SAINT LOUIS UNIVERSITY

Program Assessment: *Annual Report*

Program(s): MA

Department: Chemistry

College/School: Arts and Sciences

Date: 6/25/2019

Primary Assessment Contact: Scott Martin and Dana Baum

1. Which program student learning outcomes were assessed in this annual assessment cycle?

   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 2: Use standard search tools and retrieval methods to obtain information about a topic, substance, technique, or an issue relating to chemistry and assess relevant studies from the chemical literature.

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

2. What data/artifacts of student learning were collected for each assessed outcome? Were Madrid student artifacts included?

   For Outcome 1 and 4, the final oral exam was used for assessment by asking the chair of the committee to fill out a rubric.

   For Outcome 2, performance on a class project/presentation was collected. Assessment data was typically in the form of a rubric from the course instructor. For this outcome, only 1 course for the year had multiple students enrolled, so it was used for assessment. Course: CHEM 5470 Medicinal Chemistry (rubric attached)

3. How did you analyze the assessment data? What was the process? Who was involved?
   NOTE: If you used rubrics as part of your analysis, please include them in an appendix.

   Outcomes were assessed by rubrics, which are attached. Data was provided without names.

   Data was provided to Department's Assessment Committee.

4. What did you learn from the data? Summarize the major findings of your analysis for each assessed outcome.
   NOTE: If necessary, include any tables, charts, or graphs in an appendix.

   For Outcome 1 and 4, the majority of our MA students rated fair during their final oral exam. They displayed advanced knowledge, but there were still weaknesses in key concepts.

   For Outcome 2, all MA students rated as satisfactory or above on a class presentation demonstrating ability to search and utilize the chemical literature.

   It should be noted that the size of the MA program is small (typically less than 5 students), which

may skew the results.

5. How did your analysis inform meaningful change? How did you *use the analyzed data to make or implement recommendations for change* in pedagogy, curriculum design, or your assessment plan?

Based on our analysis, we would recommend graduate advisors and graduate course instructors work to develop a more structured plan for our part-time MA students. This could involve a more defined plan of specific courses to take or additional study to help them with concepts they are not familiar with and to prepare for their final exam.

The results of the assessment will be shared with the full faculty during our annual department retreat later this summer. Additional actions may be proposed at that point.

6. Did you follow up ("close the loop") on past assessment work? If so, what did you learn? *(For example, has that curriculum change you made two years ago manifested in improved student learning today, as evidenced in your recent assessment data and analysis?)*

This is our first year assessing these outcomes using these metrics.

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

SLU Chemistry Department – Final Oral Exam Rubric for MA students

	1 (Poor)	2 (Fair)	3 (Good)	4 (Excellent)	Score
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	*Student lacks basic knowledge in chemistry topics.*	*Student displays knowledge, but is weak in several key concepts.*	*Student displays knowledge, with minor weaknesses.*	*Student displays great knowledge chemistry topics.*	
Apply learned chemical practices and theories to proposed problems	*Student unable to solve basic chemistry problems.*	*Student displays knowledge, but is weak in several key concepts.*	*Student displays knowledge, with minor weaknesses.*	*Student able to apply knowledge to solve proposed chemical problem.*	
Communicate chemical topics effectively	*Student unable to clearly communicate chemical topics.*	*Student can sometimes communicate chemical topics effectively.*	*Student can effectively communicate chemical topics.*	*Student can communicate chemical topics effectively and compellingly.*	

Comments:

Please return to the Chemistry Graduate Program Coordinator

CHEM-5470 Presentation Rubric **Name** _____

Standards	5 - 4 Exemplary	3 - 2 Satisfactory	1 - 0 Weak	Score	Weight	Total Score
Organization	Has a clear opening statement that catches audience's interest; maintains focus throughout; summarizes main points	Has opening statement relevant to topic and gives outline of speech; is mostly organized; provides adequate "road map" for the listener	Has no opening statement or has an irrelevant statement; gives listener no focus or outline of the presentation		x 2	
Content	Demonstrates substance and depth; is comprehensive (4 med chem topics covered); shows mastery of material	Covers topic; uses appropriate sources; is objective	Does not give adequate coverage of topic; lacks sources		x 4	
Quality of conclusion	Delivers a conclusion that is well documented and persuasive	Summarizes presentation's main points; draws conclusions based upon these points	Has missing or poor conclusion; is not tied to analysis; does not summarize points that support the conclusion		x 1	
Delivery	Has natural delivery; modulates voice; is articulate; projects enthusiasm, interest, and confidence; uses body language effectively	Has appropriate pace; has no distracting mannerisms; is easily understood;	Is often hard to understand; has voice that is too soft or too loud; has a pace that is too quick or too slow; demonstrates one or more distracting mannerisms		x 1	
Use of media	Uses slides effortlessly to enhance presentation	Looks at slides to keep on track; uses an appropriate number of slides	Relies heavily on slides and notes; makes little eye contact; uses slides with too much text		x 1	
Response to Questions	Demonstrates full knowledge of topic; explains and elaborates on all questions	Shows ease in answering questions but does not elaborate	Demonstrates little grasp of information; has undeveloped or unclear answers to questions		x 1	
Comments				Grand Score (max 50)		

Adapted from Dorothy Mitstifer, https://rubrics.kon.org