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

Physics/Engineering

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

Discipline Name

Engineering (ENGR)

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

Department Chair Name

Hector Garcia Villa

Department Chair email

hgarciavilla@palomar.edu

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

Hector Garcia Villa: Associate Professor and Chair

Website address for your discipline

https://www2.palomar.edu/pages/physics/

Discipline Mission statement

The Department has not developed an agreed on mission statement for this discipline. This will be a goal for the coming year after we have hired several new faculty. A suitable stand-in is presented here:

Engineering includes the application of science, mathematics, and empirical evidence to create technologies that improve the world we live in. Our mission is to provide students with an outstanding learning experience in which they develop strong analytical, quantitative, and problem solving skills to prepare them for a career in one or more of the various fields engineering. We strive to provide an engaging teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals. We support and encourage students who intend to transfer as well as students pursuing a technical certificate. We seek educational empowerment in all we do. We provide students with rigorous and comprehensive courses that allow them to perform at a high level while also fostering creativity and excitement about applied science and engineering.

(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

AA, AS, ADT, Certificates, etc.

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?

0.2

*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.)

0.67

*Link: **FTEF Data***

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

| Abby Corona, 10% (20% for Physics and Engineering combined) |
| Tony Kopec, ISA 25% (50% for Physics and Engineering combined) |

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

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

| Randy Parker (20 hours/week) |

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.

| We are working on improving our Program learning outcomes, and implement suitable assessment methods. Those should provide results that better inform of our program goals and scope. We expect to have better outcomes soon. |

How do they align with employer and transfer expectations?

| Despite the poorly written program learning outcomes, it does not affect much our students transfer or employability. The main reason is that most of our students do not seek an AS degree, because it would require more lower division work than their major requires upon transfer. Most of our students transfer successfully to 4-year institutions for a degree in engineering. |

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

| All of our SLOs have been assessed, and we feel confident the outcomes are satisfactory. The SLOs outcomes are helping us improve our curriculum, and improve our articulation with our partner 4-year institutions. We are in a three year assessment cycle.

The PLO need update and better assessment. |

Summarize the major findings of your program outcomes assessments.

Students met the outcomes to our satisfaction. The outcomes themselves are in need of update.

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

21/22: 1
20/21: 3
19/20:5
18/19:7
17/18: 3

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?

Most of our students seek to transfer to a 4-year institution to earn a BS in engineering. Since completing the AS would
force them to take more GE and lower division classes than required for their major, they opt to save time and money
and transfer without an AS degree.

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.

- Talented faculty. We hired a full-time engineering instructor, and this is helping our program, part-time faculty and

students achieve better results and have a more cohesive curriculum.

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

- Decrepit facilities:Students are currently working in cramped quarters using old and often malfunctioning equipment,

making it difficult to make accurate measurements. We have improved the equipment somewhat, but we need to improve the classroom in which they are working (Q-10).

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?

We chose the College standard. Our students are very well prepared by the time they take engineering classes (they
have completed Calculus, Physics, etc.), but the difficulty of the curriculum balances that out.

What is your stretch goal for course success rates?

80.0%

How did you decide upon the goal?

It is important to make careers in engineering available to the community we serve, especially to groups that have been under-represented in the various engineering fields.

We believe that the current enthusiasm for promoting STEM and the continued student support services being offered by the College (STEM center, MATH center, etc.) should allow us to meet this target.

COURSE STUDENT LEARNING OUTCOMES (SLOs)

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

ENGR 126: 81.25% of students scored at least 70% on this assessment Successful students will keep a detailed
engineering lab notebook while completing working analog and digital circuits. The engineering lab notebook will follow
engineering standard formats, and will require entries during every scheduled lab meeting.
Assessment: A lab notebook describing all lab work performed in each class will be evaluated on format and contents.

ENGR 210: 78.57% of students scored at least 70% on this assessment.Resource Needs Equipment Students are
currently working in cramped quarters using old and often malfunctioning equipment, making it difficult to make accurate
measurements. Successful students will be able to design non-trivial passive electronic circuits. Students will have a
basic understanding of circuit analysis methods including DC Transistor Circuit, Superposition, Thevenin/Norton
techniques, and determination of Maximum Power Transfer.
Assessment: Students will be asked to analyze and design, non-trivial passive circuits, using combinations of all
common passive circuit analysis techniques.
Criterion: 70 % of students will score at least 70% on this assessment.

ENGR 235: Derive and apply expressions or equations from the mechanical free-body diagrams in order to solve
engineering problems. 24/38 earned 70% or higher in assignments
63% students met this criteria. Department will assess and modify this criteria to reflect the current teaching.

ENGR 245: 93% of the students met the criteria based on the examsStudents successfully grasped the fundamentals of
analyzing and calculating the atomic dimensional structures. These skillsets can be applied to their upper division
courseworks.

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?

Most of our students seek to earn a BS in Engineering. This is the initial degree required for many different engineering
careers, such as:

- Architectural Engineering
- Electrical and Electronic Engineering
- Mechanical Engineering
- Chemical Engineering
- Computer Engineering
- Industrial Engineering
- Environmental Engineering
- Civil Engineering
- Engineering Teachers, Postsecondary
- Automotive Engineering
- Bioengineers and Biomedical Engineers
- Nanotechnology Engineering
- Petroleum Engineers
- Aerospace Engineering
- Ship Engineers
- Sound Engineering

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)

KNOWLEDGE:

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This
includes applying principles, techniques, procedures, and equipment to the design and production of various goods and
services.
Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans,
blueprints, drawings, and models.
Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to
understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures
and processes.
Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer
hardware and software, including applications and programming.

