2026-27 Comprehensive Program Review

Program: Chemistry

Division: STEM

Writers: Michael Ansell, David Montelongo, Mary Divin, and Chris Dudzik

SLO/SAO Point-Person: David Montelongo

Email your completed form to Karin Spirn and your dean by November 2, 2026.

Helpful Links:

- ★ Tools for Writers - with contacts and info for help with specific sections.
- ★ Program Review Glossary - defines key terms you can review when writing.
- ★ Discipline Data Packets – institutional research about disciplines and student services
- ★ Course Success Rates Dashboard – allows you to research your program's success rates

Detailed information and instructions appear at the end of this form. For help, please contact Karin Spirn at kspirn@laspositascollege.edu.

Section 1: Program Reflection and Planning

These questions appear on all Program Reviews including comprehensive and updates.

1. Please describe your program's most important **achievements** in year 25-26.

- We **successfully hired** a new Full-time Faculty Member, Dr. Mary Divin.
- Acquired an 80MHz Magritek **Benchtop NMR**, trained faculty, and used it in all our Organic Chemistry classes for 1H, 13C, and 2D experiments for a full academic year.
- We hired **six new part-faculty** for our growing program.
- The new **STEM Building** was approved by DSA and **construction has started**, on time, for 2028 opening.

2. Please describe your most important **challenges** in year 25-26

- We continue to lack **enough Full-Time faculty** to support the Program and to ensure high-quality instruction. We have had four full-time faculty since 2019 but have grown 70% during this time.
- We lack **enough FTEF and lab space** to serve the strong and growing demand for Chemistry courses. Over 250 students were turned away on waitlists in Spring 2026 alone.
- **Large waitlists and budget concerns** have pressured instructors to take more students into lab courses than **should be safely allowed**. Because spots are so scarce, students are not dropping and unsafe lab capacities are persisting throughout the semesters. The Chemistry department had an 111% fill rate in the Spring of 2026.

- We are facing retirement and resignation of **Laboratory Support staff.** We need to maintain the current staffing and plan for additional staffing as we move from three chemistry labs to five in the new building.
- As of last year, *all of our available part-time faculty had done overload within the last three years*, limiting our ability to staff classes in the future.
- **Finding qualified part-time faculty** continues to be a significant ongoing challenge. This year we hired the final part–time faculty member three days before the class started. Another full–time faculty had to take over for the first week while HR went through the paperwork.
- We would like to see additional **staffing in the STEM Dean's office**. The efforts of our Dean and her executive assistant have been heroic, but they should not have to be heroic on a daily, year-round basis. The STEM Division has 40% of the college's courses, with only these two people to do everything that the Division offices are required to do in terms of hiring, management, and support for so many faculty, staff, and students. Twenty years ago, we had two administrative assistants when the Divisions had half the work to do! Please provide more staffing so that we can retain our amazing people!
- We continue to face challenges in **keeping our scientific equipment maintained, operational, and up to date**.

3. What are your upcoming **plans**? Please note any ways that these support student achievement and equity.

- We are adding **new sections of Organic Chemistry** "off sequence," meaning that Chemistry 12A will now be offered in the Spring and Chemistry 12B in the Fall to meet strong demand from students.
- We are **applying for two new Full-time Faculty Positions**. One is in Organic Chemistry to staff the new "off sequence" Chemistry 12A (Spring) and 12B (Fall). That person will help support the challenging instrumental and curricular needs of these courses, and to prepare for upcoming faculty leaves and retirements.
- We have added **additional sections of General Chemistry (Chemistry 1A and 1B) and Introduction to College Chemistry (Chemistry 31)**.
- We will continue to help support other programs such as VWT, Biology, Environmental Science, and Environmental Studies.
- We will continue to re-evaluate our equipment needs in light of modernization and equipment life cycles.
- We will begin the process of ordering new equipment to fully supply all five new laboratory classrooms in the new STEM building opening in 2028.
- We will continue to collaborate with other programs that offer support services for our students including the **LPC Library, the MESA Program, the Tutorial Center, the Veterans First Program, and DSPS**. We hope that resources and staffing will continue to be supported by the college with robust funding for these programs.

Section 2: SLOs/SAOs

This section is completed every three years as part of the Comprehensive Program Review, with brief annual check-ins on the Program Review Updates. The following resources will be useful when completing this section:

- Three-Year Assessment Template
- Aggregated and Disaggregated Data from the following sources:
    - ELumen (if saved--no longer available online)
    - CurrIQunet
    - Student Success Dashboard

1. During the 2023-2026 three-year assessment cycle that just concluded, what did your program set out to learn through your PSLO/CSLO/SAO assessments?

- The Laboratory Skills, Lecture Content, and Lab Communication PSLOs were assessed during the 2023-2026 three-year assessment.
- These three PSLOs were selected with the purpose of learning about student success in both the lecture and lab components of each chemistry course. Examining both components separately is essential for gauging overall success in chemistry.
- Since chemistry is one of the core laboratory sciences, two PSLOs relating to student success in the lab were selected. One of these SLOs (Laboratory Skills) measures student mastery of the chemical techniques learned in the lab along with successfully implementing safe laboratory practices. The other lab-based SLO (Lab Communication) measures student success in data interpretation, analysis, justification of experimental results, and ability to communicate experimental results effectively. We assessed these two SLOs individually to get a more complete perspective on lab performance.

