment with our local schools, and we are behind the times. Some of our equipment is over 20 years old and constantly breaking down. In addition, due to the outdated technology, we waste valuable time that could be used for other lab exercises. To assess learning outcomes in the lab, it is necessary to have updated, working equipment.

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

Organic chemistry students and faculty

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

Students will have modern equipment in their courses to prepare them for transfer. Faculty will be able to assess learning outcomes in the organic chemistry lab.

d. Timeline of implementation

3 months

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

\$6100 for 10 melting point devices

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

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| <input type="checkbox"/> 3:4 | <input type="checkbox"/> 3:5 | <input type="checkbox"/> 4:1 | <input type="checkbox"/> 4:2 |
| <input type="checkbox"/> 4:3 | <input type="checkbox"/> 5:1 | <input type="checkbox"/> 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)?

None

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.

MP Quote.pdf

Item 2

What are you requesting?

Gas Chromatography Instruments

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)

Our gas chromatography instruments are old, time-consuming to use (4-6 hours), and expensive to maintain. Furthermore, faculty have to run samples for students. The newer instruments are cheaper to maintain and work faster so students would be able to run their own samples, providing them a more robust education.

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

Organic chemistry students and faculty

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

Improved efficiency for faculty, improved student experience in the lab, lower maintenance costs.

d. Timeline of implementation

3 months

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

\$6500 for 2 instruments

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

- | | | | |
|---|------------------------------|------------------------------|------------------------------|
| <input type="checkbox"/> 1:1 | <input type="checkbox"/> 1:2 | <input type="checkbox"/> 1:3 | <input type="checkbox"/> 1:4 |
| <input type="checkbox"/> 1:5 | <input type="checkbox"/> 2:1 | <input type="checkbox"/> 2:2 | <input type="checkbox"/> 2:3 |
| <input checked="" type="checkbox"/> 2:4 | <input type="checkbox"/> 3:1 | <input type="checkbox"/> 3:2 | <input type="checkbox"/> 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)

2

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?

☒ Yes ☐ No

Budget Category

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

Please upload a copy of the quote, if available.

1088609.pdf

Item 3

What are you requesting?

pH Meters (15)

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)

Some of our pH meters no longer work and we need to replace them so that students can learn how to operate them and so that faculty can assess the pH meter SLO for Chem 115L.

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

Students and faculty

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

Students will be able to work individually with pH meters (rather than in groups) and faculty can assess the pH meter SLO for Chem 115L.

d. Timeline of implementation

3 months

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

About \$800 per unit for a total of \$12000 (no other ongoing costs)

Do you already have a budget for this request?

No

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

Goal 1: To update technology (chemical instruments, computers, and software) in order to remain current with chemical education pedagogy.

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

- | | | | |
|---|------------------------------|------------------------------|------------------------------|
| <input type="checkbox"/> 1:1 | <input type="checkbox"/> 1:2 | <input type="checkbox"/> 1:3 | <input type="checkbox"/> 1:4 |
| <input type="checkbox"/> 1:5 | <input type="checkbox"/> 2:1 | <input type="checkbox"/> 2:2 | <input type="checkbox"/> 2:3 |
| <input checked="" type="checkbox"/> 2:4 | <input type="checkbox"/> 3:1 | <input type="checkbox"/> 3:2 | <input type="checkbox"/> 3:3 |
| <input type="checkbox"/> 3:4 | <input type="checkbox"/> 3:5 | <input type="checkbox"/> 4:1 | <input type="checkbox"/> 4:2 |
| <input type="checkbox"/> 4:3 | <input type="checkbox"/> 5:1 | <input type="checkbox"/> 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)

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?

☒ Yes ☐ No

Budget Category

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

Please upload a copy of the quote, if available.

☒ 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.

jzabzdyr@palomar.edu