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2021-2022 COMPREHENSIVE REVIEW

OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR NON-INSTRUCTIONAL PROGRAMS

Program Review is a self-study of your unit. For non-instructional program review, the definition of what is a unit varies based upon your division. A unit may be a department (e.g., Information Services, Institutional Research and Planning, Financial Aid), a program (e.g., EOPS, TRIO), or a division (Human Resource Services). The Vice Presidents for each division have identified/defined the units that will complete the review cycle.

Regardless of whether your unit is a program, department, or division, program review is about documenting the plans you have for improving Institutional Effectiveness in your area and sharing that information with the college community. Through the review of and reflection on key elements, Program Review and Planning identifies program strengths and strategies necessary to improve the operation of your area. With that in mind, please answer the following questions.

BASIC UNIT INFORMATION

Program/Unit Name
STEM Center

Department Name
STEM Center

Division Name
Mathematics, Science and Engineering

Name of Person responsible for the Program/Unit
Mireya Gutiérrez-Agüero

Website address(es) for your program(s)/unit(s)

Webpage URL 1

Unit webpage
https://www2.palomar.edu/pages/stem/

Please list all participants and their respective titles in this Program Review

Participant	Title
Mireya Gutierrez-Aguero	STEM Center Supervisor
Amber DeFreitas	STEM Center Coordinator

PROGRAM/UNIT MISSION STATEMENT

What is you Program/Unit's mission statement?
The mission of the STEM Center is to inspire students to take ownership of their learning in order to excel in their STEM courses. The STEM Center provides a space and a place of belonging where students from diverse backgrounds can learn independently and collaboratively, build community, and establish a supportive network of STEM learners.

Describe how your mission statement aligns with and contributes to the College's Vision and Mission.
Through a variety of STEM programs and services offered in the STEM Center, students nurture their intellectual capacity and actively engage with peers and faculty in scholarly discourse. The STEM Center engenders a community of STEM learners who support each other individually and collectively to achieve academic success in their STEM courses. The STEM Center is more than just a study space for Palomar college students; it is their second home.

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PROGRAM/UNIT DESCRIPTION

Staffing

Use the Permanent Staff Count link below to answer staffing questions.

Link: Permanent Employees Staff Counts

This form required a login and password to access. Please use your Palomar email and password to log in.

Full-Time Staff	**Part-Time Staff**
Total Number of Full-time Staff 3.00	**Total Number of Permanent Part-time Staff** 1.00
Number of Classified Staff 2.00	**FTE of Part-time Staff (2x19 hr/wk=.95)** 0.45
Number of CAST Staff 1.00	**FTEF of Part-time Faculty** 1.00
Number of Administrators 0.00	
Number of Full-time Faculty 0.00	

Describe additional temporary hourly or contract staff who support this unit and/or department. (Include FWS/District Student Worker/Veteran Student Worker)
In the STEM Center, we currently (fall 2021) have a total of 11 short-term employees supporting the SI and Tutoring efforts in the STEM Center.
•One (1) Embedded Tutor one
•One (1) SI Leader one
•Eight (8) Tutors

Over the last few years, the STEM Center has relied on CalWorks and FWS student employees to cover the front desk. The summer 2021 goal was to initiate the hiring process of FWS and CalWorks employees to have them start working for the Virtual Math and STEM Centers this fall 2021. However, the CalWorks Program experienced a drop in student enrollment, and staff are currently recruiting students. Dra. Christina Dawber shared the pandemic has been challenging for CalWorks students to work remotely when they have to take care of their small children at home. In regards to FWS, we were hoping to hire FWS recipients over the summer as well, but this year the awards were delayed until the second week of September 2021. In the past years, the practice was that students would contact me directly to schedule interviews. This year was the first time that the FWS Coordinator provided a list of students with emails, so that I could email students directly. We had our first FWS student join the team as of the end of October. It is quite surprising that FWS recipients have not inquired about employment opportunities, but these are different times.

Over the last few years, the STEM Center has relied on CalWorks and FWS student employees to cover the front desk for the Virtual Math and STEM Centers and the STEM Center in the NS building. The goal was to hire CalWorks recipients over the Summer 2021 to be ready to cover the virtual front desk. CalWorks Program has experienced a drop in student enrollment, and staff are currently recruiting students. Dra. Christina Dawber shared the pandemic has been challenging for CalWorks students to work remotely when they have to take care of their small children at home. In regards to FWS, we were hoping to hire FWS recipients over the summer as well, but this year the awards were delayed until the second week of September. We currently have not front desk staff to help cover the Virtual Math and STEM Center front desk.

As part of the PRP cycle, Human Resource Services has provided organizational charts for all non-instructional

units. Please review the charts and answer the following questions:

In reviewing your organizational structure, what are the strengths and opportunities this structure brings to the department, division, and college?
It is helpful to see staff names and roles listed under the MSE Division. The STEM Center strengths are that it provides a plethora of academic and student support services for students taking science, technology, engineering and math courses. The center supports student success by assuring students have access to resources such as academic tutoring, Supplemental Instruction (SI), counseling services, and academic advising, as well as a place where students and staff can collaborate and build a community and a supportive network.

