

Program: Geology

Division: STEM

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SLO/SAO Point-Person: Dani Blatter

Audience: Deans, Vice Presidents of Student Services and Academic Services, All Planning and Allocation Committees. This document will be available to the public.

Uses: This Program Review will inform the audience about your program. It is also used in creating division summaries, determining college planning priorities, and determining the allocation of resources. The final use is to document the fulfillment of accreditation requirements.

Please note: Program Review is NOT a vehicle for making requests. All requests should be made through appropriate processes (e.g., Instructional Equipment Request Process) or directed to your dean or supervisor.

Time Frame: This Program Review should reflect your program status during the 23-24 academic year. It should describe plans starting now and continuing through 2024-25.

Helpful Links:

- ★ [Tools for Writers](#) - with contacts for help with specific sections.
- ★ [Program Review Glossary](#) - defines key terms you can review when writing.
- ★ [Fall 2023 Program Reviews](#)
- ★ [Program Review FAQs](#)

For help with your program review, please contact Karin Spirn at kspirn@laspositascollege.edu

Sections

There are four sections to the document:

1. Review your program, including curriculum updates, accomplishments, challenges, and planning.
2. Data Analysis
3. SLO/SAO Review
4. Feedback on the PR template and process

Instructions

1. Please answer each question with enough detail to present your information, but it doesn't have to be long.
2. If the requested information does not apply to your program, write "Not Applicable."
3. Optional/suggested: Communicate with your dean while completing this document.
4. Send an electronic copy of this form to Program Review chair, Karin Spirn, and your Dean by Monday, Nov. 4, 2024

5. Even if you don't have much to report, we want to hear from you, so your voice is part of the college planning process.

Equity is a guiding principle. Here is the LPC definition:

Las Positas College will achieve equity by changing the impacts of structural racism, ableism, homophobia, and systematic poverty on student success and access to higher education, achieved through continuous evaluation and improvement of all services. We believe in a high-quality education focused on learning and an inclusive, culturally relevant environment that meets the diverse needs of all our students.

LPC Equity Definition: Equity is parity in student educational outcomes. It places student success and belonging for students of color and disproportionately impacted students at the center of focus.

Section 1: Your Program In 2024-2025

Please place an X next to N/A where relevant

A. Accomplishments: Identify your main accomplishments from the 23-24 academic year.

Some areas you **may** want to note in your explanation are:

- Did your accomplishments support your program's plans identified in recent PRs?
- Did they relate to guided pathways?
- Were they in support of the colleges [equity definition](#)?
- Did they connect to any of the college [planning priorities](#)?
- Did you receive any positive/negative feedback from students?
- Are there any innovations or new processes you'd like to integrate?
- Has your program changed in response to the SCFF model of college funding? (completions, increasing enrollment, offering certificates, degrees, etc.)?

N/A _____

A primary goal of our program over the last few years has been to hire a new full-time faculty and get them onboarded, trained, and up to speed. We determined that, for small programs such as geology, leadership is especially important and that replacing the previous full-time geology faculty and program coordinator was crucial. The 22-23' academic year saw the hiring process and 23-24' saw the new full-time faculty stepping into the role of primary instructor and program coordinator. While it will take time to see the fruits of this accomplishment, we are confident it will provide quality, equity-focused instruction for our students, enhance the program's visibility, and enable to program to adjust its course offerings in response to the job market and the needs of our students.

The geology program successfully acquired new scientific equipment—two seismometers, one to be used in the classroom and one to be installed at LPC to monitor seismic activity. The second has already been installed and is currently connected to a network of citizen scientist-run seismometers. We are currently learning how to use the first and planning how to use it in the classroom and in our geology labs.

A further success has been maintaining high program success rates. At 88%, we are at or above the rate for 4 of the past 5 years and well above the set standard of 81%. We are emphasizing student-centered teaching in our monthly geology faculty meetings as part of furthering the college's caring campus initiative. We benefit from a group of high-quality part-time faculty who understand this mission and fully on board with making it happen in the classroom.

