General Education Annual Course Assessment Form

Course Number/Title: Planet Earth  GEOL 003  GE Area: B1

Results reported for AY: 2017/18  # of sections: 2  # of instructors: 1

Course Coordinator: June Oberdorfer  E-mail: june.oberdorfer@sjsu.edu

Department Chair: Jonathan 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 to curriculum@sjsu.edu by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by October 1 of the following academic year.

Part 1

To be completed by the course coordinator:

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

GELO 2: Students should be able to demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues.

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

Besides having weekly quizzes, two midterms, and a final exam, students were also required to complete two small assignments that required fieldtrips to identify rock types and locations of possible natural hazards in northern California. In these two assignments students had to explain how some societies perceive the role of science in solving the impact of natural hazards. One of the questions debated/asked on these assignments was “What are the current political and social views in North America about the role of science in studying and minimizing the impacts of global climate change in terms of natural hazards?“.

The results were positive. More than 86% of the students were able to understand how some societies perceive the role of science to reduce the impact of natural hazards. Approximately 88% of the students were successful in debating and expressing their opinion on the current political and social views in North America about the role of science in studying and minimizing the impacts of global climate change regardless of their political preferences. Nearly 90% of the students expressed the view that the issue of global climate change should be addressed and not politicized to minimize a possible increase in natural hazard occurrence in the near future.

(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.)

For the upcoming academic year, it is planned to use:

GEOL 003
a) More in-class videos explaining how science influences and is influenced by complex societies (ex. The role of politics and society in the current global climate change debate on both developed and developing nations).

b) More in-class group debates on the role of politics when it comes to solving potential future natural hazards occurrence.

**GELO 3: Students should be able to use the methods of science, in which quantitative, analytical reasoning techniques are used.**

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

In addition to weekly quizzes, a midterm, and a final exam, students were required to complete two assignments that required fieldtrips to identify rock types and locations of possible natural hazards in northern California. In these two assignments students had to apply methods of investigation used in geology (taught in the lectures) and use them on the field (ex. How to differentiate igneous from sedimentary rocks). In one of these assignments students also had to use quantitative analytical reasoning to numerically calculate fluvial discharge to forecast flood probability. They were also exposed to the limits of scientific investigation when they tentatively had to find locations of possible natural hazards.

The results were very encouraging. More than 85% of the students were able to go on the field and answer the questions correctly using methods of investigation. Nearly 87% were able to numerically calculate fluvial discharge.

(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.)

For the upcoming year, it is planned to use:

a) More in-class videos and animations explaining methods of science in which quantitative, analytical reasoning techniques are used (ex. How to calculate the age of rocks and sediments using isotope dating).

b) More quantitative questions in the quizzes, midterms, the final exam, and fieldtrip assignments/labs.

**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 (GELOs), Content, Support, and Assessment? If they are not, what actions are planned?

All sections of Geol 003 are still aligned with the GELO’s
(5) If this course is in a GE Area with a stated enrollment limit (Areas A1, A2, A3, C2, D1, R, S, V, & Z), please indicate how oral presentations will be evaluated with larger sections (Area A1), or how practice and revisions in writing will be addressed with larger sections, particularly how students are receiving thorough feedback on the writing which accounts for the minimum word count in this GE category (Areas A2, A3, C2, D1, R, S, V, & Z) and, for the writing intensive courses (A2, A3, and Z), documentation that the students are meeting the GE GELOs for writing.