In reviewing the organization structure, are there areas that could be improved if you were structured differently (i.e., efficiencies, communications/collaboration with the college, needs, etc.)
The first conversations of combining the Math Learning Center and the STEM Center began in 2018, but nothing has ever been finalized. Due to the pandemic, the faculty and staff decided to work collaboratively online to minimize student confusion and maximize resources. Additionally, it would be great to see an outline of faculty and staff supporting the various tutoring centers. While I understand communication may be challenging working online, communication could be strengthened among staff and faculty especially those supporting the various centers, STEM programs and services. It would be ideal for directives to be communicated to all staff and faculty working on STEM programs and services to ensure transparency, collaboration and dialogue. Since the start of Spring 2021, both the Math and STEM Center have been working together virtually. Students seeking STEM/Math tutoring use the same Zoom link to utilize tutoring services. The virtual front desk staff greet and send students in the appropriate breakout rooms to work with STEM tutors, STEM SI Leaders, Math student tutors, and/or Math Faculty on duty. Finding one location for both centers would be wonderful, and allows for the STEM and Math Centers to permanently co-locate in order to maximize campus resources.

Program/Unit Description

Who utilizes your services
Students majoring in the STEM disciplines and students taking general education STEM courses utilize the Virtual Math and STEM Centers and pre-pandemic STEM Center (NS-310).

What services does your program/unit provide (Describe your program/unit)?

Since March 2020, the STEM Center transitioned their STEM Counseling, tutoring, Learning Assistants (LA) and Supplemental Instruction (SI) services to an online format. Currently, the STEM Center utilizes Zoom as the online platform to provide tutoring to students. Additionally, we have an online STEM Counselor who meets with students via Zoom and over the phone.

STEM CORE is a one-year STEM-preparatory program with an emphasis in math, designed to help students finish prerequisite courses in order to major in the sciences. The STEM Core program provides workshops and resources for students to apply for STEM related internships. Currently, the STEM Core program supports 14 students under the guidance of the STEM Support Specialist. Some of the student services include study corner, monthly meetings, bi-weekly workshops and staying connected through the STEM Core Canvas shell. STEM Core students are supported through the math and technology courses during their first year. After successful completion, students are ready to take higher level courses in math, technology and science. Students are enrolled in STEM Precalculus (Math 126 and Math 127) is a two-semester preparation for Calculus that provides a combination of lecture sessions with instructors, hands-on learning activities with peers in groups, tutoring support and ample opportunities for exploring and discovering ideas inside and outside of the classroom. This is an accelerated, enriched, single-year path to calculus that is an alternative to the traditional three-semester Math 60/115/135 sequence.

Women in STEM Network is an opportunity to meet other students and professionals majoring in STEM. Students will discuss various topics in an encouraging environment, network with STEM professionals and industry representatives. This network empowers students by gaining insight into the world of STEM pathways.

Rising STEM Scholars guarantees admission to CSUSM in the following majors: Biology, Biochemistry, Biotechnology, Chemistry, Computer Science, Engineering (Software), Math, and Physics. Students receive invitations to attend STEM related workshops, seminars, speaker series, and/or symposiums at CSUSM. Information is disseminated about summer internships and scholarship opportunities. Student have access to Palomar College STEM Counselors and CSUSM Academic Advisor. With the support of counselors and advisor, students will obtain a four-year academic plan to transfer to a university.

Pre-pandemic: We previously offered a STEM Outreach component and had a full-time employee supporting these efforts. Unfortunately, the pandemic has made it challenging to offer STEM Outreach programs and services. Additionally, Kate Crocker the STEM Outreach Specialist, resigned her position in September 2020. In Fall 2020, we were informed the STEM Outreach Specialist position would no longer be filled. The STEM team is aligning with the PC Outreach team to provide STEM Outreach materials.

Prior to the pandemic, the STEM Center in NS-310 provided a variety of services such as tutoring, supplemental instruction, STEM counseling, CSUSM Academic Advising, computers and printers, study space, textbooks and other materials that support students in their academic achievement. The culture of the STEM Center (NS-310) helped students engage in their academics as well as make important connections with other students and faculty. Some faculty hosted their office hours in the STEM Center providing an opportunity for students to strengthen faculty and student relationships. Often students worked together in groups to help support one another in particularly difficult courses. They taught each other, quizzed each other, and motivated each other to achieve academic excellence. The Supplemental Instruction (SI) Program and tutoring played a critical role in meeting the mission and goal of the STEM Center. Supplemental Instruction was regularly scheduled outside of class time, and SI Leaders facilitated collaborative learning sessions for specific STEM lectures or labs. Students voluntarily signed up to attend SI sessions. Tutoring at the STEM center was perceived as at just-in-time tutoring. Tutors are available when a student have a question or want to check their understanding on a concept.

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PROGRAM/UNIT ASSESSMENT

SERVICE AREA OUTCOME ASSESSMENT

GOT SERVICE AREA OUTCOMES?

Outcomes are statements written in support of student learning to show direct support (instruction) or indirect support (services) provided on campus. Assessment is the way we measure how well we are achieving our outcomes.

For non-instructional areas, outcomes are called Service Area Outcomes (SAO).

So, what is an SAO?

