

Status: **Reviewed**

Entry #: 238

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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
2020-2021

Are you completing a comprehensive or annual PRP?
Annual

Department Name
Earth, Space, and Environmental Sciences

Discipline Name
Geology (GEOL)

Department Chair Name
Sean Figg

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 TOP coded as 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, Department Chair

Use the link to provided to help answer the staffing questions below. This form requires a login and password to access. Please use your Palomar email and password to log in.

Link: [Permanent Employees Staff Count](#)

Full-time Faculty (total number of FT faculty in your discipline)

1

Full-time Faculty (FTEF)

1.00

Part-time faculty (FTEF)

0.27

Classified and other permanent staff positions that support this discipline

Abby Corona- ADA

Tony Kopec -ISA

Additional hourly staff that support this discipline and/or department

PROGRAM INFORMATION

In this section you are asked to consider your programs, their learning outcomes, the annual number of completions, goals for completions and enrollment and efficiency trends.

PROGRAM LEARNING OUTCOMES

Begin this section by reviewing the Program Review reports for programs and courses in Nuventive Improve (TracDat). All active course and program learning outcomes should be systematically assessed over a 3-year cycle. First, look at program learning outcomes.

- **Program** = Leads to a degree or certificate
- **Discipline** = A group of courses within a discipline

*Programs will be able to complete program completion and outcome questions.

How well do your program's learning outcomes communicate the scope and depth of the degree/certificate offered?

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.

How do they align with employer and transfer expectations?

Employers expect graduates with an Associate's (A.S.) degree in geology to have a general understanding of geologic concepts. Students demonstrate their knowledge of these concepts through the current program learning outcomes Mineral/Rock Identification, Interpret Geologic Structures/Processes, and Tectonic/Geomorphic Synthesis. Upon completion of an associate's degree, graduates will meet the qualifications for many entry-level geology positions, including research assistant, staff geologist, geology technician, GIS technician, and database analysis.

Typically, an associate's degree in geology provides a pathway for a bachelor's degree at a four-year university. In addition to the concepts listed above, universities expect students to be proficient in communication and concept application at the time of transfer. Program learning outcomes of the Associate's Degree in Science for Transfer (AS-T) include Communication of Geologic Concepts, Geologic Application of the Scientific Method, and Transfer Skills. The program learning outcomes for the AS-T degree ensure adequate preparation for transfer.

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.

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.

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 2020 two geology degrees were awarded: 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, 2019, and again in 2020 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.

Program Information Summary

Consider your program outcome assessments, completions, and enrollment/efficiency trends, as well as other internal and external factors.

How have these factors contributed to the success of your program(s)?

The geology program continues to see growth in the number of declared majors, degrees obtained, and specifically in student transfer rates to four-year universities.

How have these factors presented challenges for your program(s)?

A major challenge is having students complete the geology A.A. or A.S.-T. The majority of students are accepted to universities with one or two classes remaining. Instead, students opt to finish the degree at the university level rather than Palomar College..

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?

82.0%

How did you decide upon the goal?

The overall success rate (76%) and retention rates (97%) remain well above the program standard. A stretch goal of 82% will increase student 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 have improved by 5% over the past four years. Female success rates remained consistent from 2014-2017. In the Fall of 2018, there is a notable dip in the female success rate while the total success rate remained above the program standard. The fall of 2019 showed an increase in female success rate by a factor of 7%.

It is interesting to note that the overall number of males enrolled decrease significantly between Fall 2018 and Fall 2019, while the female enrollment remained constant. In the fall of 2019, more females were enrolled in geology courses than males. These trends reflect on overall decrease in enrollment in 2019.

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

Data for the success rate and retention rates for the geology program remains above the institutional set standard. It is important to note within the last five years there are a number of ethnicities with no data. The geology program consistently has data for the Hispanic, White, and Multi-Ethnicity groups. Data for students of Asian ethnicity was recorded in two semesters over the past five years. All other ethnic groups show no data.

