



Non-Instructional Program Review and Planning

OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR NON-INSTRUCTIONAL AREAS

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 as well as strategies necessary to improve the operation of your area. With that in mind, please answer the following questions:

[We are using the Strengths, Opportunities, Aspirations, Results \(SOAR\) strategic planning technique to help us focus on our current strengths and opportunities, create a vision of future aspirations, and consider the results of this approach.](#)

BASIC UNIT INFORMATION

Academic Year
2018-2019

Division Name
Mathematics, Science and Engineering

Unit Name
STEM Center

Name Person Responsible for the Program/Unit
Mireya Gutierrez-Aguero, STEM Center Supervisor

Please list all participants in this Program Review:

Name	Position
Mireya Gutierrez-Aguero	STEM Center Supervisor
Judea Werner	Administrative Specialist II

Website address for your program or unit
<https://www2.palomar.edu/pages/stem/>

Program/Unit Mission Statement

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

What is your Program/Unit's mission statement?

The mission of the STEM Center is to empower students to take ownership of their learning and responsibility for their success in the STEM fields. The STEM Center provides students with a sanctuary to become academic risk-takers by testing the bounds of their knowledge; learning from their mistakes;

nurturing their creativity; and actively engaging with peers and faculty in scholarly dialogue and debate.

Describe how your mission aligns with and contributes to the College's Vision and Mission.

The STEM Center programs and services align with the Palomar College Vision of Learning for success by providing an array of programs and services to ensure the academic success of students pursuing STEM disciplines.

The STEM Center inspires and supports students from diverse backgrounds to become independent and collaborative learners in historically challenging STEM courses.

In addition the STEM Learning Center supports the Vision and Mission in the following ways:

*Given the need to diversify STEM, the STEM Center Team consisting of MSE faculty, staff, administrators, and faculty counselors work closely to promote programs and services to students who have been left out in the margins

*The learning center provides a space and place of belonging for all students of diverse backgrounds

* The Guaranteed Transfer Admission Support Program (GTASP) between Palomar College and CSUSM allows ensures students experience a seamless transfer experience

*The STEM Center supports Access, Equity, Diversity, and Inclusiveness through the STEM Ambassador Outreach Program and the STEM Conference by targeting underrepresented students from K-12 students in order for them to participate and engage in hands-on science experiments and interactive STEM workshops.

*Offering the STEM Ambassadors Outreach Program and the STEM Conferences allows the campus to have a physical presence and engage with the community members. In addition, we have collaborated on Tarde de Familia, Week of Welcome, the High School Counselor Conference, and various community events.

* The STEM Center provides Supplemental Instruction (SI), STEM Tutoring, CSUSM Academic Advising, Counseling, and Research Camps where we intentionally support the academic needs of all students regardless of their race/ethnicity, socio-economic status, and aptitude.

Overall, the various programs and services offered in the STEM Center advance the campus mission of engaging teaching and learning for students of diverse origins, experiences, needs, abilities and goals.

Program/Unit Description

Staffing

Total Number of Full-time Staff

4

Total Number of Permanent Part-time Staff

0

Number of Classified Staff

3

FTE of Permanent Part-time Staff

0

Number of CAST Staff

1

FTEF of Part-time Faculty

1

Number of Administrators

1

Number of Full-time Faculty

0

What additional temporary hourly or contract staff support this unit and/or department?

The two full-time staff (STEM Center Tutoring Coordinator and the STEM Outreach Specialist) begin their

full-time position as of Wednesday (4/10/2019). For the last two (2) years and four (4) months, we have been operating at full capacity with the support of temporary student staff. Judea Werner the Title V/HSI STEM Administrative Specialist II has been supporting the STEM Center since her appointment in November 2018. Cindy Anfinson has been instrumental in supporting STEM Center operations since January 2018, and her appointment expires in May 2019.

