General Education Annual Course Assessment Form

Course Number/Title ___Geology 8- Age of Dinosaurs___ GE Area _B2________________________________________

Results reported for AY __2017-2018____ # of sections ___3________ # of instructors ___1________

Course Coordinator: ______Jonathan Miller_________ E-mail: ______jonathan.miller@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 1: Students should be able to use the methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations.

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?

Questions addressing GELO 1 are distributed throughout quizzes and exams over the course of the semester. These questions ask students to consider what evidence forms the basis of our understanding of the history of the Earth, including evolution, mass extinctions, the recent restructuring of the dinosaur family tree, and the nature of the fossil record.

One example from the final exam asks students to explain why a certain group of dinosaurs (pachycephalosaurs) has a particularly poor fossil record in North America, despite the wealth of other dinosaur fossils. This particular question had a low success rate, due in part to my poor wording of the question. Nevertheless, 50% of students were able to recognize that these dinosaurs lived in a mountainous environment not conducive to fossil preservation.

The third writing assignment of the course asks students to research a specific question about dinosaurs and how they lived (from a provided list of topics). Students locate and cite relevant scientific articles. The focus of the paper is not on what the answer is, but how scientists went about arriving at their current understanding. Students evaluate and discuss the steps of the scientific method as they relate to the study they choose. Based on final writing assignment scores, 81.3% were able to effectively communicate their understanding of this learning objective. A recurring issue lies in distinguishing relevant sources from other internet webpages, so the relevance of sources will be emphasized more moving forward.
For GELO 2, The second writing assignment of the course asks students to consider the impact of people’s social, religious, or political opinions on the acceptance of the theory of evolution. The focus is on why the theory of evolution is rejected by people who otherwise accept other scientific ideas, such as the theory of gravity or rock formation. Students draw on their own experiences, in some cases their own acceptance or non-acceptance of evolution, and cite sources to support their ideas. Based on final writing assignment scores, 81.7% of students were able to effectively communicate their understanding of this learning objective.

(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.)

As dinosaur science progresses, the course will continually be updated with current scientific discoveries, such as the recent recognition of two dinosaur genera with an apparent aquatic lifestyle, overturning our understanding of dinosaurs as exclusively terrestrial (and neatly tying into to GELO 1’s target of questioning existing explanations). As this course continues to evolve and assignments are refined, greater emphasis will be placed on explicitly targeting GELOs on exams.

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?

This is the first assessment data to be reported for Geol 008. All sections of Geol 008 are 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.