A Service Area Outcome (SAO) is a statement about what a client will experience, receive, or know as a result of a given service. Clients can be students, faculty, staff, or community members.

As part of our three-year planning and review cycles, all non-instructional units are asked to:

- identify at least two SAOs,
- develop a plan and assess their SAOs,
- reflect on the results,
- and take action, as necessary.

Palomar has adopted Nuventive Improve (previously named TracDat) as our official repository for SLO and SAO Assessment information.

Review and/or define your SAOs and assessment plans and ensure they are entered in Nuventive Improve by:

1) Login to Nuventive Improve (previously TracDat) https://idmpg.palomar.edu/_layouts /PG/login.aspx?ReturnUrl=%2Fsso%2Fdefault.aspx.. Your Palomar username and password is your login.

2) Check your SAOs for **currency** and **sunset** any SAOs if you no longer plan to assess them.

3) Revise or edit your current SAOs by revising their wording and/or updating the assessment and assessment results.

NEED HELP?

Nuventive Improve:

1) If you need help with anything Nuventive Improve related such as login, unit identification, entering SAO info, contact Marti Snyder at msnyder2@palomar.edu.

2) Check out this video on how to enter SAOs in Nuventive Improve: https://youtu.be/b1sRa68wm4c

Defining and Assessing SAOs:

Not sure if your SAOs make the grade? Need some help writing an SAO? Not sure about how to assess your SAOs?

1) Hartnell's SAO Guide is a nice resource! Thank you Hartnell!

2) Contact Michelle Barton at mbarton@palomar.edu. We have a resource support team to help.

A template for entering SAOs can be found on the IR&Ps Non-instructional Program Review and Planning website

Are all of your unit's SAOs and assessment plans UPDATED and ENTERED in Nuventive Improve?
Yes

SAOs SUMMARIES AND REFLECTIONS

For each SAO in Nuventive Improve summarize what you learned from the assessment and what improvements you have implemented or plan to implement as a result of your SAO assessments.

SAOs

SAO 1

SAO Title
Students who use the STEM Center during the semester will pass their STEM classes at a rate higher than the department pass rate.

Assessment Status
Not assessed

SAO Summary and Reflection
In fall 2021, we will request data from IRP to assess the outcome of this SAO.

Next planned assesment
The next schedule assessment will occur in 2024.

SAO 2

SAO Title
75% of STEM faculty are pleased to very pleased with the services provided by the STEM Center.

Assessment Status
Not assessed

SAO Summary and Reflection
We surveyed faculty at the end of October, and the results are included below. One-hundred percent (100%) of the faculty who responded said they were very aware (78%) or somewhat aware (22%) of the services provided by the STEM Center. One-hundred percent (100%) of the faculty who responded said they recommend to their students to utilize use the STEM Center services. Ninety-four percent percent (94%) of the faculty who responded said they satisfied (44%) or very satisfied (50%) with the services provided in the STEM Center. We are very please to with the faculty results, and will continue to promote the STEM Center programs and services to increase the faculty awareness.

Next planned assesment
We will survey students and faculty in the fall every semester.

OTHER ASSESSMENT DATA

Quantitative Data

List all other quantitative and/or qualitative measures you use to track, monitor, and/or evaluate the effectiveness of your program/Unit.

Measures, Descriptions, and Annual Values

Measure 1

Name of Measure
Unique Users for Supervised Tutoring

Description of Measure
Number of unique students using Supervised Tutoring in the STEM Center

Year	Year	Year	Year
2017-2018	2018-2019	2019-2020	2020-2021

Value	Value	Value	Value
3331	2872	2259	380

List values for years listed immediately above. Select "+ Add Measure" below to insert all measures, values, and descriptions.

Measure 2

Name of Measure
Total Visits for Supervised Tutoring

Description of Measure
Total number of student-visits using Supervised Tutoring in the STEM Center

Year	Year	Year	Year
2017-2018	2018-2019	2019-2020	2020-2021

Value	Value	Value	Value
34,545	28,478	18,604	1,969

List values for years listed immediately above. Select "+ Add Measure" below to insert all measures, values, and descriptions.

Reflect on your quantitative data and summarize your findings or interpretations.
Measure 1: In academic year 2017-2018, the STEM Center Team served a total of 3,331 unique students. It is worth mentioning the STEM Center was being led by one full-time employee (the STEM Center Supervisor). As of the academic year 2018-2010, the STEM Center served a total of 2,872 unique students. In the Spring of 2019, the STEM Center Coordinator was finally hired to help support the needs of the STEM Center. In the academic year 2019-2020, two full-time staff helped support 2,259 unique students. It is evident the STEM Center's Supervised Tutoring program has supported a significant number of unique STEM students. The decrease in enrollment over the years in supervised tutoring dropped since 2017-2018 can be attributed to a decrease in enrollment for the campus. Additionally, the pandemic significantly impacted the STEM Center in the Spring 2020. Since the pandemic, the STEM Center was no longer able to collect reliable data on the students due the PAT 2.0 system not being available in the remote environment. The overall numbers for unique students during the academic year 2020-2021 are significantly lower due to the pandemic.

