

COURSE SLO ASSESSMENT REPORT, SCC

Department: **Physics** Course: **Physical Science 115**

Year: **2012** Semester: **Fall**

SLO #1: Analyzing Physics Phenomena

1) Outcome to be assessed	2) Means of assessment and criteria of success	3) Summary of data collected	4) Analysis of data	5) Plan of action/what to do next
<i>Correctly analyze natural phenomena using the concepts of physics and chemistry.</i>	A final exam consisting of fifty multiple-choice questions. Some of the questions involved mathematical calculations and some of the questions involved using critical thinking applied to a conceptual question. Twenty-five students took the exam.	The following is a breakdown of scores: A 0 B 24% C 24% D 40% F 28% Median Score: 64%	The results are less than satisfactory. Slight less than half of the class, 48%, received a passing grade on this exam. This indicates that the students did not master problem solving techniques.	Incorporate more practice problems and cumulative review for the students.

SLO #1: Lab Experience

1) Outcome to be assessed	2) Means of assessment and criteria of success	3) Summary of data collected	4) Analysis of data	5) Plan of action/what to do next														
<p><i>Investigate physical phenomena using appropriate equipment and methods, make valid comparisons with theoretical predictions, and communicate those results.</i></p>	<p>In a class of twenty-five students, eight groups were each given a hydrogen fuel cell car. They were asked to: (1) Use the chemistry concepts covered in class to analyze the chemical reaction that took place and to explain the observations that they made. (2) Devise a method to determine the average speed of the car. (3) Analyze the energy processes involved in making the car move. (4) Conduct research and discuss the hydrogen fuel cell as a viable energy source using the concepts learned in class to support their answer.</p>	<p>The scores for the hydrogen fuel cell analysis are listed below (there are fifty points possible):</p> <table style="margin-left: 20px;"> <tr><td>Group 1</td><td>47</td></tr> <tr><td>Group 2</td><td>50</td></tr> <tr><td>Group 3</td><td>50</td></tr> <tr><td>Group 4</td><td>45</td></tr> <tr><td>Group 5</td><td>48</td></tr> <tr><td>Group 6</td><td>50</td></tr> <tr><td>Group 7</td><td>45</td></tr> </table>	Group 1	47	Group 2	50	Group 3	50	Group 4	45	Group 5	48	Group 6	50	Group 7	45	<p>All of the groups were able to successfully apply their knowledge of physics and chemistry to answer questions related to the hydrogen fuel cell.</p>	<p>The biggest weakness in this course is the lab manual. Every semester a few more inquiry based activities are added. In addition, problems involving critical thinking are added. However, there is still much improvement that can be done to improve the quality of the lab experience.</p>
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