As part of this PRP cycle, Human Resource Services has sent organizational charts to all non-instructional units. Please review the charts and make any needed changes. You have three options to submit your organizational chart:

1. Upload the document (under 5 MB)
2. Provide URL to document.
3. If you cannot create an organizational chart, or did not receive one from Human Resource Services, list the positions in your unit showing reporting relationships (e.g., Manager Facilities with the following direct reports, Supervisor Position A, Supervisor Position B, Supervisor Position C; Supervisor Position A with direct reports, Position A, Position B, Position C)

How will you submit your organizational chart?

Upload Document

Upload Organization Chart

STEM Center Org Chart.pdf

Program/Unit Description

Who utilizes your services?

We have a diverse group of students utilizing the STEM Center. In 2014-2015, the STEM Center enrolled 2,250 students who logged in over 27,000 sessions. As of 2017-2018, we had

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

1. STEM Learning Center
2. Tutoring Component
3. Supplemental Instruction (SI)
4. Rising STEM Scholar Program
5. CSUSM Academic Advising
6. Counseling Component
7. STEM Newsletter
8. Annual STEM Conference (since 2017)
9. STEM Speaker Series & Workshops
10. STEM Ambassador Program
11. Advertising & STEM Promotional material
12. Biology Research Camp & Engineering/Computer Science Research Camp (since 2017)
13. Support the STEM Faculty Retreat
15. Lab Assistants (LA's)

PROGRAM/UNIT ASSESSMENT

Service Area Outcomes

Service Area Outcome 1

Describe this Service Area Outcome

Students who use the STEM Center tutoring during the semester will pass their STEM courses at a higher rate than those that do not use tutoring.

When was this SAO last assessed?

Due to the various sign-out options on the PAT system, tutoring is not adequately captured in the Tutoring Report.

What did you learn from the last assessment?

We need a better tracking system, and a full-time designated staff to oversee the daily operations of the tutoring program.

Are there improvements you have implemented or plan to implement as a result of this SAO Assessment? If so, please describe.

We definitely need to implement a better assessment of tutoring and the SI Program. With more staff supporting the various programs and services, the STEM Center Supervisor will have time to assess and evaluate programs in a timely fashion.

Service Area Outcome 2**Describe this Service Area Outcome**

Students who use the STEM Center Supplemental Instruction (SI) program will perform 5-30% higher than those who do not participate in SI.

When was this SAO last assessed?

The Dean of MSE submitted a request to IRP to evaluate effectiveness of the SI Program. In the Fall 2018, we submitted a list of all the SI Courses offered since 2012. While we haven't received the data results, we anticipate a notable increase in passing rate for students utilizing the SI Program as we have seen in past years.

What did you learn from the last assessment?

We need better tracking systems and designated staff to support the SI program.

Are there improvements you have implemented or plan to implement as a result of this SAO Assessment? If so, please describe.

We have the STEM Center Tutoring Center Coordinator starting on Friday, April 12th, and we anticipate we will make great improvements.

Other Assessment Data

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

Quantitative Data

Measure	2015	2016	2017	2018	Definition/Description of Measure
Final grade on SI Course for Chem 115		11% Higher			Students who participated in SI session earned 11% higher than students who did not attend SI sessions on their final grade. The SI

		average was 60.31 % and the non-SI average was 49.24%
Final grade on SI Course for Chem110Lab	8% Higher	The final grade average of students who attended the SI Sessions is 78.29% which is approximately 8% higher than students who did not attend the SI sessions.
Final grade on SI Course for Anatomy (Bio 210) Mon & Wed	27% Higher	70.19% versus 43.27% with a difference of 27%.
Final grade on SI Course for Anatomy (Bio 210)	27% Higher	84.50% versus 57.99% with a difference of 27%.
Organic Chemistry 221 Lecture	3% Higher	89.73% versus 86.75% with a difference of 3%.

Are there any comments or notes about this quantitative data?

We reviewed the Tutoring report which includes tutoring data from 2010-2016, and unfortunately the data does not adequately capture the actual amount of tutoring offered on a daily basis. For example, the Tutoring Report provided by IRP states that we served a total of 2,065 students from 2010-2016. This is partly due to the current tracking system that we are using. For example, while students at other centers have limited sign-out options, we allow students to select various reasons for their visit such as computer usage, studying, counseling, SI, tutoring and other usage.