Measure 2: In academic year 2017-2018, the STEM Center Team had a total of 34,545 total visits. Serving this large number of students is a huge accomplishment, given the STEM Center Supervisor was the only full-time employee who was working with part-time employees. As of the academic year 2018-2019, the STEM Center served a total of 28,478 students. In the academic year 2019-2020, two full-time staff helped support a total of 18,604 students in the STEM Center. It is evident the STEM Center supported a significant number of STEM students. The decrease in total students visiting the STEM Center can be attributed to a decrease in enrollment for the campus. Once again, the pandemic significantly impacted the STEM Center in the Spring 2020. Since the pandemic, the STEM Center was no longer able to collect reliable data on the students due the PAT 2.0 system not being available in the remote environment. The overall numbers during the 2020-2021 are lower due to the pandemic.

APR Data for Title V/HSI STEM: IRP provides data for the Title V STEM Annual Performance Report. The data is broken down by "participated in a STEM or Grant activity" which mainly includes students in the STEM Center. Primarily, performance measures two (2) and three (3) focus on persistence, and performance measure six (6) focuses on success rate numbers. In regards to persistence, Hispanic students who participated in any grant activity in the Title V grant consistently demonstrated greater persistence compared to students who did not participate in grant activities. The data includes First-Time Freshman cohorts from the Fall 2013 through Fall 2019. For example, in the Fall 2019 Hispanic students who participated in a grant activity demonstrated an increase in persistence from Fall to Spring by 25 percentage points (93% versus 68%). In regards to Fall to Fall persistence, Hispanic students who participated in a grant activity experience an increase of 32 percentage points (78% versus 46%). Additionally, Non-Hispanic students also experienced a significant increase in persistence compared to students who did not participate in a grant activity. In regards to success rates, non-STEM students had a higher success rate than STEM students. For example, in the Fall 2017 STEM students had a 71.8% success rate versus non-STEM students who experienced 84.3% success rate. In the Fall 2018, STEM students experienced a 60.6% success rate compared to non-STEM students who experienced an 80.6% success rate. In the Fall 2019, STEM students who participated in STEM Center activities experienced an 85.2% in success rates compared to non-STEM students who experienced a 94.3% in success rates. However, the success rates for STEM student had significantly improved. It is important to mention that in the students majoring in STEM experience higher attrition rates compared to non-STEM students. It is also worthwhile to mention that in 2018 the Title V/HSI STEM team was finally formed to focus on the various STEM initiatives.

Since the pandemic, we have collected data which is stored on Excel spreadsheets. Based on the data gathered, the following analyses was made.

•In the Fall 2020, there were a total of 669 visits of which 177 were unique students. A total of 714.98 tutoring hours were offered (42,899 minutes), and the average time students spent were 64 minutes per session.

•In the Spring 2021, there were a total of 945 visits of which 163 were unique students. A total of 10,009.35 tutoring hours offered (60,561 minutes), and the average time students spent were 64 minutes per session.

•In the Summer 2021, there were a total of 355 visits of which 40 were unique students. A total of 518.62 tutoring hours offered (31,117 minutes), and the average time students spent were 88 minutes per session.

•Thus far (Fall 2021), there have been a total of 377 visits of which 86 have been unique students. A total of 478.78 tutoring hours have been offered (28,727 minutes), and the average time students spent were 76 minutes per session. The Fall 2021 numbers apply for the first seven weeks of the semester with a total of nine more weeks of data remaining to be collected. The Fall 2021 data goes through end of day on October 12, 2021.

•Currently (Fall 2021), the Virtual STEM Center provides tutoring in Chemistry, Physics, Computer Science and Biology. In the Fall 2020, Spring 2021, Summer, 2021 and the Fall 2021, Chemistry has been most requested tutoring subject by students.

As of the October 29 (2021), for the fall 2021 semester the front desk staff have signed in a total of 2,570 students, tutors and faculty for the Virtual Math and STEM Centers.

Qualitative Data

Describe any qualitative measures you use and summarize the results.
The STEM Center staff utilized the student and faculty survey. We surveyed faculty and students at the end of October (2021) and beginning of November (2021). Students ranked our tutors high on patience. They the majority of the tutors explained the material well, said the tutoring in the STEM Center was very good. The majority agreed that the STEM Center helped them reach their academic goals.

What improvements have you implemented or plan to implement as a result of your assessment of quantitative and/or qualitative data described above?
The STEM Center staff and Math Center faculty have and will continue to streamline processes to better serve the needs of students. Currently, the Virtual Math and STEM Centers have collaborated to provide in-person tutoring at the Math Learning Center (MC-1). We resumed in-person tutoring at the Math Learning Center (MC-1) on Thursday, September 28, 2021.

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ACHIEVEMENTS AND OTHER RELEVANT INFORMATION

Describe your program's achievements this past year. Where possible, describe how these achievements are related to our students and their success!
In the Spring of 2021, the Math and STEM Centers joined forces online to have one Zoom link for both centers rather than have multiple zooms links for the various services. The Virtual Math and STEM Centers team (staff and faculty) has continuously streamlined their process to better serve students. As of September 30, the Virtual Math & STEM Centers began to provide in-person tutoring at the Math Learning Center (MC-1). At this point, we are offering tutoring services both in-person and online.