SKILLS:

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.
Science — Using scientific rules and methods to solve problems.
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.
Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate
options and implement solutions.

ABILITIES:

Written Comprehension — The ability to read and understand information and ideas presented in writing.
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).
Information Ordering — The ability to arrange things or actions in a certain order or pattern according to a specific rule or
set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

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 full time faculty member,

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.

Searching, finding and recruiting an outstanding faculty member, preferably with a background in Electrical
Engineering (or related).

So far, we have not been able to accomplish this goal.

Goal 2

Brief Description

Revise Curriculum.

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.

We can complete this goal by allotting time and resources. We need time to develop new curriculum (a new full time hire would help), and money to purchase new equipment to support the new curriculum.

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 1: Our department constantly strives to have as many students as possible to complete our program. One challenge we face, especially in the first class of our majors sequence (Physics 230) is a larger than ideal drop rate. This could be remediated with better Math prepraration, especially with Calculus classes that target especifically our student population. VfS Goal 2: All of our students who complete our program are ready for transfer. They are routinely accepted at CSU, CalPoly and UC.

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.

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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

Professor of Engineering

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.

This faculty member would help the department meet our program goals in Engineering. Right now we do not have a full-time engineering faculty member with a background in electrical engineering. By adding a faculty member in this field, we would be able to develop new curriculum in our electronics courses, and be able to successfully transfer
those students.

This is especially true as the demands for engineers are rapidly increasing in San Diego's North County, and as
CSUSM has started an Electric Engineering BS degree.

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

Engineering is a very diverse field (from civil to nuclear, and everything in between). To support our Engineering
program, we need experts in two fields: mechanical and electrical engineering (EE). It is impossible to find someone
with enough background in both, and with teaching experience. Right now we have a probationary full-time faculty
member, with a background in mechanical and aerospace engineering. We need another faculty member, with a
background in EE (or related), to develop and implement curriculum in our EE classes.

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

This position would help in many of those areas:

- Accreditation: we need a fully developed electrical engineering program, with current curriculum and equipment.

- Regulatory and Safety: Having a full-time faculty member supervise the maintenance and purchase of electrical
equipment is very important to ensure its safety for students and staff.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional

career education needs for this discipline.

Our discipline has an efficiency somewhat below the College target. One reason for this is that, with our current
resources and equipment, we are limited to lectures with 36 students. Our goal would be to have enough lab
resources, so that the lab sections can be larger and support larger lectures.

Regionally, there is a huge need for engineers. This is clearly reflected in CSUSM decision to start an electrical
engineering program. They will start accepting transfer students soon, and we need to be ready to serve our students and our region. This is why it is fundamental that we get to hire a full time faculty member to develop the curriculum, and the personal connections with the CSUSM faculty.

Refer to data and other analysis earlier in this document.

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

Yes, currently one member (Aundrea Tavakkoly, Physics) has release time. She is serving as SLO coordinator for the
College.

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

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

ISA - Lab technician

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

Classified

Is this request for a full-time or part-time position?
⊙ Full Time ○ Part-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.)

PHYSENGR needs a full-time dedicated ISA (lab technician). Right now PHYSENGR has an ISA with 50% time for
our department (the other 50% is for Earth Sciences). That means that the Engineering program get about 25% of his time.

It is impossible that he can fulfill all his responsibilities with only that amount of time. Engineering has labs in very
different topics: electronics, materials, etc. It takes a lot of time to maintain, replace and purchase equipment for each lab, and to make sure things are stored properly.

Right now a lot of those tasks are falling in the hands of full time faculty, who are completing them without any pay, on top of their regular contractual obligations. This is not sustainable long term, as faculty are already over-stretched, and performing unpaid tasks in addition to their normal workload does not help. This problems is going to get worse as we move back to campus for F2F labs.

Additionally, there are many safety concerns: electrical equipment, mechanical devices, etc. need to be constantly
maintained and cared for in order to be in working condition. Failure to do so can create hazards for students and
faculty. We need an ISA that can do those things on a regular basis.

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

Yes, the department would be more efficient, and faculty could focus on developing and implementing curriculum.

Additionally, having a dedicated lab technician maintain and care for all the equipment would ensure its longevity.

Is there funding that can help support the position outside of general funds?
○ Yes ⊙ No

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

This position would help ALL of our programs and courses, since virtually all of our classes have a lab component. On top of that, our students could learn a lot of hand-on knowledge from a dedicated ISA (they already do with a 25% assigned time one).

Strategic Plan 2022 Objective

☐ 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 https://www2.palomar.edu/pages/strategicplanning/files/2020/01/FINAL-

Strategic-Plan-2022.pdf

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

We do not have a back-up plan for this. This has been a need we had for a while now.

Probably there will be discussion within the department (there is already some debate about this). Possible outcomes
are: asking for release time to maintain the labs, cancelling the labs due to a lack of maintenance (that would impact
our accreditation and transferability).

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

Technology Request

Technology Request 1

What are you requesting?

Matlab License.

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. Inlude in your response:

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

In order to prepare Physics and many Engineering majors for transfer, we need to teach them how to use
Matlab, since many schools are expecting them to know how to use it, and a Matlab class is a lower division requirement for many Engineering and Physics majors.

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

It will be Physics and Engineering majors.

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

- Using Matlab to solve Engineering and Physics problems
- Data analysis and visualization
- Analysis and processing of experimental data

d. Timeline of implementation

As soon as we obtain a license and the class is approved.

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

The license for 50 students (about the expected need) is quoted by MathWorks at $1600.

Do you already have a budget for this request?

No

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

None, we just need the Matlab license.

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 technology 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 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

☑ 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.

hgarciavilla@palomar.edu