It is recommended program assessment results be used to celebrate achievements of student learning as well as to identify potential areas for future curriculum improvement.

Please email this completed form as an attachment to thatcherk@slu.edu

CAS PROGRAMS: Please email this completed form by July 1 to Donna LaVoie lavoiedj@slu.edu

1. Degree Program(s) included in this report: Bachelor of Science in Chemistry and Biochemistry
2. Department: Chemistry
3. School/Center/College: Arts and Sciences
4. Name(s): Alexa Serfis (Assoc. Chair) and Scott Martin (Chair)
5. Email: martinrs@slu.edu
6. Phone: 977-2850

Instructions: Please answer the following five questions to the best of your ability for each degree program offered within your department.

1. Summarize your assessment activities during the past year for each degree program and how this work relates to the established assessment plan (e.g. what program outcomes were assessed, faculty discussions, new survey design, data collection, revised assessment plans or learning outcomes, etc.). Please include how Madrid courses/program were involved.

Administration of ACS exams in Analytical, Organic, and Biochemistry occurred this year. Both Chemistry and Biochemistry majors took the ACS Analytical and Organic exams. Only Biochemistry majors took the Biochemistry ACS exam. This activity addresses the first two learning outcomes in our plan (identify principles and demonstrate applications; apply chemical principles in a lab setting).

All BS students submitted a thesis that was reviewed and graded by faculty. We also had some BS students present research posters at the Sigma Xi SLU Chapter Student Research Symposium in early May. This activity addresses learning outcome number two, applying chemical principles to the laboratory setting.

BS students also completed the CHEM 3100 (Chemical Literature) course and completed all activities associated with that class. BS students also wrote laboratory reports in capstone lab courses, where they are required to consult the chemical literature in assembling their reports. Both of these activities address the third learning outcome. The third learning outcome states that students will recognize, process, and use scientific literature and articulate the importance of chemistry in society.

Exit interviews of all seniors were conducted but not tabulated at the time of this report. Analysis and discussion will take place over the summer (at the departmental retreat). Exit
interviews address the third learning outcome, in which students will recognize, process, and use scientific literature and articulate the importance of chemistry in society

2. Describe specific assessment findings related to the learning outcomes assessed for each degree program, including any pertinent context surrounding the findings. Please include the learning outcomes themselves. (e.g. Our goal was that 75% of students performed at the “proficient” level of competency in problem solving, using a new scoring rubric. 81% of students performed at the “proficient” level in problem solving, exceeding our expectations.) Do not include student-level data. Data included in this report should be in aggregate. Please include how Madrid courses/program were involved.

Our goal for ACS exam performance is a class average of at least the 70th percentile nationally. In Analytical, students achieved 82.5th percentile; in Organic, 88th percentile; and in Biochemistry (Biochem majors only) the average was 76th percentile. Our goal was exceeded for all the exams.

All BS theses were written and all students achieved B- or better on the report. All lab reports were graded with a rubric, and all students passed the course with successful completion of the written reports. Samples of these reports were submitted to the ACS as part of our recertification efforts.

In addition, we assessed the second learning outcome by having a review of the general chemistry lecture/lab sequence. We have reviewed student performance in the lab and made changes accordingly (in terms of grading, how lab reports are turned in, and the experiments themselves).

*Please attach any tables, graphics, or charts to the end of this report.

3. Describe how assessment feedback has been provided to students, faculty, and staff. (e.g. report for faculty, executive summary for the dean, web page for students, alumni newsletter, discussion with students in class or club event, etc.)

Our data is shared with faculty at the departmental retreat held annually in early August. The review of the general chemistry lecture/lab sequence was shared with the faculty in a report and a presentation at a faculty meeting. In addition, the College of Arts and Sciences posts this assessment report on their website so all students can see the report.
4. In what ways have you **used assessment findings** to celebrate student achievements and/or to improve the curriculum this past year? *(e.g. prizes to students, hosting student parties, changes to curriculum, student projects, learning goals, assessment strategies, etc.)*

   Since we have just completed assessment, and all ACS scores are high, we do not anticipate curricular changes in response to assessment results. After we review exit interview data as a faculty, we will discuss and make adjustments if needed. During our ACS re-certification efforts we did notice we need to expose students to more about polymers so we plan on adding that to the curriculum this year.

5. Describe any changes to your assessment plans, or any challenges or educational experiences with the **assessment process** this past year that you would like to share.

   No changes are anticipated at this time.

*Please submit any revised/updated assessment plans to the University Assessment Coordinator along with this report.*