Due to the lack of data on the tutoring and SI Programs, Dean Kailikole requested faculty with SI support to provide final grade percentages for all students to the STEM Center Supervisor. We were instructed to analyze the data based on the grades and total number of sessions that students attended. In the Spring 2016, we offered a total of seven SI supported courses. In all of these courses, students who participated in SI sessions performed at a higher rate ranging from 3%-27% over the class average. For instance, in Anatomy (Bio 210) the students who participated in SI sessions earned an average of 27% on their final course grade.

Qualitative Data

Describe any qualitative measures you use and summarize the results.

Since December 2016, we have not collected Satisfaction Surveys for the STEM Center. In the spring of 2017, we stopped collecting pre and post surveys for the Supplemental Instruction (SI) Program due to the lack of the Faculty SI Coordinator or the STEM Center Coordinator. We had one full-time CAST Supervisor operating on survival mode for almost 2 years and 4 months.

What improvements have you implemented or plan to implement as a result of your assessment of quantitative and/or qualitative data described above.

With the incoming support of the STEM Center Tutoring Coordinator and the STEM Outreach Specialist, we will reestablish previous practices of data collection to improve our current programs and services. We intend to

Achievements and Other Relevant Information

Achievements

Describe Achievement

As the STEM Center Supervisor, I feel extremely proud that I've been able to motivate and inspired our STEM Center Team consisting of student employees to achieve the impossible. Regardless of the limited resources, we continued to have a reputable reputation on campus and in the community. Even with limited resources, we maintained programs such as the Summer Research Camps, some Outreach and the STEM Conference.

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 are preparing for AB 705.

In addition to (or in response to) the changes listed above, what in-house policies, procedures, and processes need to be updated, created, or deleted?

None.

PROGRAM/UNIT EVALUATION AND THREE YEAR PLANNING

Program Evaluation and Planning is completed in two steps.

Section 1: Overall Evaluation of Program

Reflect on your program/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 your goals for this upcoming three year planning cycle. Use the template in Section 2 below to document your goals, strategies, and timelines for completion.

Overall Evaluation of Program

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

Strengths

The STEM Center strengths are the student staff that are highly committed to supporting the various programs and services. We have a strong team work ethic that values the importance of supporting the academic needs of students pursuing STEM degrees. In the last couple of years, MSE faculty have supported the STEM Center, STEM Outreach Programs and the Summer Research Programs. Another

great strength that allows us to be efficient and effective is that we seek students input in our daily operations.

Opportunities

Since we will have two additional full-time staff beginning April 12th, we can now focus on strengthening and improving our current programs and services. Specifically, we want to focus on our Rising STEM Scholar Program, and offer incentives that will encourage students to be more proactive in their STEM journey. For instance, we would like to schedule more campus visit to local 4-year universities, offer additional workshops and provide opportunities to attend STEM conferences locally/nationally.

Aspirations

*In order for student to feel a stronger sense of community, we would like to provide our Rising STEM Scholars with tangible keepsakes such as program T-shirts and/or graduation stoles.

*We would like to develop relationships with industry partners to create scholarship and internship opportunities.

*We aspire to continue to maintain a reputation of excellence the STEM Center has cultivated.

*We aspire for our STEM Center staff (tutors, LA's and SI Leaders) to be better trained to be successful in their roles.

Results

*We would like better systems for collecting data to ensure we are making proper decisions for the various programs and services offered in a timely fashion.

*With additional staff members, we are excited to implement measures for collecting qualitative data such as satisfaction surveys for Tutoring.

*We would like our STEM Center staff to attend formal conferences and trainings such as ACTLA and Supplemental Instruction.

Program Goals

In the previous sections, you identified opportunities for improvement. Using these opportunities, develop 3-year [SMART goals](#) for your department. Goals should be Specific, Measurable, Attainable, Relevant, Time-Specific. Ensure your goals align with the mission of your department and/or [the College's strategic plan](#).

