General Education Annual Course Assessment Form

Course Number/Title: GEOL 004L – Planet Earth Laboratory  
GE Area: B3

Results reported for AY: 2012-2013  
# of sections: 16  
# of instructors: 9

Course Coordinator: Ellen Metzger  
E-mail: ellen.metzger@sjsu.edu

Department Chair: Robert Miller  
College: Science

Instructions: Each year, the department will prepare a brief (two page maximum) report that documents the assessment of the course during the year. This report will be electronically submitted, by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by September 1 of the following academic year.

Part 1

To be completed by the course coordinator:

(1) What SLO(s) were assessed for the course during the AY?

SLO 1: Students can use the methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations.

(2) What were the results of the assessment of this course? What were the lessons learned from the assessment?

This SLO was assessed by reviewing student performance and engagement for Lab 4: Climate Change? The Modern CO2 Record. This lab involves interpretation of graphs to describe short-and long-term increases in atmospheric concentrations of carbon dioxide and methane.

Student reactions to this lab exercise were discussed with the Geology 4L instructors who reported that students are interested in climate change and generally earn a B or better on this assignment, but do not exhibit a high level of engagement in this exercise. This is partly due to the fact that the most recent values given for CO2 concentrations are from the mid-2000s.

(3) What modifications to the course, or its assessment activities or schedule, are planned for the upcoming year? (If no modifications are planned, the course coordinator should indicate this.)

Based on her conversations with the 4L instructors, Metzger will update this lab exercise to include more recent atmospheric data and expand it to include exploration of the current and anticipated
impacts of climate change due to rising greenhouse gas concentrations, including ocean acidification and changes in ocean circulation. New activities to complement the graph interpretation questions will include viewing of short videos and hands-on exploration of density-driven ocean circulation. These modifications are part of Metzger’s ongoing revision of the 4L lab exercises to include more examples of the interconnectedness of Earth’s atmosphere, oceans, and living things, make more connections to students’ everyday lives, and engage students in additional hands-on investigations.

Student performance on the revised lab will be assessed on the basis of average grades earned for this assignment. Discussions with the 4L instructors will be used to gain a qualitative measure of whether the revisions lead to greater student engagement.

Part 2

To be completed by the department chair (with input from course coordinator as appropriate):

(4) Are all sections of the course still aligned with the area Goals, Student Learning Objectives (SLOs), Content, Support, and Assessment? If they are not, what actions are planned?

All sections are still aligned with Area B3 goals and student learning objectives.