

General Education Annual Course Assessment Form

Course Number/Title: METR 10/Weather & Climate

GE Area: B1

Results reported for: AY 13-14

of sections: 4

of instructors: 4

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#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". Raw data is stored in the chair's office/assessment data shelf (COADS).

- (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. During AY 13-14, this was the week of April 14-18, 2014. In the meeting, faculty developed a set of questions to assess the SLOs. We designed a question to address SLO#1 in our core GE class MET 10.

In MET 10, students were asked to respond in-class to the following prompt: "Explain how and why temperatures are different on a clear winter night as opposed to a cloudy winter night, all else being the same". Briefly, the answer involves the physics of water vapor and liquid cloud droplets, which combine to prevent the loss of heat from the lower atmosphere. This is a version of the greenhouse effect. Provided that students had attended lectures (and/or read the text) on the topic of radiative heating/cooling of the atmosphere, the task should have been straightforward.

Data was gathered in four "live" sections of MET 10 and the one online section. For the online section, the instructor provided responses to us in a highly unfriendly format (basically each answer was in the form of one long line of text). As a result, we were unable to evaluate those responses, so only results from the "live" sections are discussed here.

Answer sheets from all sections of all GE classes were holistically graded by three faculty members in May 2014; the results for MET 10 are tabulated below. The meaning of the scores is: "+1" indicates that the student fully met the outcome; "0" indicates that the student partially met the

outcome (perhaps something was missing, perhaps there was an error, but some of the “right stuff” was present); “-1” indicates that the student did not meet the outcome.

| Section | Responses | +1 | 0 | -1 |
|---------|-----------|----------|----------|---------|
| A | 32 | 23 (72%) | 4 (13%) | 5 (16%) |
| B | 40 | 21 (53%) | 11(28%) | 8 (20%) |
| C | 42 | 24 (57%) | 10 (24%) | 8 (19%) |
| D | 27 | 16 (59%) | 7 (26%) | 4 (15%) |
| Sum | 141 | 84 | 32 | 25 |
| Percent | | 60% | 23% | 17% |

Overall in these four “live” sections (141 students), 60% were deemed to have fully met/satisfied the learning outcome, and a further 23% partially met expectations. Meanwhile, 17% of students who showed up for class on that day failed to satisfy the learning outcome. If pressed, this author would prefer this number to be under 10%. However, it is not clear what would lead to improvement.

There is some section-to-section variation in success. Notably, students in section “A” did best in this assessment. We are pleased by this since assessment in the same instructor’s sections last year produced results that were below average. So we conclude that “it’s not the instructor – it’s the students”.

(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 these results in an assessment meeting early in Fall, and will seek ways to improve our overall performance relative to this SLO and across all sections and instructors. Our faculty are mindful of the fact that a certain fraction of admitted SJSU students are not “college-ready” for a variety of reasons. This class is one that can be taken immediately, including by students who are ELM/EPT remedial.

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 “B” goals, SLOs, content, support, and assessment.