Please list all discipline goals for this three-year planning cycle. [Click here for previous PRPs and goal information.](#)

Goals

Goal 1

Brief Description

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

Is this a new or existing goal?

Existing

Goal Status

Ongoing

How will you complete this goal?

We need to offer better training to the STEM Center Tutors, LA's and SI Leaders to better serve our students.

Implement better methods for informing our current student population of the various programs and services offered in the STEM Center. We will have the STEM Center Coordinator and the STEM Outreach

Specialist help disseminate STEM Center information.

Timeline for Implementation

This year and on-going.

Outcome(s) expected (qualitative/quantitative)

Increase retention and persistence of students utilizing STEM Center resources. This will also have a positive impact on enrollment.

Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.

We will need to provide more opportunities for personnel to receive proper training.

Of the resources described above, which ones are reallocated and which ones are new or needed?

The SI Regional Conference and ACTLA trainings are new to the STEM Center personnel.

How does this goal align with your department mission statement, the college strategic plan, and Guided Pathways?

Absolutely, the goal aligns with the STEM Center mission statement and the strategic

Expected Goal Completion Date

5/29/2020

Goal 2

Brief Description

The STEM Center staff will continue to outreach to disproportionately impacted (DI) groups with information regarding the services and supported offered in the STEM Center.

Is this a new or existing goal?

Existing

Goal Status

Ongoing

How will you complete this goal?

We will work closely with MSE faculty, Veterans, EOPS and TRIO personnel to identify potential students from DI groups.

Timeline for Implementation

This year and on-going.

Outcome(s) expected (qualitative/quantitative)

Increase success and retention for DI groups who utilized the STEM Center resources.

Describe the resources (human, technology, equipment, etc) you will need or will assign to implement this goal.

The STEM Center personnel will continue to attend training to support DI groups to better serve various student populations.

Tutor training components will include support and retention of DI groups. All tutors will be required to participate in a cultural simulation exercises and discuss the impact of culture on learning.

Of the resources described above, which ones are reallocated and which ones are new or needed?

These trainings will be new for the majority of the STEM Center personnel.

How does this goal align with your department mission statement, the college strategic plan, and Guided Pathways?

Supporting the tutoring needs and empowering students to become independent learners directly aligns with the mission, strategic plan and Guided Pathways.

Expected Goal Completion Date

5/29/2020

How do your goals align with the College's value of diversity?

We specifically target underrepresented students for the various programs and services offered in the STEM Center.

RESOURCES

Staffing Needs

If you have a staffing need, Identify if the staffing need is to replace a position or if the need represents a new position. Further explanation /prioritize. How does it align with North and South Centers/ Define what it is you need staff to do.

Are you requesting additional personnel?

Yes

In the last ten years, what is the net change in number of Staff in the department? (loss vs. gain)

The STEM Center opened in March of 2012. We just completed our 7th year serving serving students. We have operated when there was an abundance of resources and a limited budget. The STEM Center operates with two full-time staff, but we need additional support. We figured an ISA II would be ideal since we are always in need of tutors especially chemistry tutors.

Request for additional personnel

Position 1

Title of Staff position you are requesting

Instructional Support Assistant II

Which goal/strategy in your three-year plan does this resource request support?

This position would directly impact the goals of increasing the academic success and retention rates of students of diverse backgrounds.

Strategic Plan 2019 Objective

- 1.1: Implement our campus theme "Better Together" and encourage all employee groups and students to include the campus theme in activities, discussions, and events on campus and in our community.
- 1.2: Encourage and promote innovative instructional and student support practices and strategies focused on strengthening teaching and learning.
- 2.3: Develop curriculum and processes to ensure compliance with Assembly Bill 705
- 2.6: Strengthen and integrate existing programs focused on persistence and student success

Brief description of the need for this resource / Impact on other areas of the college (see technology, equipment, other needs)

With the support of an ISA, we know this position will allow the STEM Center to better serve the

academic needs of students.

Is this a new position, a vacant position, modification to existing position, or other?

New

Technology, Equipment and Other Needs

Do you have funding requests?

No