Traditionally, based on the analysis of the data, people of Asian ethnicity have a lower success rate compared to other ethnic groups. Many international 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 necessary skills are also encouraged to seek help from campus support service providers (e.g., writing center, math learning center, STAR tutoring).

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

With the temporary transition to a distance education environment, 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. The virtual environment makes use of three-dimensional models and augmented reality. 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. The overall success rate for the geology program remains high, 78%, an increase from the previous three years. 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.

CAREER AND LABOR MARKET DATA

The Chancellor's Office Vision for Success stresses the importance of increasing the percent of exiting students who report being employed in their field of study. It is important for us to consider how all of our programs connect to future careers.

Go to this website <https://www.onetonline.org/> and enter your discipline in the bubble on the top right for ideas about potential occupations. Click on an example to see more detail.

What kinds of careers are available for people who complete your programs (and/or transfer)? (Refer to link above) Are there any new or emerging careers and if so how would the new or emerging careers impact your future planning?

Geological Sample Test Technicians
Geoscientists, Except Hydrologists and Geographers
Geophysical Data Technicians
Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
Mining and Geological Engineers, Including Mining Safety Engineers
Environmental Science Teachers, Postsecondary
Geography Teachers, Postsecondary
Curators
Geological and Petroleum Technicians
Hydrologists
Civil Engineers
Civil Drafters
Architectural and Engineering Managers
Natural Sciences Managers
Geographic Information Systems Technicians
Water/Wastewater Engineers
Drafters, All Other
Environmental Engineering Technicians
Mapping Technicians
Environmental Scientists and Specialists, Including Health

Several of the geologic careers shows an increase in demand from the previous year. Including hydrology, geologic sample test technicians, GIS technicians, environmental scientists, engineers, and more.

Unfortunately, courses geared to many of these careers are offered by four-year universities and not at the community college level. Future planning will entail guiding prospective students towards transfer degrees at a university that offers quality programs for careers such as hydrology and geologic engineering.

Students that complete the geology associates degree at Palomar College will be qualified for positions as sample test technicians, environmental scientists, and GIS technicians. Each of these careers is currently seeing an increase in demand, providing more job opportunities for Palomar College graduates.

What are the associated knowledge, skills, abilities (KSA's) needed for the occupations listed above? (click examples in the link above to get ideas)

Analytical skills
Communication skills
Ability to understand basic engineering principles
Passion about the geological and natural environment
Sample collection
Data interpretation
Mapping techniques
Flexibility and versatility
Enthusiasm, patience, and perseverance
Ability to work with teams of people from a wide range of backgrounds
Good physical fitness (for field jobs)

How does your program help students build these KSA's?

Students are required to meet the basic qualifications for all KSA's mentioned in the previous question. The program is designed so each course builds on its predecessor. For example, geologic mapping skills are introduced at the 100 level, students must interpret symbols and structures on a map. The next course (i.e. geol 150) guides students through making their own geologic maps from given data sets. Ultimately, during the field studies course (i.e. geol 195), geology majors use geologic tools and skills to take measurements and relate their findings to a professionally published geologic map.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning.

Have you incorporated work based learning (work experience, internships, and/or service learning) into your program?

Yes

What have you done to integrate work-based learning?

The geology field courses (GEOL 195) allows students to apply conceptual knowledge in the field. Students will conduct investigations and practice the field techniques conducted by professional geologists.

How does your work-based learning help your students learn how to do some of the tasks associated with the potential occupations?

Field courses provide students an opportunity to practice techniques such as scientific inquiry, mapping exercises, the use of geologic tools (such as Brunton Compass), measure geologic features, interpret stratigraphy, identify faults, and discuss the geologic process that leads to these features. Through these exercises, students get to experience the work conducted by professional geologists.

How do you engage with the community to keep them apprised of opportunities in your program?