Since we began offering in-person tutoring from September 28 through October 28t (five-week span), we have had a total of 57 total student visits of which 24 were unique students. Twenty-three (23) students utilized a an in-person math tutor and one used an in-person chemistry tutor at the Math Learning Center over a five-week span. The front desk staff supporting the Virtual Math and STEM Centers have checked in 2,542 visitors which include students, tutors and faculty. These large numbers demonstrate the importance of streamlining tutoring services between the Math and STEM centers to make it more accessible for students seeking tutoring. Additionally, STEM Counseling Services has seen an increase in services.

Describe any recent changes in legislation, policies, procedures, processes, and/or technology (software and hardware) that have impacted or will impact your program/unit.   What effect will these changes have on your program/unit?
We need better data tracking for STEM services, workshops, tutoring and SI. We continue to track tutoring attendance in the Excel spreadsheets. While the PAT 2.0 system has been ready, we have not inputted any tutoring data into the system, yet. The goal is to begin to input all of the data for the Fall 2021 currently stored in excel spreadsheets to the PAT 2.0 system by the end of December 2021.

Guided Pathways: Given the high attrition in STEM education, it is extremely important for STEM students to be supported on all four pillars of the Guided Pathways. We must provide STEM Program maps developed by both STEM instructional faculty and faculty counselors who can create clear pathways and establish transfer pathways. It is necessary for teams to create alignment for STEM pathway courses and learning outcomes with transfer institutions to optimize community college credits to university STEM majors. Additionally, it is critical for us to provide accelerated STEM remediation to help students succeed in college level coursework. We must provide the necessary STEM support in advising, counseling and tutoring. Finally, we must ensure students are learning in their STEM education.

Recently the VPI (now retired), decided for the Math and STEM Centers to take over all of the STEM and Math tutoring for the entire campus. This decision allows for less confusion for students and to improve efficiencies on campus to maximize resources.

In addition to (or in response to) the changes listed above, what board policies, procedures, and processes need to be updated, created, or deleted?
The STEM Center has been in existence since the Spring of 2012. Almost immediately, the STEM Center outgrew the space provided. Given all of these years of great service, the STEM Center has never received a tutoring budget from the general fund. Since the Spring of 2012, the STEM Center has relied on grant funds to support the tutoring, SI, LA, counseling and advising services. While the Math and STEM Centers are collaborating, it is concerning to see the budgets allocated to be decreasing significantly. The lack of funding support is concerning since STEM Center programs and services support Guided Pathways for STEM students.

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PROGRAM/UNIT EVALUATION AND THREE-YEAR PLANNING

Program Evaluation and Planning is completed in two steps.

First, you will complete an overalll evaluation of your unit drawing from your unit assessment data.

Second, working from that evaluation, you will establish you goals for the upcoming three years.

Section 1: Overall Evaluation of Program

Reflect on your unit, the results of your assessments in Part 2 above, and your vision for the future. Then, working together answer the following questions. Summarize your answers in the grid below.

1. What are our greatest strengths?
2. What are our best opportunities?
3. What is our preferred future, what do we aspire to do?
4. What are the measurable results that will tell us we've achieved that vision of the future?

Section 2: Establish Goals and Strategies for the Next Three Years

Once you have completed your overall evaluation, identify a set of goals and strategies for accomplishing them for this upcoming three-year planning cycle. Use the template in Section 2 below to document your goals, strategies, and timelines for completion. Goals should be Specific, Measurable, Attainable, Relevant, and Time –Specific (SMART). Following the goal template below will help you create SMART goals!

OVERALL EVALUATION OF PROGRAM

Discuss your Program's/Unit's Strengths, Opportunities, Aspirations, and Results (SOAR) and summarize your discussion below.

Strengths:
Ever since we opened the STEM Center, we outgrew the space immediately. Considering we opened in the middle of the Spring in 2012, we quickly figured out students urgently needed a space to learn independently and collaboratively. The strength of the STEM Center is to provide academic support such as online tutoring, academic advising and counseling. Prior to the pandemic, we prided ourselves in offering in-person space for students to gather and build relationships with like-minded individuals.

Opportunities:
The most important opportunity for the STEM Center is the possibility of merging with the Math Center. In-person, the STEM Center draws many students, yet we have no opportunity to claim FTES for tutoring since we have no faculty. The Center is fortunate to have two full-time employees paid through the general fund. On the other hand, the Math Learning Center has faculty support, but they do not have the support of a CAST and/or a Classified employees to support the daily operations. Each center in MSE has what the other is lacking and relocating under one space is a solution where everyone benefits. Another opportunity is to continue to offer online tutoring even when the pandemic is over.

Aspirations:
The STEM Center staff aspire to receive stable funding for their tutoring, Supplemental Instruction (SI), and Learning Assistance (LA) programs, STEM Counseling and Advising. Additionally, it would be ideal for the Math and STEM Center to gain a large enough space to support the various programs and services provided by both centers. Given the Math and STEM centers support students pursuing STEM degrees as well as institutional goals, it would be ideal for these centers to be institutionalized. Another aspiration would be to develop STEM programs that focus on Diversity, Equity and Inclusion (STEM) to encourage, support, retaining and graduate minoritized STEM students.