2. Based on your analysis of your PSLO/CSLO/SAO assessment data, what conclusions did you draw about student outcomes and equity in your program?

- Findings: Overall student performance was somewhat above average—most students met the SLOs at a competent level, with strengths in documenting measurements and summarizing procedures; weaknesses were observed in clearly articulating experimental rationale and deeper data interpretation.
- As students complete more chemistry courses, the overall percentage of students that meet the SLO increases, and the overall percentage of students that are developing SLO or do not meet the SLO decreases. The trend is very clear and is consistent among individual course sections. To summarize: among all introductory chemistry courses (CHEM 31/CHEM 30A), 51.59% of students met the SLO; among all general chemistry courses (CHEM 1A/CHEM 1B), 75.13% of students met the SLO; and among all organic chemistry courses (CHEM 12A/CHEM 12B), 83.10% of students met the SLO.
- No consistent trends were observed in the disaggregated demographic data for each course, indicating that there were no significant gaps in SLO performance among demographic groups that stood out. All demographic groups performed roughly equally on average.

- One notable exception to this general trend was found among CHEM 30B students (the second semester of the Intro and Applied Chemistry for Allied Health majors). This course has a particularly high percentage of students that were classified as “No longer attending/Participating,” at 42.86%. This has been the result of a recent change to the Allied Health degree requirements, in which CHEM 30B is no longer required for degree completion. As a result, many students decide to drop the course since it is a significantly more demanding course than CHEM 30A, and dropping the course ultimately does not affect their degree completion plan.

3. Explain potential plans to improve student outcomes and close equity gaps.

- Revise lab rubrics to emphasize rationale and interpretation criteria, incorporate model lab reports, and provide targeted feedback sessions and mini-workshops on scientific writing and reasoning.
- Adopt a department-wide set of standards and expectations regarding lab notebook format to ensure that all students develop consistent skills in notebook upkeep and lab communication.
- Hire additional instructional staff (full-time and part-time) to reduce waitlists, expand course capacity, and provide more consistent student support.
- Develop faculty hiring plans that emphasize diversity and expertise in inclusive pedagogy to better serve diverse student populations.
- Integrate plans for the new STEM building into course planning to add lab-based sections.

4. Describe any obstacles that you encountered in your assessment process and any supports that would be helpful.

- We were not able to attain SLO assessment data from all of our course sections, partially due to errors that were encountered by some faculty during the switch from reporting on eLumen to CurrIQunet META.
- Although a majority of our part-time faculty do reliably provide SLO data, some faculty members may not, leaving an incomplete SLO dataset.
- The transition from eLumen to CurrIQunet META resulted in the loss of eLumen SLO data prior to the switch, so only the data currently on CurrIQunet was able to be evaluated.
- Since each faculty member might choose different criteria or methods to evaluate student SLO achievement, it can be challenging to directly compare the data between different course sections.
- In addressing the high drop rate for CHEM 30B, further support from counselors and instructors would be helpful to ensure that students continue with the course rather than withdrawing. The course content is extremely pertinent and applicable to allied health students aspiring for a nursing degree, irrespective of the fact that the course is no longer required for degree completion.

Section 3: Data Discussion

This section is completed every three years as part of the Comprehensive Program Review. Workshops and office hours will be offered in Fall 2026 to support Program Review writers.

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

*(**Note**: Not all Programs have RPIE 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 RPIE team.)*

Data may come from:

- RPIE Data Packets
- Transfer data
- Succes Rates Dashboard (scroll down on page)
- Requested data from the Office of Research, Planning, and Institutional Effectiveness (RPIE)
- SLO/SAO data
- Data from program-created surveys or investigations
- Any other relevant source of quantitative or qualitative data

- Overall, growth has been dramatic with the overall program increasing by 60-70% since 2021 in terms of both FTES and FTEF. Our overall fill rates have gone from 85% to 111% during this time.
- Our students have gotten younger. The percentage of students in the youngest age groups has grown steadily, while the percentage of older students has decreased.

2. Equity: Did your data reveal any patterns of inequity? If so, please explain those patterns and any actions that should be taken at the program or college level.

- There has been a small, but significant growth in success rates across all demographic groups over the period from 2021-2025 since we are recovering from the pandemic, offering only in-person classes, and demand is so high that students take the classes very seriously, because they may not be able to get into a class the second time.

3. Course Modality (Instructional Programs Only): In reviewing your program's data packet and Succes Rates Dashboard, are there differences in success rates by modality (i.e. face-to-face, asynchronous, synchronous, hybrid, or hyflex)? If so, reflect on what might account for differences and any actions that should be taken. (Non-instructional programs may also choose to reflect on online vs. in-person services if applicable).

- We no longer offer any online courses in Chemistry. All our classes include a lab component and a challenging lecture component that requires in-person assessment. Success and completion rates were significantly lower during the 2020-2022 academic years when online classes were offered.

