



Program Review and Planning 2019-2020

OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review is about documenting the plans you have for improving student success in your program and sharing that information with the community. Through the review of and reflection on key program elements, program review and planning identifies program strengths as well as strategies necessary to improve the academic discipline, program, or service to support student success. With our new Guided Pathways plan, this review becomes even more crucial for the success of our students and college.

[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 PROGRAM INFORMATION

Academic Year
2019-2020

Are you completing a comprehensive or annual PRP?
Annual

Department Name
Earth, Space, and Environmental Sciences

Discipline Name
Astronomy (ASTR)

Department Chair Name
Catherine Jain

Division Name
Mathematics, Science and Engineering

Website address for your discipline
<https://www2.palomar.edu/astronomy/>

Discipline Mission statement

The mission of the Astronomy Program at Palomar College is educate our students in the fundamental science of astronomy as a way to understand our universe. We achieve this mission by providing high quality educational opportunities in astronomy for a diverse student population who wish to achieve general education science credit, earn a certificate of achievement, or to fulfill transfer requirements for a degree in astronomy at California universities. As one of the core STEM disciplines, our astronomy courses promote the understanding of basic science and physical processes to create a science literate society and encourage student participation in STEM disciplines and careers.

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

Does your discipline have at least one degree or certificate associated with it?
Yes

Are any of your programs vocational (CTE/CE)?
No

List all degrees and certificates offered within this discipline.
Certificate of Achievement (CA) - Astronomy

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

Mark Lane (Professor of Astronomy & Planetarium Director)

W. Scott Kardel (Associate Professor of Astronomy and Assistant Planetarium Director)

Full-time faculty (FTEF)

2.0

Part-time faculty (FTEF)

0

Classified & other staff positions that support this discipline

ADA 20%; Instructional Assistant IV 10%

Additional hourly staff that support this discipline and/or department

None

PROGRAM INFORMATION

PROGRAM OUTCOMES

Begin this section by reviewing the Program Review reports for courses and programs in TracDat. All active course and program outcomes should be systematically assessed over a 3-year cycle.

- **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 and align with employer and transfer expectations?

We believe that our program learning outcomes are comprehensive and communicate the scope and depths of our transfer courses and certificates. They are developed in consultation with our counterparts at key transfer institutions for our students (i.e. SDSU, CSUSM).

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

We assess our program learning outcomes over a 3-year cycle by reviewing student performance in our key transfer classes. Changes in learning assessments are considered and made if they are not effective in summarizing outcomes.

Summarize the major findings of your program outcomes assessments.

Students have met or exceeded all of our program outcome assessments except one. We are struggling with getting students to pass the SLO on the seasons. We are currently working on a strategy that will better assess the students in a way that will more accurately quantify this outcome.

Depending on the degree or transfer goals of our students, they have the choice of three different GE pathways:

- [Associate Degree GE Requirements](#)
- [CSU GE Requirements](#)
- [IGETC Requirements](#)

Palomar College has identified a set of General Education/Institutional Learning Outcomes, which represent the overall set of abilities and qualities a student graduating from Palomar should possess. [Click](#)

[here for a link to Palomar's GE/ILOs.](#)

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 we will identify a program standard and a stretch goal (what you would like to move toward) for program completions.

The standards represent the lowest number of program completions deemed acceptable by the College.

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.

In this section we will identify a program standard and a stretch goal (what you would like to move toward) for programs.

List the number of completions for each degree/certificate for the previous year.

AS - ASTR (1 student)

CA - ASTR (2 students)

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

What factors have influenced your completion trends?

The astronomy CA stayed the same (2 students) but the astronomy AS completion decreased by 1. This is explained by the elimination of the AS degree in the 2017-18 school year.

The Chancellor's Office Vision for Success stresses the importance of reducing equity gaps through faster improvements of underrepresented groups.

ACCJC also requires that colleges establish institutional and program level standards in the area of success rates. These standards represent the lowest success rate deemed acceptable by the College. 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.

[Click on this link to review the course success rates \(A, B, C, or Credit\) for your discipline.](#)

In this section we will identify a course success rate standards and a stretch goal (what you would like to move toward) for programs.

Course Success 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/>)

COURSE INFORMATION

COURSE SUCCESS AND RETENTION

What is your program's standard for Discipline COURSE Success Rate?

50.0%

Why did you choose this standard?

Astronomy can be a difficult subject for many students. It requires students to have some K-12 science experience that many students are currently lacking. When choosing a general education course to take to fulfill their GE requirements, many choose astronomy not realizing that they will have to work harder than other non-science courses. Even with careful and patient instruction, many of these students perform at a lower level than they otherwise would in non-science courses. It is important that our astronomy program at Palomar College adheres to the standards that CSU and UC schools demand in their astronomy courses if we are to maintain articulation agreements with the university system.

One development that is becoming apparent is an increase in the number of our students who are receiving financial aid. Although this allows them access to college that they might not otherwise afford, many of these students enroll in astronomy not expecting a subject that is rigorous and challenging. To keep their financial assistance, they must be enrolled at the end of the semester but many of them stop showing up to class and effectively drop out without officially dropping the course. Many "FW"s are assigned at the end of the semester which drags down our success rate.