B. Challenges, Pain Points, and Needs

What significant or ongoing challenges or obstacles did your Program face during the 23-24 academic year, especially related to accomplishing program goals/plans? Consider funding, staffing, materials, facilities, outside requirements such as legislative mandates, working on equity gaps, etc. Highlight/identify any challenges mentioned in previous reviews.

N/A _____

A major challenge of the geology program has been getting enrollment back up to pre-Covid levels. Covid hit enrollment hard and it has still not recovered fully. Our strategy for raising enrollment is three-fold:

1. Providing consistent, inclusive, student-centered instruction to our students
2. Raising program visibility at student events such as Welcome Back Week and Preview Night
3. Scheduling courses with the right mix of modalities

A second challenge (related to one of our accomplishments mentioned above) during 23-24 was getting the new full-time faculty up to speed. This was a challenge considering her lack of community college teaching experience and the multitude of new roles and responsibilities she stepped into at the same time as taking over as the primary instructor for the geology program. She continues to emphasize professional development, especially learning how to employ student-centered, DEI-informed, inclusive teaching methods in class. She is also learning to identify obstacles to student success and focus energy and attention on struggling students while still accomplishing all of her other responsibilities as a full-time faculty member. Needless to say, this is a lot to ask of one person and it may take time for her to become highly effective in all of these roles.

C. Planning: What are your program's most important plans, either new or continuing?

N/A_____

The geology program has three main goals:

1. Increase enrollment to pre-Covid levels and beyond
2. Update course offerings to better reflect shifting job market priorities
3. Continue to learn and implement student- and equity-centered teaching strategies

We discussed #1 during the challenges section above.

Part two of our goals involves changing our course offerings and curricula to shift away from preparing our students for careers in fossil fuel extraction and toward preparing them for jobs in clean energy and environmental sustainability, including groundwater sustainability. To accomplish this, we are preparing to add a new introductory class on climate science designed as a GE course for non-majors and geology majors alike. This course will likely be offered in Fall of '26.

As a program, we are continuing to learn from our students and peers how to better reach and serve our students. They are a very diverse group. The vast majority of them are not geology majors; rather, they are business, arts, and social science majors who are taking our courses to satisfy their science and science lab GE requirements for graduation and transfer. Many of them have had negative experiences in science classes in the past and experience fear, anxiety, and imposter syndrome. They also have lots of responsibilities outside of the classroom, including part-time or full-time work, family responsibilities, and more. They also are trying to find time to socialize, are dealing with mental health challenges, and many are navigating college for the first time in the history of their families. Helping these students succeed in their geology courses is a challenge and requires deployment of a multitude of DEI-inspired techniques and tools. Learning these strategies and disseminating them to one another is a priority of the geology faculty at LPC.

D. Identify any college, district, or legislative barriers to your program's equity work. What suggestions do you have for minimizing or eliminating these barriers?

Barriers:

Class sizes

- While we seek to increase enrollment, we recognize that many of the most effective strategies for creating an inclusive classroom climate and a caring campus are labor-intensive and are challenging to implement with large class sizes. For instance, reaching out individually to struggling students to establish trust and develop a plan for their success becomes much harder with 44-46 students per class as compared with 25-30

Suggestions:

N/A_____

E. Curriculum Updates

Reasons for updating include that it is required every two (CTE) or five (non-CTE) years, there is a program or college need, starting a new program, or new legislation.

1. Are you planning to update any curriculum in 24-25?
Yes___ No_X
2. Comments (Optional):
 - a. No courses are marked as being up for review in 24-25
3. Please review your program [maps](#). Do you need to make any modifications?
Yes___ No_X
4. If yes, compare each [Program Map](#) to your current course offerings and sequencing. Pay close attention to prerequisite information, and classes offered only during certain semesters.
 - a) If your map requires a **non-curricular change** (i.e., course sequencing), consult your [Pathway counseling faculty liaison](#) to initiate changes.
 - b) **If your map requires a curricular change** (Program modifications) - these are initiated through the Curriculum Committee.

Any questions? Contact the [Curriculum Chair](#) or the [Curriculum and SLO Specialist](#).

Section 2: Data Analysis – Quantitative and Qualitative

IR Data Review: Discuss any significant trends in the data provided by the Office of Institutional Research and Planning (or any other data you use for decision-making and planning).