The geology program keeps in communication with local geology chapters (SDAG and SCAG). The program makes announcements at local meetings and sends emails about upcoming courses, field courses, and events such as Earth Science Day. In return, the local geology chapters send information about upcoming events, internships, and jobs that are passed along to the students at Palomar College.

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.

This goal has been partially completed. In Spring 2020, enrollment in GEOL 110 increased by 60% compared to the data from 2018. Increased advertisement and especially moving the course to a mid-morning timeslot were the main factors for increasing enrollment.

GEOL 150 is scheduled to run in Spring 2021. It is unknown how the current COVID-19 situation will affect course enrollment. Meeting this goal may require an extension from 2021 to 2023, as the course is offered on a two-year cycle.

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

8/17/2023

Goal 2

Brief Description

Development of Online Geology Course

Is this a new or existing goal?

Existing

Goal Status

Completed

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?

During the 2018-2019 academic year, the position is ranked high by IPC. Due to the hiring freeze from the unforeseen on-set of COVID-19 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

8/17/2021

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)

PART 1: STAFFING NEEDS

Requests for faculty will follow the prioritization process currently in place in IPC, and the IPC SubCommittee. Requests for new staff positions will be prioritized at the division level and reviewed at Exec.

Are you requesting additional full-time faculty?

Yes

NOTE: If you are requesting full-time faculty, you must go back to the Labor Market section of the form to complete that section. It is required when requesting additional faculty positions.

REQUEST FOR ADDITIONAL FULL-TIME FACULTY

Faculty Request 1

Title of Full-Time Faculty position you are requesting

Oceanography/Geology instructor

How will this faculty position help meet district (Guided Pathways, Strategic Enrollment Management etc.), department and/or discipline goals?

The success of district goals such as Guided Pathways and SEM relies on disciplines being able to provide excellence in learning opportunities (consistent standards/quality of instruction as well as curriculum development) which, in turn, leads to enhanced student retention and success. This, of course completely overlaps with discipline and department goals.

With the retirement of Patty Deen in December 2018 and Al Trujillo in May 2020, the Oceanography Program currently has one full-time faculty member, Lisa Yon. Lisa has 40% of her teaching load in oceanography and is responsible for coordinating OCN Lab schedules/activities and curriculum updates, including the update of the latest edition of the OCN 100 lab manual. However, Dr. Yon also oversees the Earth Science Program and has 60% of her teaching load in that discipline including being responsible for ES curriculum updates. As a result, 84% of the courses offered in oceanography are taught by part-time faculty. Currently, 100% of oceanography lectures and 50% of oceanography labs are taught by part-time faculty. The geology program also has only one full-time faculty member. Currently, 66% of the geology courses are taught by adjuncts. Thus, in order to maintain consistent standards/quality of instruction, considerable time is invested in the hiring, training, and evaluation part-time faculty who often go on to other jobs thus necessitating an on-going cycle of hiring, training, and evaluation. This is not an efficient way to maintain consistent standards/quality of instruction nor does it lend itself to maintaining acceptable levels of student retention and success.

District goals also include increasing student access to educational opportunities through increased offerings at satellite campuses. Beginning Fall 2018, offerings at the Rancho Bernardo Center included both an OCN lecture and lab. As there is no designated instructional support assistant at this satellite campus, the logistics of setting up labs and equipment fell to the discipline faculty. During the Fall 2018 semester, Lisa Yon spent over 20 hours setting up equipment/supplies at the Rancho Bernardo campus and meeting regularly with the part-time faculty teaching at the new campus to ensure a smooth transition. SEM goals important at the RB Center include recruitment/marketing (making students aware of the opportunities) and providing a positive classroom experience (via well-qualified faculty) with the goal of retention and success for enrolled students. A committed full-time faculty member would greatly assist in achieving this goal.

