Course SLO Assessment Report - 4-Column

El Camino College

El Camino: Course SLOs (NSC) - Astronomy

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
El Camino: Course SLOs (NSC) - Astronomy - ECC: ASTR 20 - The Solar System - SLO #1 Scientific Method - Students will be able to recognize the elements of the Scientific Method in the discussion of a scientific problem. (Created By El Camino: Course SLOs (NSC) - Astronomy) **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/12/2013 **Course SLO Status:** Active	**Assessment Method Description:** The assessment consist of a written assignment in which the student analyzes the application of the Scientific Method to the Copernican controversy. The assignment is attached. **Assessment Method:** Essay/Written Assignment **Standard and Target for Success:** 75% of students will score 6 or above on this SLO. RUBRIC: SCIENTIFIC METHOD — COPERNICAN REVOLUTION 2 points each: 1. Clearly identifies the competing hypotheses. 2. Clearly identifies observations or tests supporting each theory and how they support them. 3. Identifies how the principle of Occam's Razor favors one theory. 4. Differentiates between strong and weaker observations or tests. 5. Demonstrates an understanding of the role of disproof as opposed to proof in scientific theories. **Related Documents:** ScientificMethod.SLO.Copernicus.rtf	02/07/2014 - When reduced to one number, the percentage of students who met the acceptable score of 6, the results are as follows: Professor A 15% Professor B 38% These figures are discouraging low are a far cry from the target of 75%. We have gone through considerable soul searching in consequence. We met on Jan. 31, 2014, to discuss these results. When we look at the assignments more closely, the typical pattern that emerges is that most students can successfully contrast the sun-centered and Earth-centered theories and most can describe one or two lines of evidence that favor the sun-centered theory. Where most students fall down is in applying the Scientific Method and Occam's Razor to the controversy. We decided that for some of us the method of administering the assessment was faulty. Professor A gave it as part of the last exam at the end of the term. Professor B gave it as a low-points homework assignment near the end of the semester. We think that students need to be given more motivation to complete such a long assignment. The upside is that the depth of this assignment gave us important feedback on how students understand the application of the Scientific Method to a real scientific problem. Although we are disappointed, we have learned a lesson. We realize that it is not enough to lecture on the Scientific Method or the Copernican Revolution. We need to give students practice in thinking for themselves and applying the Scientific Method. **Standard Met? :** No **Semester and Year Assessment Conducted:** 2013-14 (Fall 2013) **Faculty Assessment Leader:** V. Lloyd **Faculty Contributing to Assessment:**	12/01/2015 - 4. Do an early re-assessment. **Action Category:** SLO Assessment Process 12/05/2014 - 3. Give students more time and encouragement to complete the assignment. **Action Category:** SLO Assessment Process 12/01/2014 - 2. Apply the Scientific Method to a real problem at least twice during the semester. **Action Category:** Teaching Strategies 12/01/2014 - 1. Give students more writing practice. **Action Category:** Teaching Strategies

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