

**COURSE SLO ASSESSMENT REPORT, SCC**Department: Earth, Space and Physical Sciences (Chemistry) Course: Chem 210Year: 2011 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 (66 questions). Achieving the SLO requires a 60% or better on the final exam.
3) Summary of data collected	No of students assessed = 19 students  No of sections = 1  Average correct answers was 42.3  All 19 students got over 60% on their final exam. That is 100% meeting the success criteria of a 60% or better on the final exam.

Question number	Number of incorrect students	% incorrect students	Question number	Number of incorrect students	% incorrect students
1	2	10%	34	3	16%
2	0	0%	35	0	0%
3	1	5%	36	1	5%
4	4	21%	37	5	26%
5	1	5%	38	0	0%
6	2	10%	39	1	5%
7	1	5%	40	2	10%
8	1	5%	41	0	0%
9	6	32%	42	0	0%
10	1	5%	43	3	16%
11	5	26%	44	11	58%
12	2	10%	45	6	32%
13	9	47%	46	2	10%
14	4	21%	47	2	10%
15	2	10%	48	2	10%
16	0	0%	49	2	10%
17	0	0%	50	4	21%
18	3	16%	51	12	63%
19	1	5%	52	5	26%
20	1	5%	53	3	16%
21	2	10%	54	3	16%
22	3	16%	55	15	79%
23	1	5%	56	3	16%
24	1	5%	57	3	16%
25	1	5%	58	0	0%
26	10	53%	59	12	63%
27	0	0%	60	11	58%
28	2	10%	61	7	37%
29	3	16%	62	6	32%
30	11	58%	63	7	37%
31	8	42%	64	9	47%
32	3	16%	65	0	0%
33	9	47%	66	1	5%

4) Analysis of data	From the above data, some of these questions had a lower correct answers (higher than 50% of students did not get the correct answer). This includes Question # 26 (addition reactions to alkenes) Question # 30 (recognize hemiacetals) Question # 44 (number of amino acids to complete a helix) Question # 51 (changes in DNA code) Question # 55 (alcohol fermentation products) Question # 59 (Kcal in 1 mole of ATP) Question # 60 (structure parts of acetyl CoA)
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. At the current time, the sample was small and no valid conclusion can be reached. We need to collect more data on the class and combine data to reach a valid conclusion.

**COURSE SLO ASSESSMENT REPORT, SCC**

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

Year: 2011 Semester: Fall

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	No students = 21students No sections = 1 section

	Parts of report	Exemplary 3	Accomplished 2	Developing 1	Beginning 0	Total
4) Analysis of data	Observations recorded	6, 29%	15, 71%			
	End point reached correctly	11, 52%	10, 48%			
	Calculations done correctly	5, 24%	16, 76%			
	Calculated % acetic acid matches the actual %	20, 95%	1, 5%			
	Students calculate the amount of acetic acid in 1 L vinegar	12, 57%	5, 24%	4, 19%		
	Students distinguish acidic hydrogens from non-acidic hydrogens	18, 86%		3, 14%		
	<p>In performing the experiment and writing their data, the students all have exceeded the 60% on their reports. It looks like the conversion of percent calculation to molarity calculation was somehow difficult for the students. Also, the distinction of acidic and non acidic hydrogens was not clear.</p>					

5) Plan of action/what to do next	At the time, the sample collected was very small. We plan to do the assessment on one more class to have a more meaningful data.
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