(Note: Not all Programs have IR data available; if your program does not have a data packet or dashboard data, you may note that in the response box and reach out to [the IR team](#).)

Here are a few samples of data to review and reference if that's helpful.

- IR Data packets [are available here](#) (Posted Fall 24)
- Academic & Career [Pathway Specific data](#) (Posted Fall 24)
- Your program's survey data
- [Transfer data](#)
- Course Set Standard Overview & Success Rates Dashboard are in the middle of [this page](#)

Age and gender

- We did not observe any statistically significant shifts in the age or gender of our students across the past five years, with the possible exception of a slight trend toward younger students

Race and ethnicity

- We did not observe any statistically significant shifts in the race or ethnicity of our students across the past five years

Student enrollment status

- We did not observe any statistically significant shifts in the enrollment status of our students across the past five years, with the possible exception of a slight trend toward a greater degree of continuing students.

Student unit load

- We did not observe any statistically significant shifts in the course load of our students across the past five years

Educational goal

- We observed a small shift in the educational goal of our students across the past five years away from “undecided” and toward “transfer.” We view this as a positive development and a result of our college-wide effort to get students to develop a Student Educational Plan as a part of guided pathways.

Education level of students

- We observed a trend over the past five years of data away from students with 60+ college units and toward freshmen (students with less than 30 units). We view this as a positive development, reflective of the college's guided pathways efforts to get students on track to graduate sooner

Grade distribution

- A couple trends are noticeable in the grade distribution of our students
 - More students are earning A's while fewer are earning C's. Whether this is attributable to pandemic-related grade inflation or to improvements in the classroom is unclear
 - The proportion of students earning an F spiked during the pandemic years but has declined since

Student performance—distance education

- The data here show a fairly high degree of variance but no significant trend. Perhaps with more post-pandemic data in coming years a trend will emerge

Enrollment management

- Student enrollment dropped precipitously during the pandemic and has yet to recover
- Productivity and student fill rates have begun to rebound as of Spring '24 and enrollment has stopped dropping
- Fall '24 has seen large increases in student enrollment and a roughly 100% productivity rate (meaning, all geology program courses are full or beyond enrollment caps), so things seem to be trending positively

Prior experience in English and Math

- Geology students are much more likely to have a completed transfer-level English and Math than the LPC average and are much less likely to be new to LPC. It seems students wait until their second year or more to take their GE science and science lab classes

B. Program-Set Standard (Instructional Programs Only):

The program-set standard is a baseline that alerts programs if their student success rates have dipped suddenly. 95% of the rolling 5-year average. There are valid reasons a program does not meet the Program Set Standard; when a program does not meet this standard, they are asked to examine possible reasons and note any actions that should be taken, if appropriate. | [Program-set standard data can be found on this page.](#)

1. Did your program meet its program-set standard for successful course completion?

Yes X No

2. If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests.

Section 3: SLOs/SAOs: Assessment of Student Learning and Support

Program Review is the college’s major data source on student learning and support and is, therefore, regularly reviewed. *Each year, programs must discuss their PSLOs, CSLOs, or Service Area Outcomes (SAOs.) This helps us to see how our students are progressing in their learning.* For assistance with these questions and instructions on running reports using eLumen, [click here.](#)

Please complete at least one of the following three sections based on what is appropriate for your program.

Check at least one below:

- C1: Instructional Programs with PSLOs (disaggregated PSLOs)
- C2: Instructional Programs with CSLOs (*Departments without degrees, non-major courses, and/or other courses up for assessment*)
- C3: Non-Instructional Programs (SAOs)

C1: Instructional Programs with PSLOs (disaggregated PSLOs)

To assess PSLOs within eLumen, CSLOs must be correctly mapped to only one PSLO, and every mapped CSLO must have assessment data. Please review the items below and proceed accordingly.

- If the CSLOs are mapped correctly and there is data for each CSLO, then continue to question 2.
- If the CSLOs have assessment data and the mapping needs to be completed, then complete the mapping within eLumen ([See SLO Handbook, p. 7](#)) and continue to question 2.
- If not all mapped CSLOs have assessment data, then you cannot assess the PSLO. In this case, continue to section C2.

