Course Assessment Report - 4 Column

Great Basin College

Courses (SCI) - Chemistry

Course Outcomes 1 and ctu.unitid = 658	Means of Assessment & Criteria / Tasks	Results	Action & Follow-Up
CHEM 122 - General Chemistry II - Solve problems involving equilibrium - Solve problems involving equilibrium (including acid-base and aqueous ion) **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** exam 1, exam 2, final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 79.1% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - The type of problem students tended to have the most trouble with involved weak acid and weak base mixtures. I need to assign more problems of this type in the future on homework. Students did surprisingly well on polyprotic acid problems. They usually hate that stuff. Go figure.
CHEM 122 - General Chemistry II - Solve problems involving chemical thermodynamics - Solve problems involving chemical thermodynamics **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** exam 2, final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 84.3% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - Students did well at all types of these problems. No changes are needed.
CHEM 122 - General Chemistry II - Solve problems involving electrochemistry - Solve problems involving electrochemistry **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** exam 2, final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 78.6% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - In general students did very well in this outcome. Students are struggling with gaining intuition at determining the spontaneous direction of electrochemical reactions. More homework could be assigned in the sub-discipline above.
CHEM 122 - General Chemistry II - Solve problems involving chemical kinetics - Solve problems involving chemical kinetics **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** exam 3, final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70	10/19/2015 - 81.0% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - This section of general chemistry requires a high level of mathematics (differential equations) to truly understand. The students did very well in this area. No changes are needed.

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CHEM 122 - General Chemistry II - Solve problems involving nuclear chemistry - Solve problems involving nuclear chemistry **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** exam 3, final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 88.1% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - Students had some trouble with complicated nuclear equations involving positrons, but in general they did very well in this outcome. No changes are needed.
CHEM 122 - General Chemistry II - Solve problems involving organic chemistry - Solve problems involving organic chemistry **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 75% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - This was the weakest area of the course in terms of outcomes attainment. Students did OK – they met the criteria for success, but I would like to improve upon these results. I plan to spend more time on it next year.
CHEM 122 - General Chemistry II - Solve problems involving metals and metalurgy - Solve problems involving metals and metalurgy **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 93% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - This material is very easy, and mostly descriptive. No changes are needed.
CHEM 122 - General Chemistry II - Solve problems involving transition metal and coordination compounds - Solve problems involving transition metal and coordination compounds **Next Assessment:** 2018-2019 **Start Date:** 06/19/2014 **Course Outcome Status:** Active	**Assessment Measure:** final (multiple questions) **Assessment Measure Category:** Exam **Criterion:** 70%	10/19/2015 - 79.8% **Criterion Met:** Yes **Reporting Period:** 2014-2015	10/19/2015 - Students find this material challenging. They are required to demonstrate ability to name and work with complex ions, and do crystal field splitting calculations. The grades in this area are better than I would have expected. The students even got 60% correct on the crystal field splitting calcs. I can't believe they got more than 33% correct on that. No changes are needed.
CHEM 122 - General Chemistry II - Operation of common chemistry lab equipment (balance, quantitative glassware) - Operation of common chemistry	**Assessment Measure:** Lab reports (the lab reports cannot be completed without successful operation of equipment)	10/19/2015 - 85% **Criterion Met:** Yes **Reporting Period:**	10/28/2015 - I am very keen to have students achieve well in this course as my specialty is thermodynamics and kinetics in chemical reactions.

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lab equipment (balance, quantitative glassware) **Next Assessment:** 2018-2019 **Start Date:** 10/19/2015 **Course Outcome Status:** Active	**Assessment Measure Category:** Assignment - Lab **Criterion:** >70% on aggregate lab report grade	2014-2015	Outcomes #1-8 were measured using exams in masteringchemistry (Pearson's online homework/testing tool). I have attached the aggregated data (screenshot) that was used to prepare this report. There is more detailed data (when you press the "+" you see in the screenshot), which I have not attached, but have used to analyze more precisely what students are having trouble with. This is what I have used in my action plan comments. Comparison with previous year: Last year I did a very similar assessment for this course. Students did better at every outcome this year. Even the lowest score (organic chemistry) was better this year. Last year it was 66%. 10/19/2015 - Students have demonstrated proficiency in lab and on lab reports. No changes are needed.