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

Although our current part-time Faculty are talented instructors and show a dedication to the program, they are not a replacement for a full-time faculty member. Finding qualified part-time faculty who can teach according to designated course offerings is challenging; Lisa Yon has spent considerable time this past year reviewing applicant credentials for the part-time teaching pool in both Oceanography and Earth Science. Should an applicant be qualified, we still face challenges in scheduling due to the fact that part-time faculty fall into two categories:

- They teach for us in addition to holding a full-time job elsewhere and thus can only teach evening classes.
- They are part-time instructors at several regional colleges and thus we compete with other colleges for their hourly availability.

Currently, two regional community colleges are in the process of hiring full-time replacements for their Oceanography faculty who retired within the last year. Three of our current part-time faculty have applied for these positions and we may be losing their talents as a result. A separate part-time faculty member has already informed us that they have accepted a full-time position elsewhere and will not be returning for any future teaching assignments.

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

The passing of California AB 1725 set the goal of a 75:25 ratio requiring full-time faculty to teach 75% of a college's offerings. In Oceanography, due to the nature of expanded teaching assignments in Earth Science and Geology, we have struggled to meet this goal. With the retirement of Patty Deen and Al Trujillo, we will be looking at an average of less than 20% of Oceanography courses being taught by full-time faculty. Part-time faculty teach 100% of oceanography lectures and 50% of oceanography labs, figures that are far below goal set by AB 1725. Considering the academic role that Patty Deen served in Geology as well, the data provided by the College speaks volumes. Currently, the average Full-time Equivalent Faculty in Oceanography (3.13 over six years) and Geology (1.40 over six years) indicates that typical course offerings require the equivalent of 4.5 full-time faculty members. We are clearly understaffed with only 2 full-time faculty members across both Oceanography and Geology disciplines and as the text of AB 1725 states "the quality, quantity and composition of full-time faculty have the most immediate and direct impact on the quality of instruction."

In addition to the legislative aspect, Oceanography and Geology disciplines have regularly collaborated in Regional Field Studies courses (GEOL 195), such as GEOL195B- Southern California Coast. Field courses are an essential part of any Geology Program and at Palomar College, the Geology Program offers both an A.S. and A.S.-T in Geology. Participation in a Field Course is part of the graduation requirements for the A.S. degree. The nature of these field courses is such that they require two faculty members for logistical and safety reasons.

Logistics and safety also play a role in the staffing of OCN 100 lab sections. With the retirement of Patty Deen and Al Trujillo, 50% of the lab offerings are now being taught by part-time faculty. Spring 2019 offerings necessitated the hiring of two new part-time faculty to teach OCN 100 lab sections. Considerable training time must be spent with these faculty to ensure proper set-up of labs (safety is a priority with labs such as Seawater Chemistry) and the logistics of field trips. About 25% of the lab meetings are field trips to regional coastal settings where students directly engage in observation of coastal processes, collect data for analysis, or learn about important topics such as mariculture or desalination. As part-time faculty members move on to new jobs, this again necessitates an on-going cycle of hiring, training, and evaluation. If the majority of teaching staff are associated with this "revolving door" scenario, the situation also places unreasonable demands on the program to maintain quality of instruction and to develop innovations in curriculum.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional career education needs for this discipline.

The Oceanography discipline has consisted of three full-time faculty since Fall 1997. Over time, however, the duties of the faculty have shifted in response to demand for increased offerings in specific Earth Science courses. Both Dr. Lisa Yon and Professor Patty Deen shifted 40-60% of their teaching load from Oceanography to Earth Science as well as to additional Geology courses including field courses. With the retirement of Professor Patty Deen in December 2018 and Al Trujillo in May 2020, there is a crucial need for a replacement full-time faculty member who can teach across Oceanography and Geology. Currently, the average Full-time Equivalent Faculty in Oceanography (3.13 over six years) and Geology (1.40 over six years) indicates that typical course offerings require the equivalent of 4.5 full-time faculty members. Thus, we are understaffed with only 2 full-time faculty members across both Oceanography and Geology disciplines.