For these reasons it is unrealistic to expect that the astronomy discipline will meet the standard for Discipline Course Success Rate that the rest of the college holds. The data provided by the Institutional Research and Planning database shows that a 50% success rate for the astronomy discipline is a realistic goal for astronomy. At this time we are averaging around 50% and we feel that we can keep a 50% rate a reality and a norm for the discipline.

What is your Stretch goal for COURSE success rates?

52.0%

How did you decide upon the goal?

We believe that we can increase our course success rate but our plan of action will take some time before results are apparent. We believe that a small increase to the existing rate is a reasonable stretch goal. If we are successful, we can increase the next stretch goal and so on.

When or Where: Why do you think differences based on when or where the course is offered exists? What do you need to help close the gap?

We are seeing a drop off in our evening enrollments. This might be related to labor forces since a stronger economy means fewer students returning to school - many of these returning students are older and would normally prefer a night class.

Age: Why do you think age differences exist? What do you need to help close the gap?

Our older students are significantly more successful than our younger ones. Possibly they have the study skills and level of commitment necessary to be more successful in our courses.

COURSE OUTCOMES

How have you improved course-level assessment methods since the last PRP?

Our last PRP was completed last spring. SLO assessment methods have remained the same since then.

Summarize the major findings of your course outcomes assessments.

Overall our students are meeting or exceeding our minimum standards for SLO success with one nagging exception - the seasons. This has been a long standing failure in our SLOs and we have a strategy to change the way we assess the SLO questions regarding the seasons in a way that might raise the success

rate for this outcome.

This section is intentionally blank for annual PRPs. Please click "Next" to continue.

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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

Revise program requirements for the Astronomy Certificate

Is this a new or existing goal?

Existing

Goal Status

No longer a goal

How will you complete this goal?

The plan in Spring 2019 was to Revise the astronomy certificate to make it more attractive to students by placing a greater emphasis on astronomy and less on advanced mathematics and physics, but articulation concerns have shown that this is not an option.

Outcome(s) expected (qualitative/quantitative)

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

Expected Goal Completion Date

9/16/2019

Goal 2

Brief Description

Increase enrollments for the ASTR105L courses

Is this a new or existing goal?

Existing

Goal Status

Ongoing

How will you complete this goal?

In recent semester, we have had a difficult time reaching minimum enrollments for the night section of

astronomy lab. We moved the night lab to a daytime slot as an experiment to see if enrollments become more robust and they did.

We have also worked to advertise the course more effectively, and are considering offering some hands on activities (using telescopes, etc.) that hopefully will encourage more students to enroll.

Outcome(s) expected (qualitative/quantitative)

Increased enrollments in both lab sections with more robust enrollment numbers early on during open enrollments.

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

Our experience is that students who enroll in both the astronomy lecture and lab classes are more successful in the lecture class. Encouraging more students to take the lab class will allow us to serve more students providing a pathway for them to be more successful in the lecture sections increasing both success rates and retention rates.

Expected Goal Completion Date

8/24/2020

Goal 3

Brief Description

Offer an online version of the ASTR 100 course

Is this a new or existing goal?

New

How will you complete this goal?

Complete all necessary training and logistical requirements (Curriculum Review, etc.) necessary to offer an online ASTR 100 course.

Outcome(s) expected (qualitative/quantitative)

By offering an online version of the astronomy lecture course, we will serve students who are not geographically local who still want to earn credit from Palomar College. An online version of the course will offer students the flexibility of taking a course that will satisfy their GE requirements but might not be able to attend F2F lectures due to scheduling conflicts, etc.

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

Adding an online version of the course will allow us to serve a more diverse student body by being flexible to students with different learning styles, needs, and availability which will increase our enrollment numbers and perhaps even increase our success rates.

Expected Goal Completion Date

5/29/2021

STAFFING AND RESOURCE NEEDS

Instructions

1. Refer to [Strategic Plan](#).

2. See [Data](#).
3. See career info (In PRP)

Are you requesting additional full-time faculty?
No

Are you requesting additional Staff, CAST or AA?
No

Review

Chair Review

Chair Comments

Thank you, Scott and Mark, for your efforts on this document.

Chair Name
Catherine Jain

Chair Sign Date
10/28/2019

Dean Review

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

I am excited to see the creative work taking place within astronomy. You have been willing to shift scheduling patterns and even consider online as an option to increase enrollment rates, great work.

Areas of Concern, if any:

Recommendations for improvement:

As you work on moving your ASTR 100 online, I recommend you reach out to the Guided Pathways team, as there may be resources available to you during the development process.

Additionally, the STEM Center may be a good resource for students who are struggling to pass the coursework. I recommend reaching out to see what resources may be available to your students.

Dean Name
Nicholo Roe

Dean Sign Date
12/19/2019

IPC Review

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

Areas of Concern, if any:

Recommendations for improvement:

IPC Reviewer(s)

IPC Review Date

Vice President Review

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

Please see dean comments above- agreed- a great discipline.

Areas of Concern, if any:

We should continue to monitor success rates.

Recommendations for improvement:

Vice President Name

Jack S. Kahn Ph.D.

Vice President Sign Date

1/30/2020