

COURSE SLO ASSESSMENT REPORT, SCC

Department: Astronomy Course: 140
 Year: 2013 Semester: Fall

1) Outcome to be assessed <i>(verbatim and in the same order as in CurricUNET)</i>	2) Means of assessment and criteria of success <i>(include % of students expected to meet criteria of success)</i>	3) Summary of data collected <i>(include # of students assessed and % meeting each SLO)</i>	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>A specific lab, SN 1987a, was chosen such that it focuses on the collection of data by the student, their own analysis of that data, and the forming of a conclusion based on the data collected. Overall completion as well as a subset of the questions were used to address whether students could properly support their conclusion with data.</p> <p>Success is determined if the overall lab average is 60% or above AND if more than 60% of student can justify their conclusion with at least one correct reason drawn from their data and analysis.</p>	<p>Data were collected from the SN 1987a lab conducted during the last 25% of the class. All 4 lab sections were assessed and yielded a total of 86 students completing the lab.</p> <p>The overall final average for all 4 sections is 82%.</p> <p>90% of the students were able to correctly justify their conclusion with a supporting statement based on their data analysis.</p> <p>60% of the students were also able to identify at least one source of error in the experiment.</p> <p>58% of the students were able to correctly determine the type of supernova that occurred in 1987.</p>	<p>Given that 90% of the students were able to justify their result with at least one correct reason from their analysis, 60% were able to identify at least one source of error, and the overall class average was 79% the SLO is considered to have been met.</p> <p>A general understanding of the scientific method is used to draw a conclusion at the end of the lab. While only 58% were able to determine the correct supernova, the process that 90% of the students successfully worked through to justify their conclusion demonstrates their understanding of the method as a research tool.</p>	<p>The assessment of the lab SLOs has historically used the same lab, SN 1987a. The faculty feel it collectively addresses all of the SLOs for the course.</p> <p>The faculty are encouraged to continue using the SN 1987a activity in the SLO analysis as well as to explore other lab exercises that specifically address data collection, analysis and conclusion supported statements.</p>