1. [Please review your 3-year plan](#) and verify that all courses will be assessed by June 2026. (between Fall 2023 – Spring 2026)

The geology program does not currently have a 3-year plan for SLO evaluation. This is likely because the previous full-time faculty and program coordinator retired in 2020 and the program was without a full-time faculty or program coordinator until last year. This is the first time that the new program coordinator has examined SLOs and will likely need more time to develop a plan and implement it. Expect follow-up with the SLO committee in the coming weeks.

Will at least one SLO be assessed in each course by June 2026?

Yes____ No____

If not, please update your 3-year plan to include any courses you missed. If you plan to revise your 3-year plan, then send your updated plan to the [Curriculum and SLO Specialist and the SLO Chair](#).

2. Based on your [3-year plan](#), list the PSLO(s) for the academic year 2023-2024 that your program selected to review and explain why these were chosen.
3. What percentage of faculty completed the planned CSLO assessments? (In eLumen, [run a Faculty Participation report](#) for 23-24).
 - _____%
4. Analysis of PSLO(s): What conclusions can be drawn about student learning and equity in your program based on eLumen and/or other data? You may want to consider disaggregated data. When using eLumen [See the Guide](#) for instructions on how to disaggregate PSLO data.
5. Based on discussions with others in your program, explain potential changes designed to improve student learning and close any equity gaps identified through the analysis of PSLO data. Please also note if you decide to update any CSLOs or PSLOs based on this analysis (If updating, then you may do this through eLumen, see the [SLO Handbook](#) if you need instructions on how to do this).
6. If you experienced any challenges in completing your PSLO assessment process, please list those below along with any items that would help you improve this process in the future.

C2: Instructional Programs with only CSLOs - Departments without degrees, non-major courses, and/or other courses up for assessment

1. [Please review your 3-year plan](#) and verify that all courses will be assessed by June 2026. (between Fall 2023 – Spring 2026)

Will all courses be assessed by June 2026?

Yes____ No____

If not, please update your 3-year plan to include any courses you missed or if you plan to revise your 3-year plan, then send your updated plan to the [Curriculum and SLO Specialist, and the SLO Chair](#).

2. Based on your [3-year plan](#), list the CSLO(s) for the academic year 2023-2024 that your program selected to review.
3. What percentage of faculty completed the planned assessments for the selected CSLO? (In eLumen, [run a Faculty Participation report](#) for 23-24).
4. What conclusions can you draw from the CSLO data and reflections in eLumen. If you used any additional evidence or methods to answer this question, please explain.
5. Explain potential program changes designed to improve student learning. Please also note if you have decided to update any CSLOs or PSLOs based on analysis (If updating, then you may do this through eLumen, see the [SLO Handbook](#) if you need instructions on how to do this).
6. If you experienced any challenges in completing your CSLO assessment process, please list those in the box below, along with any items that would help you improve this process in the future.

C3: Non-Instructional Programs (SAOs)

1. [Please review your 3-year plan](#) and verify that all courses will be assessed by June 2026. (between Fall 2023 – Spring 2026)
Will all courses be assessed by June 2026?
Yes____ No____
If not, please update your 3-year plan to include any courses you missed or if you plan to revise your 3-year plan, then send your updated plan to the [Curriculum and SLO Specialist](#), and the [SLO Chair](#).
2. Based on your [3-year plan](#), list the SAO(s) for the academic year 2023-2024 that your program selected to review.
3. Based on discussion with others in your area, what conclusions can be drawn from the SAO data and reflection questions from eLumen or other sources of data?
4. Explain any planned changes to improve outcomes in your service area. Please note if you have decided to update any SAOs based on this analysis.
5. If you experienced any challenges in completing your SAO assessment process, please list those below, along with any items that would help you improve this process in the future.

Section 4: Suggestions for the Program Review Committee (optional)

What questions or suggestions about this year's Program Review forms or process do you have?

None, really. I find this process provides a necessary moment of reflection and forces effort to be put into evaluating data and working on the student learning outcome evaluation process.