Clearly hiring a full-time faculty member to support the goals across the Oceanography and Geology disciplines will enhance productivity in areas such as curriculum management including evaluation of both course and program learning outcomes. In addition, full-time faculty will be more involved in student, department, and institutional activities thus enhancing not only productivity but also the efficiency of the programs and course offerings. Full-time faculty members provide essential stability for program planning and curriculum development. They also provide levels of availability that students need outside of the classroom, such as involvement in course advisement and extracurricular activities (Geoscience Connection club, Earth Science Week activities). In addition, effectively expanding the program (Oceanography/Geology/Earth Science) to satellite campuses such as Rancho Bernardo requires the attention of full-time faculty. If College/District plans include this goal, then support and allocation of resources must be provided for the hiring of a full-time faculty member as a replacement for a retired full-time faculty member.

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

Lisa Yon- 40% teaching load in oceanography. 60% teaching load in Earth Science.
Sean Figg- 40% release time as department chair.

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

Two full-time faculty retirements. No gain.

Are you requesting new Classified, CAST or AA positions?

No

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for 2018, 2019, 2020. 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?

No

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](#).

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 AND FACILITIES NEEDS

Will you be requesting any technology (hardware/software) this upcoming year?

No

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

No

PART 4: OTHER ONE-TIME NEEDS

For more information about funding sources available, see [IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES](#). Please check with your department chair on the availability for this cycle.

Do you have one-time requests for other items (e.g., Non-Technology Equipment, Supplies, Operating Expenses, Travel) that your budget or other funding sources will NOT cover?

No

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

Yes

Enter your email address to receive a copy of the PRP to keep for your records.

Review

Chair Review

Chair Comments

The FTEF on the basic information page reflects data from fall 2018 full-time FTEF of 1.00 and the part-time FTEF 0.27. In fall 2019, the only full-time instructor was on sabbatical (0 FETF), and all classes were taught by part-time faculty (1.20 FETF).

The information should have been updated during the last save and before submission. If the data still says 1 for full-time FTEF and 4 for part-time FTEF, the figures will need updating.

Chair Name

Sean Figg

Chair Sign Date

10/20/2020

Dean Review

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

Of particular significance is the means by which the program evaluates students outcomes. It does an excellent job at collaboratively addressing low outcomes and rather than waiting for the next evaluation cycle, the program develops an improvement plan and reevaluates the outcomes in the following semester. Undoubtedly, the has helped the program maintain its success rates and are able to work towards the higher established stretch goal. Additionally, the program is actively engaged in supporting co-curricular activities that create a sense of culture within the discipline and advance knowledge. The success of engagement is clearly demonstrated by the increase in the number of students obtaining degrees.

Areas of Concern, if any:

The departments existing successes may be hindered by the loss of two positions due to retirement. It will be important for the program to replace positions to ensure program sustainability.

Recommendations for improvement:

I would recommend the department consider supporting a general geology course at the Camp Pendleton location. This course is highly desirable to those that serve in the military because it provides an academic context to locations in which they are deployed or participate in training. I believe this course would be very successful if offered. I would also recommend that the department consider working toward a stretch goal that is less ambitious and work with the STEM Title V counselor to provide transfer support by helping students create educational plans that would support transfer. It is common for geology students to transfer without completing all science sequences due to the high demand for geology majors at the 4-year institutions. Having early counseling support for students may help increase the number of degrees awarded.

Dean Name

Patricia Menchaca

Dean Sign Date

11/5/2020

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:

strong connection between SLO assessments and changes to teaching approaches to impact student success; WBL

Areas of Concern, if any:

low completions

Recommendations for improvement:

1. consider having students complete completion forms in capstone courses
2. work with dean and marketing director to discuss institutional support for marketing/outreach for your program

Vice President Name

Shayla Sivert

Vice President Sign Date

1/3/2021