



# 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**  
Geology (GEOL)

**Department Chair Name**  
Cathy Jain

**Division Name**  
Mathematics, Science and Engineering

**Website address for your discipline**  
<https://www2.palomar.edu/pages/geology/>

#### **Discipline Mission statement**

The Geology Program at Palomar College consists of the study of the dynamic processes that shape Earth. Geology incorporates a multidisciplinary approach to describe and solve a variety of problems, including those related to human interaction with natural systems, geologic hazards, and resources. The mission of this program is to develop the fundamental geologic knowledge and instill skills for life-long learning in a constantly changing regional, global, and scientific community. The program strives to provide high quality, field-orientated educational opportunities in science for a diverse student population to fulfill general education requirements or fulfill transfer requirements for California universities, ultimately leading to careers in geoscience-related fields.

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

**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.**  
Geology (AS)

Geology (AS-T)

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

Sean Figg, Associate Professor of Geology, Program Coordinator

**Full-time faculty (FTEF)**

0 (Fall '19 Sabbatical)

**Part-time faculty (FTEF)**

1.2

**Classified & other staff positions that support this discipline**

Brenda Morris- ADA

**Additional hourly staff that support this discipline and/or department**

## **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?**

The geology program SLO's are designed to relate to all of the sub-fields in geology (Geochemistry, Hydrology, Paleontology, etc...). SLO's such as Mineral/Rock Identification, Interpret Geologic Structures/Processes, and Tectonic/Geomorphic Synthesis relate to numerous concepts across all sub-fields. This ensures that geology students will have a competent foundation of geologic knowledge regardless of the sub-field they wish to pursue once they leave the program at Palomar College. Students that meet these assessments are prepared for entry-level geology positions.

The majority of students that declare geology for a major aim to transfer to four year universities. SLO's such as Communication of Geologic Concepts, Geologic Application of the Scientific Method, and Transfer Skills ensure adequate preparation for transfer. These are designed to increase student success after transfer as students delve deeper into more complicated geologic concepts.

Higher level learning objectives build upon these fundamental concepts; the solid foundation students obtain at Palomar College enable student success for transfer or future careers.

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

Each SLO is assessed on a three-year rotational basis. SLO's that are not met are assessed the following semester. If multiple instructors record classes are not meeting the criteria for certain SLO's, they are reevaluated and instructors in the geology program (full and part-time) meet to discuss improving the instructional methods. Assessments are broken up between Fall and Spring semesters. The assessment methods used by the geology program is a mixture of embedded test questions, sample identification, interpretation of diagrams, essays/papers, and field investigations. Since Palomar's student body is so diverse, multiple assessment methods are needed for multiple learning styles.

**Summarize the major findings of your program outcomes assessments.**

SLO's have not been assessed since the last PRP (just a few months ago) so these results have not changed. Students are performing above the required specification, maintaining an average of 74% on most SLO's for GEOL 100. Students enrolled in course such as GEOL 110, GEOL 150, and GEOL 195 had a higher percentage rate of meeting SLO's requirements than those in GEOL 100.

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.**

In 2019 3 geology degrees were awarded: 1 Geology AS and 2 Geology AS-T.

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

**What factors have influenced your completion trends?**

There was one degree awarded in 2014 followed by a number of years with zero degrees awarded. This is directly tied to success in students transferring to the university level. The vast majority of students transfer from Palomar with one or two classes left to obtain a degree, instead, they are accepted to a university, transfer, and complete the remaining courses. The increase in degree in 2018 and again in 2019 was influenced by more outreach to potential graduates. All geology students expected to graduate were informed several times to complete the graduation application. Still, most did not obtain a degree due to already being accepted for transfer.

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?**

70.0%

**Why did you choose this standard?**

This standard was chosen to remain consistent with the college's institutional standards.

**What is your Stretch goal for COURSE success rates?**

85.0%

**How did you decide upon the goal?**

A stretch goal of 85% continues the trend of increasing success and can likely be met without compromising program expectations/standards.

**Gender: Why do you think gender differences exist? What do you need to help close the gap?**

The success rates for males has improved by 5% over the past four years. Meanwhile, the female success rate of 85% that has remained consistent.

**Ethnicity: Why do you think ethnicity differences exist? What do you need to help close the gap?**

Based on the analysis of the data, people of Asian ethnicity have a lower success rate compared to other ethnic groups. Many foreign students struggle with the terminology used in the geological sciences. Students have online access to the textbook and other resources designed to assist all students with the terminology. Students needing assistance with basic skills are also encouraged to seek help from campus support service providers (e.g. writing center, math learning center, STAR tutoring).

## **COURSE OUTCOMES**

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

A more diverse series of assessments have been implemented. While embedded test questions are still used, the same concept is now assessed through assignments, projects, and in-class activities. This way, students with alternate learning strategies have an opportunity to succeed.

**Summarize the major findings of your course outcomes assessments.**

Utilizing multiple assessment strategies the geology program has found that the majority of students understand at the basic level the essential concepts of geology. Through these assessments, we have noticed a common trend, certain subjects such as metamorphic rocks prove a consistent stumbling spot for students. The geology faculty has met to discuss different teaching approaches in order to improve student success.