Results:
The results are: (1) Both Hispanics and non-Hispanics students who participate in STEM grant activities experience higher persistence in fall to spring and fall to fall semesters. (2) Developed efficient and effective academic support services such as tutoring, SI, LA, counseling, and advising. (3) Additionally, the STEM Center provides programs such as the Rising STEM Scholars, STEM Core and Women in STEM Network where students have an opportunity to attend online workshops to listen to guest speakers sharing their experiences and research. (4) Supporting both mathematics students and faculty at Palomar College as shown by satisfaction surveys. (5) Prior to the pandemic, provided faculty the opportunity to offer office hours to meet with students in the STEM Center.

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PROGRESS ON PRIOR PRP GOALS

List current or prior PRP goals your unit has been working on and provide an update by placing an "X" in the appropriate status box.

Prior PRP Goals

Goal 1

Goal
A STEM Center goal is to increase the academic success and retention rates for students of diverse backgrounds.

Choice
Ongoing

Goal 2

Goal
Another STEM Center staff will continue to conduct outreach to our communities focuses on Hispanic Low Income groups with information regarding the support services offered in the MSE Division.

Choice
No longer a goal

Add any comments related to your work on prior goals, if needed (e.g., successes, challenges, reasons for eliminating a goal).
Update on Goal 1: While we provide services to a diverse group of students, unfortunately we do not have the ability to get data on DI groups.

Update on Goal 2: In the fall 2020, we lost the STEM Outreach Specialist, and the direct STEM Outreach efforts were suspended. Without an Outreach Specialist we cannot continue to offer direct STEM Outreach efforts. As a result of not having outreach staff and the pandemic, we have had to sunset this goal. While we understand we can no longer have an outreach staff member, it is concerning that STEM outreach staff are now more critical than ever.

ESTABLISH GOALS AND STRATEGIES FOR THE NEXT THREE YEARS

New Goals: Please list all goals for this three-year planning cycle.

Goal 1

Description
Increase the number of diverse students who utilize the STEM Center programs and services.

Strategies for implementation
Develop a marketing plan that outlines various strategies to advertise programs and services on campus. Collaborate with the Chemistry, Physics and Life Sciences faculty to encourage students to utilize counseling, advising, tutoring, SI and the LA program in the STEM Center. Create effective flyers to promote STEM Center programs and services to students. Utilize social media to promote the STEM Center programs and services. Update the STEM Center website with relevant information to promote programs, services and events. Complete the STEM Canvas shell to stay in communication with students.

Timeline for implementation
AY 22-23

Outcome(s) expected (qualitative/quantitative)
Quantitative outcomes: Increase the number of diverse students who seek counseling, advising, tutoring, SI and LA services in the STEM Center.

How does this goal align with your unit's mission statement?
The mission of the STEM Center is to essentially provide space for students to congregate and encourage them to take ownership of their learning to excel in their STEM courses. Our goal aligns with the mission since data has demonstrated that students who participate in STEM Center activities do significantly better than students who do not participate.

How does this goals align with the College's Strategic Plan 2022?
This goal aligns with the Strategic Plan Goal 1 focusing on students: Increase student access, progress, and completion, while decreasing equity gaps. (Guided Pathways: Get on the Path, Stay on the Path). For example, the STEM Center provides academic support to ensure students experience academic success. Additionally, we offer programs and services to create equitable outcomes.

This goal also aligns with the Strategic Plan Goal 2 focusing on teaching and Learning: Implement instructional strategies that strengthen teaching and learning across the college. (Guided Pathways pillars: Clarify the Path, Ensure Learning) As we have seen, students who attend the STEM Center experience higher retentions rates than does who not participate in activities. Encouraging students to participate in STEM Center activities will allow them to experience greater persistence and success rates.

Expected Goal Completion Date
5/31/2023

Goal 2

Description
Our second goal is to analyze student data related to persistence, retention, transfer and success rates of students utilizing programs and services in the STEM Center. Collaborate with IRP to disaggregate data to determine how to better improve programs and services. The data will compare the success rates of students utilizing STEM Center programs and services compared to students not using the center.

Strategies for implementation
Annually work with IRP to collect and analyze data in the late summer to inform the PRP process and our STEM Center practices.

Timeline for implementation
AY 22-23

Outcome(s) expected (qualitative/quantitative)
Quantitative Outcomes: We expect persistence, retention, transfer, and success rates of students participating in STEM Center activities to be higher than those students who do not participate.

How does this goal align with your unit's mission statement?
The STEM Center's mission is to improve the academic success of students pursuing STEM disciplines. Collecting and analyzing disaggregated data permits staff to fulfill their mission statement of supporting students of diverse backgrounds to experience academic success. Gathering data will allow STEM Center staff to make better programmatic decisions, remove inequities, and provide quality programs and services.

How does this goals align with the College's Strategic Plan 2022?
This goal aligns with SP Goal 2, Teaching and Learning: Implement instructional strategies that strengthen teaching and learning across the college. (Guided Pathways Pillars: Clarify the Path, Ensure Learning).

