General Education Annual Course Assessment Form

Course Number/Title: METR 112/Global Climate Change GE Area: R

Results reported for: AY 11-12 # of sections: ~12 # of instructors: ~7

Course Coordinator: Alison Bridger (as dept chair) E-mail: Alison.Bridger@sjsu.edu

Department Chair: Alison Bridger 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#2: "A student should be able to distinguish science from pseudo-science". Raw data is stored in the chair's office/assessment data shelf (COADS).

This is the first time that SLO#2 has been assessed.

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

In a department assessment retreat in January 2012, faculty discussed assessment at all levels, including in GE. Faculty decided to have an "assessment week" in which assessment activities would be conducted in *all* GE classes in one week (April 9-12, 2012). Faculty also developed a set of questions to assess the SLOs. We designed *one* question to address SLO#2 in *both* our advanced GE classes, MET 112 and MET 113.

In MET 112 & 113, the following question was posed: "What steps would you take to decide whether an explanation for a phenomenon is science or pseudo-science?" Faculty also discussed the elements that would be needed in a student's response in order to qualify as "meeting" the SLO.

Data was gathered in three sections of MET 112 and one section of MET 113. Answers were graded in three categories: "meets expectations", "does not meet expectations", or "partial" (typically indicating that the student had an incomplete understanding, but was not clueless). In the four sections (89 students), 48 met expectations (54%), 37 partially met expectations (42%), and only 4 did not meet expectations. More concisely, 96% of all students responding had at least some (correct) sense of the answer, whereas only 4% did not meet the learning outcome. If this was given as a take home exercise (which we believe was the case), it is very possible that the statistics are skewed towards students who could meet the SLO.

The vast majority of students (85 of 89) *did* meet the learning outcome, at least partially. It probably would be preferred if a larger fraction of the class could fully meet the expectation set; instead the fraction outright meeting the expectation ranged from 38% to 64%. By and large, the "better" answers were longer, and the "partially met expectations" answers were shorter. We believe it is very possible that students chose to peel this exercise off in as short a time as possible, thus providing only partial evidence (to us) that they had mastered the SLO. The faculty will discuss whether there is any value to asking for longer (more well thought-out) answers in future.

In summary, we believe that our teaching in all sections of this course is being successful in teaching students about the differences between science and pseudo-science.

(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.)

The faculty will discuss the results above in an assessment meeting this fall, and will seek ways to improve our overall performance relative to this SLO and across all sections and instructors.

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?

The chair is satisfied that this course is being delivered with full and appropriate attention to all area "R" goals, SLOs, content, support, and assessment.