

College of San Mateo

2018-19 Instructional Program Review

First name Catherine Last name Ciesla Email cieslac@smccd.edu

Program Name

Please select your program. For CTE programs, use the [2018-19 CTE Instructional Program Review form](#).

Chemistry

Division

Please select your division

Math/Science

Submission Date

Description of Program

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[F18-PR-CourseDescription.docx](#)

Results of your previous Program Review's action plan

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[F18-PR-Chem-Q2A.docx](#)

2b. Program coherence and effectiveness: Explain any curriculum changes since last program review, including SLO alignments.

If your answer is more than 2000 characters (approximately 300 words), please upload a Word document below (10 MB or less). If you're not sure, please upload your answer. Please upload text only; we cannot ensure that non-text such as images, diagrams, or charts will be retained in the final submission.

The course outline and SLOs for CHEM 231 and CHEM 232 were assessed and updated in Spring 2017. Course SLO's were assessed for CHEM 210 (Fall 2017), CHEM 220 (Spring 2017), and CHEM 192 (Spring 2017) and were determined to be satisfactory. A move to make SLO assessment a more meaningful assessment is under discussion within the college. The chemistry department participated in professional development activities to help identify assessment methods for student learning (summer 2018). As part of the mapping of course SLOs to program SLOs all courses had more than one SLO that aligned with the program SLO. During the mapping process it was noted that aligning non chemistry classes (physics) with the chemistry program SLO's proved to be challenging. This perhaps requires a wider discussion as to how our program SLOs and supporting course SLOs align.

It is difficult to predict trends with respect to students completing the program due to the small number of students completing the AS degree exit survey 2012-2014, 8 students, usually taking chemistry to satisfy another major like biology or engineering. Survey of Degree Applicants shows that 100% of the students agree, or strongly agree that they are successful in all four program SLOs. 75% of the students strongly agree that they have met the SLO.

While this is gratifying, the student sample was small (8 students) and continued tracking of the data will be needed to ensure success. Also, 75% leaves room for improvement and suggest a continued focus on student success. Despite this, the alignment between the course SLO's and the program SLOs seem reasonable.

With respect to institutional learning outcomes (ILOs), every chemistry course SLOs align with at least 3 ILOs. As a department future discussions on the threshold concepts and courses that should be assessed needs to happen.

Student Success and Equity

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[F18-PR-CHEM-Q2C.docx](#)

2d. Provide an update on any long-term plans that are still in progress (if applicable).

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The department is still in the process of updating class online materials which is a large, long term commitment. The complete transfer of CHEM 210, CHEM 231 and CHEM 232 have successfully been transferred over to google docs. Future plans for the department in this current program review include the continuation of previous program review plans which have been adjusted based on our learning and discussions.

Course and Program Assessment

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[F18-PR-CHEM-Q3A.docx](#)

3b. General Education / Institutional assessment. Discuss participation in any General Education, Core Competencies, institutional or interdisciplinary assessment activities.

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Faculty from the department participated in a summer multidisciplinary SLO assessment activity geared towards brainstorming ideas on how to have meaningful learning outcomes for our students and how to assess those outcomes. As part of the undergraduate research skills class development, discussions around meaningful assessment are underway as the need to have consistent assessment calls for a shared rubric approach.

Description of Planning

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[F18-PR-CHEM-Q4A.docx](#)

4b. What will your program do to increase student success and promote student equity in the next two years? What kind of professional development and institutional support will be engaged and enacted to meet these goals?

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There are three dominant demographics in the chemistry department and the the latinx demographic group is one of them yet they trail behind 20 percentage points behind our highest success rate, actually having the lowest success rate - Why? The department needs institutional support to understand why that equity gap exists, what is causing it and how best to address it. The department can come up with hypothesis as to why this is the case but we do not have the tools or strategies to how investigate this.

Through professional development training and discussions, we would like to explore how we can make our classrooms more inclusive. An aim would be to design a more inclusive curriculum and institute cultural competency in the classroom. Professional development that would support this goal would be useful.

4c. Describe other professional development activities and institutional support and collaborations that would most effectively ensure that the program achieve its goals and plans.

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As the department moves forward professional development training on the need for equity in education and training on how to enact cultural competency in our classrooms is needed. Although the faculty are motivated to do this, having an awareness of the perspective of the students and how to sensitively address this is not innate. A question has arisen as to how we help students to see these interventions as supports and tool sets that are there to level the playing field.