

### COURSE SLO ASSESSMENT REPORT, SCC

Department: Earth, Space and Physical Sciences (Chemistry) Course: Chem 210

Year: 2012 Semester: Fall

1) Outcome to be assessed	A- Explain chemical events and processes in a clear and coherent manner using chemical symbols and chemical equations B- Solve problems using chemical concepts and chemical principles
2) Means of assessment and criteria of success	Both SLO A and B will be assessed using an MCQ final exam (49 questions). Achieving the SLO requires a “passing” (60% or better) on the final exam.
3) Summary of data collected	No of students assessed = 24 students  No of sections = 1  No of versions of the exam: 2  Average correct answers: Version A: 41.5, 85% (11 students) Version B: 40.6, 83% (13 students)  All 24 students got over 60% on their final exam. That is 100% meeting the SLO.

4) Analysis of data	From data analysis and looking at topics covered on the questions missed by the majority (over 50%) of the students taking the MCQ based final exam, only 4 questions were missed by more than 50% of the students. They were the same exact 4 questions on both versions of the exam (#s 1, 7, 8, & 9 on version A and #s 37, 43, 44, & 45 on version B). The questions covered the topics of metabolism, acidosis, active transport, and glycolysis.
5) Plan of action/what to do next	The results of this class were extremely good. All students passed the final exam with more than 60% on the final. Some of the final exam questions that students missed were very specific detail and came at the end of the course.

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1) Outcome to be assessed	C- Perform experiments with given directions and collect valid scientific data.					
2) Means of assessment and criteria of success	The assessment of this SLO was done as the students ran an experiment in lab and they were required to record all the data and observation, perform calculations, then comment on their data. This SLO was assessed using a titration experiment and lab report. They were required to perform the titration, calculate the molarity of an unknown, comment on their results and answer some post-lab questions. A rubric was provided to grade their lab reports.					
3) Summary of data collected	Number of students = 26 students Number of sections = 1 section					
	Parts of report	Exemplary 3	Accomplished 2	Developing 1	Beginning 0	Average score
	Observations recorded	19, 73%	7, 27%			2.73
	End point reached correctly	21, 81%	5, 19%			2.81
	Calculations done correctly	23, 88%	3, 12%			2.88
	Calculated % acetic acid matches the actual %	17, 65%	8, 31%	1, 4%		2.62

	Students calculate the amount of acetic acid in 1 L vinegar	17, 65%	7, 27%		2, 8%	2.50
	Students distinguish acidic hydrogens from non-acidic hydrogens	26, 100%				3.00
4) Analysis of data	<p>The average score on this assessment was 91.9%. In performing the experiment and writing their data, all 26 students have exceeded 60% (passing) on their reports. Based on this criterion, 100% of students met SLO C.</p> <p>Although, still considered overall at the “accomplished level, the calculation for the conversion of concentration of the acetic acid from percent to molarity was the most difficult part of the lab for the students (average score of 2.50); 2 students did not even complete the calculation.</p>					
5) Plan of action/what to do next	<p>This is the second time assessing this course (Chem 210). We will continue to use this assessment method to collect SLO data and monitor any gaps in learning.</p>					