Expected Goal Completion Date
5/31/2024

How do your goals align with the College's values of equity and inclusion?
Our first goal is to increase the number of diverse students who utilize academic support programs in the STEM Center. This goal aligns with the Diversity, Equity and Inclusion efforts on campus since we are promoting the STEM disciplines to historically minoritized students. The various STEM programs and services provide access to underrepresented and underserved students. We are providing equitable programs and services to students who may not be deemed as potential STEM students. The STEM Center staff have a student-first mentality and make sure the needs of students are met. The STEM Center is similar to a one-stop center where students can receive tutoring, counseling and speak to a faculty volunteer if needed. Students have an opportunity to work independently or collaboratively with like-minded STEM students. It will be important for the STEM Center to continue to hire tutors of diverse backgrounds to reflect an inclusive environment.

Our second goal is to analyze student data related to persistence, retention, transfer and success rates of students utilizing programs and services in the STEM Center. As budgets decline it is imperative to make decisions based from data to determine which programs and services are the most effective for student access and success. The goal of gathering data is to ensure decisions are made on time to make necessary changes if needed.

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. Click here to access Strategic Plan 2022.
VfS Goal 2: Transfer
The STEM Center works closely with the Title V HSI STEM grant team to encourage students to have a smooth transition to CSUSM. We have the CSUSM STEM Career Advisor who is available online twice a week to meet with students about the various CSUSM opportunities.

VfS Goal 4: Workforce
Between the STEM Core, the Women in STEM Network and the Rising STEM Scholars programs, they provide a plethora of workshops to learn about opportunities related to skill development, summer research opportunities, internships, scholarships, networking, interview tips, resume writing and career success.

VfS Goal 5: Equity
Since its inception in 2012, the STEM Center was created with a focus on Diversity, Equity and Inclusion. The STEM Center provides a welcoming environment to all students to ensure they have a space and a place of belonging. STEM programs and services have been intended to ensure students are thriving academically.

Reminder: Data does not autosave. Save this content before moving to the next section or closing form.

RESOURCES

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

The section is organized into the following four parts:

PART 1: Staffing Needs (Faculty and Additional Staff)

PART 2: Budget Review

PART 3: Technology and Facilities Needs

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

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.

PART 1: STAFFING NEEDS

Are you requesting new Classified, CAST, or AA positions?
Yes

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.

REQUEST FOR ADDITIONAL CLASSIFIED, CAST, AA

Staff, CAST, AA request 1

Title of position
Instructional Support Assistant II

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.
The in-person STEM Center is managed by the STEM Center Supervisor and the STEM Center Coordinator. Both full-time employees are also covering the 20 hours each on the Virtual Math and STEM Centers. While it is beneficial to have two full-time positions support the STEM Center, it is not feasible for two employees to fully support the the student and programmatic needs of the STEM Center. In the past, we relied on student employees to cover the front desk in the STEM Center during in-person services, but it is important to have full-time staff readily available in the center. It is not cost effective to have the STEM Center Supervisor and Coordinator to be covering the front desk when they need to tend to other duties. For these reasons, we ask for an Instructional Support Assistant II to help support the needs of the STEM Center. This person would assist the front desk coverage of the STEM Center. Help coordinate the online tutoring and in-person tutoring. We suggest an ISA because this role allows the staff member to provide tutoring to students during downtime.

Does the position assist in establishing more efficient District Operations through either of the following: reorganization/restructuring OR use of technology?
If this position would be approved, then this position would help establish more efficient district operations, especially since we continue to have conversations about the possibilities of a Math and STEM Center merger. If MSE centers merge, then this position would assist both Centers.

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.
The STEM Center supports students in their STEM journeys at Palomar College. Students pursuing STEM degrees experience a high drop out rate, and it is important that we continue to support their needs. The STEM Center supports students by providing access to critical resources that help students secure their dreams of earning their STEM degrees. This role will continue to ensure that we provide quality resources for students.

Strategic Plan 2022 Objective

1:1   1:3

If the position is not approved, what is your plan?
We will continue to hire Federal Work Study students as best we can. However, as the STEM Center Supervisor, I have never had students not email me or call me regarding the FWS positions available with the STEM Center. It is now the beginning of November and not one student has called or emailed me to schedule an interview. One student was referred by the FWS Coordinator, but by the time I contacted them they had already accepted a position with the Cashier Department. I am concerned we do not have funds for hourly employees to help cover the front desk expenses.

Staff, CAST, AA request 2

Title of position
Student Support Specialist I (STEM Core & STEM Pilot Program)

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.
The Student Support Specialist was working part-time for a total of 18 hours per week, and we are extremely happy her part-time role became full-time in May of 2021. Currently, her position is paid by the Title V/HSI STEM Grant. However, the grant will officially end next year. While we are content the position is full-time supporting the STEM Core Program, we are concerned the position will end will once Title V/HSI funds are depleted. This person is currently helping to develop a STEM Pilot Program and will continue to be a direct support in the Spring 2022.

Does the position assist in establishing more efficient District Operations through either of the following: reorganization/restructuring OR use of technology?
This position definitely establishes more efficient district operations especially related to Diversity, Equity and Inclusion.

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.
The STEM Center supports students who are interested in succeeding in their STEM classes, transferring and earning their STEM degrees. While we serve all students, we are intentional about recruiting and supporting the academic needs minoritized students. This person would directly impact students who are in STEM Core and the STEM Pilot program.