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

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

## 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

Increase Enrollment in GEOL 110 and 150

#### Is this a new or existing goal?

Existing

#### Goal Status

Ongoing

#### How will you complete this goal?

The geology program plans to increase marketing for the lower enrollment courses such as GEOL 100 Geology of Natural Parks and GEOL 150 Dinosaur and Earth History. The program will consult with creative services about banners and flyers to advertise the courses. The program will also pursue moving these courses to more optimal time slots during morning or afternoon.

#### Outcome(s) expected (qualitative/quantitative)

Increasing the advertising around campus will reach a larger portion of the student body and generate more interest in the courses. Along the same line, offering the courses during the day will hopefully be more appealing to students.

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

This goal aligns with the college strategic plan of "encourage students who are pursuing transfer-readiness, general education, and basic skills." Offering this class during the day will increase the number of students taking the course for general education credit. In addition, GEOL 150 is a required course for geology transfer majors and a clear part of the geology program guided pathway.

#### Expected Goal Completion Date

8/17/2021

### Goal 2

**Brief Description**

Development of Online Geology Course

**Is this a new or existing goal?**

Existing

**Goal Status**

Ongoing

**How will you complete this goal?**

Full-time and part-time instructors in the geology program are currently working on developing an Online Geology 100 course. The course already has all of the approvals to be offered online but lacks content. Geology faculty are working together to create an online curriculum, assignments, discussion, and original videos. The program is also working with W.W. Norton, the textbook company, which has affordable options (\$30) for online access to material including student study materials, videos, and animations.

**Outcome(s) expected (qualitative/quantitative)**

The geology program will offer sections of Geology 100 lecture online. One course section will be offered at first to ensure its successful implementation and identify potential issues. The program is also looking into the development of small scale rock boxes that can be purchased by online students.

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

Part of the geology program mission has a focus on developing "life-long learning skills for a constantly changing regional, global, and scientific community." Online classes have proven to be a part of the path forward in education. The geology program at Palomar College strives to offer high-quality instruction in an online format without compromising academic standards.

**Expected Goal Completion Date**

8/17/2021

**Goal 3****Brief Description**

Support the Faculty Request for Interdisciplinary Oceanography/Geology instructor

**Is this a new or existing goal?**

Existing

**Goal Status**

Ongoing

**How will you complete this goal?**

At this time, the position is ranked high by IPC however we are unsure whether or not we will be allowed to hire this academic year, so this goal remains "ongoing". The college needs to move forward on plans to hire a full-time faculty member for Oceanography that meets the requirements for both Oceanography and Geology. While the position is listed primarily under Oceanography, the job description requires candidates to be proficient in geologic concepts as both disciplines have the same minimum qualifications. A Geology faculty member will take part in the hiring process for this position by assisting with the geologic portion of the job description and participating in the interview process.

**Outcome(s) expected (qualitative/quantitative)**

Hiring for this will ensure the consistency and quality of the Oceanography and Geology programs. This will provide the geology program with another faculty member to co-lead the geology program's extensive list of field courses. A second instructor is imperative when conducting field courses for health and safety

reasons.

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

The incorporation of another faculty member in the operation of field courses aligns directly with the geology programs mission statement to "provide high quality, field course educational opportunities". Hiring another high-quality full-time faculty in the Earth, Space, and Environmental Science department furthers the mission and values of "excellence in teaching, learning, and service."

**Expected Goal Completion Date**

8/17/2020

## 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

## RESOURCE REQUESTS AND BUDGET ALLOCATION REVIEW

Budget Analysis: This section should be completed by department chairs by the end of September.

**Are there areas in your budget where there has been a historical surplus (See three year trend)?**

No

**Are there processes that need to be examined to ensure we are being the most efficient with funding?**

No

**Are there ongoing needs in your department budget that you currently do not have the resources for?**

No

**Do you have non-general fund sources of funding?**

No

## 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.)

Please check with your department chair on the availability for this cycle.

**Do you have one-time funding requests?**

No

## **Review**

### **Chair Review**

#### **Chair Comments**

It should be noted that our only full-time geologist, who is also the person with the greatest knowledge of the geology program, is on sabbatical, and so this PRP was prepared by the chair.

#### **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 appreciate the openness to adjust scheduling timeslots and consider online scheduling to increase interest in the program.

#### **Areas of Concern, if any:**

#### **Recommendations for improvement:**

There may be opportunity to promote the program through the "Palomar Makes it Possible" campaign if you are working on low/no cost textbooks, online courses and/or new scheduling timeslots. I recommend you reach out to the guided pathways team to brainstorm possible options.

#### **Dean Name**

Nichol 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:**

Appreciate all the creative ideas. Solid review.

#### **Areas of Concern, if any:**

#### **Recommendations for improvement:**



**Vice President Name**

Jack S. Kahn Ph.D.

**Vice President Sign Date**

1/30/2020