

COURSE SLO ASSESSMENT REPORT, SCC

Department: _____ Astronomy _____ Course: _____ 140 _____

Year: _____ 2011 _____ Semester: _____ fall _____

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>1. Demonstrate an understanding that science is based upon observations of the universe and apply the scientific method as a research tool.</p> <p>2. Use the scientific method in collecting data, formulating and testing a hypothesis then reaching a conclusion.</p>	<p>Two separate labs were used that involved either the collection of data themselves or were given a given data to analyze and interpret. Further measurement was done with specific questions that addressed whether students could state a conclusion that is properly supported by evidence collected in the lab. Success is determine if the overall lab average is 60% or above. And whether 60% or above could correctly justify the conclusions drawn from the data and their analysis.</p>	<p>Data were collected from two labs during the last 25% of the semester. Two class sections averaging 24 students in each section were surveyed. The overall average on both labs was that 80% successfully completed the work. Less than 7% of the students scored below 70% on the lab. 88% could correctly identify sources of error in the data analysis, and 64% could draw the correct conclusion and 42% had the correct justification. 36% had an incorrect reasoning and therefore wrong conclusion.</p>	<p>With less than 7% of the surveyed students scoring below 70% on the labs, SLO-1 is successfully met. General understand of the scientific method is demonstrated throughout the lab and accounted for in the final scores. With 88% of students correctly identifying sources of error and in turn, 64% correctly being able to interpret the data and justify their conclusion, SLO-2 is successfully met.</p>	<p>Future action will be to continue to collect data with this embedded question method, and overall data collection and analysis will continue for the next assessment cycle. Continued assessment will allow for a larger sample size to possibly change the assessment tool. A larger sample size will also better accurately reflect success.</p>

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>3. Read, analyze, and interpret data to draw valid scientific conclusions and communicate those conclusions in a clear and articulate manner.</p>	<p>Two pre-existing labs were used that involved either the collection of data themselves or were given a given data to analyze and interpret. Additional assessment involved whether students could state a conclusion that is properly supported by evidence collected in the lab. Success is measured determine if the overall lab average is 60% or above. And whether 60% or above could correctly justify the conclusions drawn from the data and their analysis.</p>	<p>Data were collected from three sections during the last 25% of the semester. An average of 24 students were surveyed in each section. The overall average on both labs was that 80% successfully completed the work. Less than 7% of the students scored below 70% on the lab. 88% could correctly identify sources of error in the data analysis, and 64% could draw the correct conclusion and 42% had the correct justification. 36% had an incorrect reasoning and therefore wrong conclusion.</p>	<p>With less than 7% of the surveyed students scoring below 70% on the labs, SLO-3 is successfully met. General understand of the scientific method is demonstrated throughout the lab and accounted for in the final scores. The two labs required a complete process of data collection and/or analysis and logical conclusions that are correctly supported. With 64% correctly being able to interpret the data and justify their conclusion, and final scores averaging 80% SLO-3 is successfully met.</p>	<p>Future action will be to continue to collect data with this embedded question method, and overall data collection and analysis will continue for the next assessment cycle. Continued assessment will allow for a larger sample size to possibly change the assessment tool. A larger sample size will also better accurately reflect success.</p>