

Program-Level Assessment: Annual Report

Program Name (no acronyms): Chemistry MA

Department: Chemistry

Degree or Certificate Level: Graduate

College/School: Arts and Sciences

Date (Month/Year): August 2021

Assessment Contact: Scott Martin and Dana Baum

In what year was the data upon which this report is based collected? 2020-2021

In what year was the program's assessment plan most recently reviewed/updated? 2018

1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle? (Please list the full, complete learning outcome statements and not just numbers, e.g., Outcomes 1 and 2.)

Outcome 1: Demonstrate advanced level knowledge in both (i) synthesis and materials chemistry and (ii) analytical and physical chemistry methods, with a higher level of knowledge expected in the student's area of focus.

Outcome 4: Apply learned chemical practices and theories to proposed problems.

2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please describe and identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

For both of these outcomes, course performance as determined by final grade was collected. Only one course offered in the past year had more than 1 MA student enrolled, so that was the course used for assessment.

Course: CHEM 5440 – Bioorganic Chemistry for synthesis and materials chemistry

Madrid does not have a graduate program in Chemistry.

3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and **include them in/with this report document** (do not just refer to the assessment plan).

Criteria used for assessment was as follows based on the final score in each class:

>90% Exceeds expectations

70 - 89% Meets expectations

65 - 69% Approaching expectations

<65% Not meeting expectations

Instructors for courses were asked to provide the number of students that fell into each of the above categories. Data was provided without names.

Data was reviewed by the Department's Assessment committee.

4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

Only one course offered the past year had more than one MA student enrolled and was included for the assessment.

For Outcome 1, 2 MA students were enrolled in CHEM 5440. One student met expectations, while a second student was approaching expectations. For Fall 2020, flex enrollment was an option and students attended either in person or virtually as needed, meaning their modality could change each week. Thus, we cannot assess if modality had an effect on achievement. All graduate courses are through the SLU campus.

For Outcome 4, 2 MA students were enrolled in CHEM 5440. One student met expectations, while a second student was approaching expectations. For Fall 2020, flex enrollment was an option and students attended either in person or virtually as needed, meaning their modality could change each week. Thus, we cannot assess if modality had an effect on achievement. All graduate courses are through the SLU campus.

5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

The MA program is generally for part-time students who may be far removed from their undergraduate courses and have obligations in terms of work and/or family that impact their preparation for courses. Our outcomes reflect this varied background. Due to the small number of students in this program, it is difficult to do detailed breakdowns. We typically see variations in achievement for these students.

6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

The results and findings were discussed in our annual faculty retreat.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites

- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Artifacts of student learning
- Evaluation process

- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

Please describe the actions you are taking as a result of these findings.

No specific actions are being taken as a result of these findings.

If no changes are being made, please explain why.

Given the small number of students in this program, we instead consider the data for all of our graduate programs (MA, MS, and PhD) as students across these programs take the same courses. The overall assessment is that students are overwhelmingly meeting and exceeding expectations for the assessed outcomes.

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

We have not made any specific changes to our program based solely on the assessment data for the MA program.

B. How has this change/have these changes been assessed?

N/A

C. What were the findings of the assessment?

N/A

D. How do you plan to (continue to) use this information moving forward?

As we see the MA program as a possible area of growth, we anticipate increased enrollment. We will consider how we can tailor our advising so that students in this program are able to follow a program that will provide them with the advanced knowledge that will most help them in their career paths.

IMPORTANT: Please submit any assessment tools (e.g., rubrics) with this report as separate attachments or copied and pasted into this Word document. Please do not just refer to the assessment plan; the report should serve as a stand-alone document.