Strategic Plan 2022 Objective

1:1	1:2	1:3	2:1
2:2	2:3	2:4	

If the position is not approved, what is your plan?
This means the STEM Core program would no longer exist. As the STEM Center Supervisor, I would be supporting the STEM Pilot Program as much as possible.

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for 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 budget considerations you would like your dean/supervisor to be aware of for the upcoming year?
Yes

What budget considerations would you like your dean/supervisor to be aware of or to consider? Please be as specific as possible. For example, if you need an increase in the 40000 account and a decrease in the 23000 account, describe what increase your department needs, how much, and a description of why the department needs the adjustment.
The total expenses for AY 20-21 was $885,561.32. The total expenses paid for hourly rates of tutors, SI Leaders, embedded tutors, and LA's was $81,047. The total benefits paid for benefits would be $4,514.32. Based on last year expenses, we are requesting $90,000 (23000 account).

Cost of a Student Support Specialist is $3,850 monthly and $46,200 annually.

Reminder: Data does not autosave. Save this content before moving to the next section or closing form.

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

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

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

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

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

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

PART 3: TECHNOLOGY

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

Note about technology requests:

All technology requests will now go through a review process before prioritization.

- *Your director will send you a Technology Request Checklist (aka Technology Proposal Analysis Checklist).*
  - *You must complete this checklist and return it to your director no later than 11/19/2021.*
  - *Once the director approves the form and the request, the director will send the document to the Technology Review Committee to determine IS resources needed, any integration issues, and/or potential overlap with existing technology.*
  - *The results of the review will be sent to the director with feedback.*
  - *The director will determine whether or not the request moves forward for prioritization and/or implementation.*
    - *Requests for one-time funding will move forward for prioritization.*
    - *Requests that use funding from your department budget may move forward for purchase.*

PART 3: FACILITIES NEEDS

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

Facilities Requests

Facility Request 1

What are you requesting?
We need a large enough space to co-late both the STEM Center and the Math Center.

What discipline PRP plan goal/objective does this request align with?
This request aligns with the opportunities portion of the evaluation. The first conversations of co-locating occurred in 2018, and it would be great to co-locate.

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

1:3   1:4

Provide a detailed description of the facilities item or space requested. What is it, and why do you need it? Please be as descriptive as possible. Include in your description how the requested item aligns with your discipline's PRP goals, analysis of PRP data, SLO/SAOs.
Administration has been discussing the possibilities of co-locating into one place to continue to offer the Math and STEM Center programs and services. Since we have collaborated online we have been efficient and effective in maximizing our resources to better serve the needs of students. Now, that we are returning back to campus it would be an ideal time to find a space for both centers.

This request aligns with our SAO's since students who use the STEM Center have a higher persistence rate than students who do not utilize the STEM Center services. The merging of both centers will allow STEM Center students to connect and access faculty every hour on a weekly basis. Additionally, our goals are written with an equity lens which align with the practices of the STEM and Math centers.

Is there an associated cost with this request?
Yes

Will you fund the request through your budget or other sources?
Not sure

What impacts will this request have on the facilities/institution (e.g.,water/electrical/ADA compliance)?
Certainly, this new location for both the STEM and Math Center would require water, electrical, and cleaning.

One Time Needs

For more information about funding sources available, see IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES (on the left menu of the web page under "Instructional Funding Sources").

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

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

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

**Reminder: Data does not autosave. Save this content before moving to the next section or closing form.**

Page 5 will show for reviewers (VP and/or Planning Councils) upon submission of the form.

FEEDBACK AND FOLLOW-UP

Once your Program/Unit PRP is completed, your division or planning council should review and discuss based on your Vice President's planning process. This area is intended for summary feedback and recommendations from the divisional review.

Confirmation of Review by Division / Planning Council

Person/Group/Council who reviewed PRP:	Sign Date
Patricia Menchaca	11/11/2021

FEEDBACK

Strengths and successes of the program/unit as evidenced by the data, analysis, and assessments:
The STEM Center Staff have done an excellent job at developing a STEM culture of support within the Center. Usage numbers declined but this was direct result of the sudden shift to remote learning after the onsite of the pandemic. STEM staff worked quickly and collaboratively with the Math Center staff to overcome many obstacles presented by the pandemic. This level of teamwork and varying skillsets from staff led to a very successful implementation of online tutoring. The staff are also forward thinkers and have been working on plans to ensure little to no disruption as we transition to the SP22 semester with new covid policies/procedures and an increase in face-to-face instruction. The Center has done an excellent job in developing a plan that encourages data driven decision making moving forward thereby allowing for the advocacy of funds and a more targeted approach to identifying challenge areas.

Areas of Concern, if any:
The program review document has eliminated the outreach goal.

Recommendations for improvement:
I would encourage the staff to revisit the list of prioritized outreach activities, evaluate the impact fo each, and determine the feasibility of continuing the most impactful and fiscally appropriate.

Vice President Review

Strengths and successes of the discipline as evidenced by the data and analysis:

Areas of concern, if any:

Recommendations for improvement:

VP Name: **Signature Date:**