Course SLO Assessment Report - 4-Column

El Camino College

El Camino: Course SLOs (MATH) - Math (Math and Science Majors)

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
El Camino: Course SLOs (MATH) - Math (Math and Science Majors) - ECC: MATH 180 - Pre-Calculus - SLO #4 PROOFS - Students will analyze and construct proofs, including proofs by induction. (Created By El Camino: Course SLOs (MATH) - Math (Math and Science Majors)) **Course SLO Assessment Cycle:** 2017-18 (Fall 2017) **Input Date:** 11/21/2013 **Course SLO Status:** Active	**Assessment Method Description:** In Math 180, students will prove trigonometric identities using the sum, difference, double-angle, and half-angle formulas Sample Test Question: Prove sin(x+y)-sin(x-y)=2cosx*siny **Assessment Method:** Exam/Test/Quiz **Standard and Target for Success:** Based on the rubric given below, it is anticipated that 70 % of the students will score either satisfactory or excellent. * Numbers of Students Excellent (Strong understanding of concept and strong computational skill); Satisfactory (Medium understanding of concept and medium computational skill); Unsatisfactory (Weak understanding of concept and weak computational skill);	01/25/2014 - Our data is collected from 10 Math 180 sections with a total of 254 students. Here is the breakdown: 121 students received a score of "Excellent" = 48%; 71 students received a score of "Satisfactory" = 28%; 62 students received a score of "Unsatisfactory" = 24%; Therefore, 76% of the students passed this SLO #4. We are pleased that this met our goal of achieving 70% success rate. Here are some comments collected from participating Math 180 instructors on why they were successful on this SLO: 1) Most students were able to do this problem easily. Four students left it blank. These students have very weak background in trigonometry. They either have algebra & trigonometry together in high school or never had trigonometry. 2) Students completed all of the homework problems on time before I tested them on this SLO. 3) Students were given time in class and at home to practice problems similar to the SLO problem. 4) Overall the results were pretty good. I plan on spending more class time working with the identities at various levels of difficulty. I think students need more practice in proving formulas and more homework problems in the trig sections. 5) Students did very well in constructing proofs. Two questions were given, one proof with the relevant sum, difference, double-angle, and half-angle formulas, and one to see if they remember a particular formula. As seen in the results, many students did well on this, despite it having been several weeks since we had done this material. Those who did Satisfactory didn't do well on the question without the relevant formula provided. 6) The scores were so low not because my students were unable to construct a trigonometric proof, but because they did not know the relevant 1/2 angle/double angle/angle addition/subtraction formulae that were necessary to the correct solution of the proof. I think that if the problem had been open book they would have done better. Thus, I do not think this actually measured the topic of the SLO (except that knowing the formulae/identities is pretty much necessary for any trig. proof).	01/25/2018 - Move some of the trig sections to earlier in the course rather than the middle. So students can have more time understanding trig. **Action Category:** Teaching Strategies 01/25/2018 - We'd like to increase the target success rate to 72%. **Action Category:** SLO/PLO Assessment Process

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		7) Overall the results were pretty good. I spent a lot of time working with the identities at various levels of difficulty. 8)Two questions were given, one proof with the relevant sum, difference, double-angle, and half-angle formulas, and one to see if they remember a particular formula. As seen in the results, many students did well on this, despite it having been several weeks since we had done this material. Those who did Satisfactory didn't do well on the question without the relevant formula provided. **Standard Met? :** Yes **Semester and Year Assessment Conducted:** 2013-14 (Fall 2013) **Faculty Assessment Leader:** Michael Bateman and Greg Fry **Faculty Contributing to Assessment:** Seyedin, Numrich, Evensizer, Bateman, Silva, George, Mediza, Barajas (2 sections) and Hoang. Shane Smith did not participate in this SLO. **Related Documents:** Bateman's -SUMMARY of Math 180 SLO-5 Fall 2013.docx	