4. Program-Set Standard (Instructional Programs Only): The program-set standard is a baseline that alerts programs if their student success rates have dipped suddenly below 95% of the rolling 5-year average. There is no punishment for not meeting the standard, and many valid reasons this may occur. 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

5a. Did your program meet its program-set standard for successful course completion in AY25-26?

Yes_X___ No____

5b. If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests. Success rates for individual courses can be found on the Success Rates Dashboard.

- *Not Applicable*

Section 4: Special Topics

These questions have been chosen for this year's Comprehensive Program Review to meet reporting mandates (for accreditation, Ed. Code, or other sources).

1. Mission: Describe 1-3 examples of how your program's work has aligned with the college's mission, vision, values, and/or educational master plan over the past three years. (Possibilities might include new initiatives, resource allocation/use, program improvements, or other activities). • Mission, Vision, and Values • Educational Master Plan

- The Chemistry Program will continue to strive to fulfill the LPC Mission Statement that "Las Positas College provides an inclusive, learning-centered, equity-focused environment that offers educational opportunities and support for completion of students' transfer, degree, and career-technical goals while promoting lifelong learning." This is central to everything we do.
- The Chemistry Program is a vital component supporting multiple transfer pathways including chemistry, biology, pre-med, engineering, geology, and environmental science. The department is expanding course offerings to include "off-sequence" Chemistry 12 and additional section(s) of

Chemistry 1B to remove scheduling bottlenecks and support students' transfer goals in fewer semesters.

- The Chemistry Program uses a learning-centered approach through hands-on labs and problem-solving strategies. By providing excellent facilities and modern instrumentation like the newly acquired 80MHz Magritek Benchtop NMR, the Chemistry Program trains students with the practical knowledge required for seamless transfer to four-year universities or technical careers.
- The Chemistry Program collaborates closely with the Tutorial Center and DSPS to provide equity-focused academic support. Additionally, Chemistry faculty hold office hours in STEM specific study spaces like MESA to support a variety of students.
- The Chemistry Program shares the vision of the college as a whole to "strive to support and empower students to develop the knowledge, skills, values, and abilities needed to become engaged participants and leaders in their local and global communities." We have largely done this by trying to grow as fast as possible to meet demand and give access to the community, while at the same time maintaining standards of instruction, excellent facilities, and modern instrumentation.

2. Regular Substantive Interaction (Instructional Programs Only)

To meet our college, ACCJC, state, and federal standards, **all online instructors** must demonstrate "**regular and substantive interaction**" (RSI) with students. That is, we must be clearly providing instruction and interacting with our online students, just like we would in an on-campus class. The following reflection questions allow us to capture how RSI is occurring in our classes.

The following documents explain requirements and best practices for RSI:

- ACCJC Quality Continuum Rubric for Distance Education
- Regular and Substantive Interaction (RSI) requirements

2a. If your program offers DE courses, how are Regular and Substantive Interaction (RSI) requirements met in your area? Examples appear on the DE addendums of your Course Outlines of Record. Place an X next to each method used in your courses.	
NA	Course materials make clear to students how often and when the instructor will interact with students (e.g. syllabus/home page lists email/office hours/other ways to communicate and typical response times)
	Provides direct instruction over Zoom (e.g. regularly scheduled live online class sessions in synchronous/hybrid/hyflex courses)
	Provides direct instruction through instructor-created videos (e.g. lecture videos created using Studio in asynchronous courses)
	Provides additional information from various sources/mediums to engage students with course content (e.g. instructor-curated content in Canvas pages that help deepen students understanding of course content)
	Facilitates discussions (e.g. through Canvas discussion boards, Pronto, Studio, or Hypothesis)

	Provides feedback on students' coursework (e.g. through detailed rubrics and/or assignment comments in Speedgrader; note: a grade alone does not quality as RSI, nor does auto-graded feedback students may get through completing publisher content)
	Responds to students' questions (e.g. through timely responses to student messages in Canvas Inbox, discussion boards, social annotation assignments)
	Facilitates student success through ongoing outreach (e.g. posts announcements; uses "Message Students Who" to encourage struggling students to attend office hours or access free tutoring)
NA	Other [explain]: All of our courses are face-to-face/in person, so this requirement is not applicable.

2b. What challenges if any have you faced in implementing RSI? What additional training or resources might instructors in your program need to increase the quality of RSI in online courses?

- *All of our courses are in person/face-to-face, so RSI is not applicable.*

Section 5: Program Review Feedback

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

- *We appreciate the opportunity to reflect on our program and to share our accomplishments and challenges with the larger community. Thank you.*

Detailed Instructions

Instructions

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

Sections: There are five sections to the document:

1. Program Reflection and Planning
2. SLO/SAO Review
3. Data analysis
4. Special topics
5. Feedback on the PR template and process

Time Frame: This Program Review should reflect your program status during the 25-26 academic year. It should describe plans starting now and continuing through 2026-27. It is fine to discuss topics beyond these time frames, but please specify the time frame in your responses.

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.

Equity: Here is the LPC definition of equity, which is a guiding principle in reviewing programs: "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."

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.

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