### Course SLO Assessment Report - 4-Column

**El Camino College**

**El Camino: Course SLOs (MATH) - Pre-Engineering**

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<td><strong>Assessment Method Description:</strong> Students were asked to write a one page essay describing the preparation, training, practice, obligations, and ethics required in the engineering profession.</td>
<td><strong>05/08/2014</strong> - This Spring 2014 semester, no students earned a score of 0 or 1, while 27% earned a score of 2, and 73% earned a score of 3. Since the success rate for this SLO was 100%, no improvement is possible in the overall student success rate. However, the target of 75% success at the Complete Understanding level, corresponding to a score of 3 was not met. The instructor suggested that students need to be encouraged to comprehend and address the question completely and provide answers for all elements in the question. Also, the instructor plans to emphasize and repeat important issues. This course, Engineering 1, is designed to stimulate student interest in pursuing a career in the field of Engineering. Assessments conducted in the course consist of multiple choice and short answer exams, as well as essay questions. There are no mathematical or engineering type problems to be solved in the class, nor is there a prerequisite for the course. There is only one section of the course offered each semester. Also, since there has been only one instructor teaching the course for the past number of years, there are no colleagues who also teach the course, who could benefit from his suggestions. Based on the nature of the course, there is no need to change the SLO statement. <strong>Standard Met? :</strong> No</td>
<td><strong>05/25/2015</strong> - Emphasize and repeat important issues by including short answer questions on quizzes, relating to preparation, training, and ethics for the Engineering profession.</td>
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<td><strong>Standard and Target for Success:</strong> The rubric was based on a 4 point scale with the lowest being 0, corresponding to No Understanding, 1 corresponding to Some Understanding, 2 corresponding to Most Understanding, and 3 corresponding to Complete Understanding. Students who earned a 2 or 3 were deemed Successful at mastering the SLO, while those scoring 0 or 1 were Unsuccessful. If a student correctly analyzed just one of the concepts listed in SLO #1, the student would earn 1 point, if the student analyzed three of the ideas listed, the student would earn 2 points, and if they analyzed all five correctly, they would earn 3 points, which is the maximum. Since the last time that students were assessed for SLO #1, which was during the Spring 2013 semester, no students earned a score of 0 or 1, 36% earned a score of 2, 64% earned a score of 3, the success rate was 100%. For this Spring 2014 semester, because the 100% success rate cannot be improved upon, the target was set for 75% of the students to earn a score of 3, corresponding to complete understanding.</td>
<td><strong>Semester and Year Assessment Conducted:</strong> 2013-14 (Spring 2014) <strong>Faculty Assessment Leader:</strong> William Latto <strong>Faculty Contributing to Assessment:</strong> Milan Georgevich</td>
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**El Camino: Course SLOs (MATH) - Pre-Engineering - ECC: ENGR 9 - Intro to Engineering - SLO #1 Solve Equilibrium Problems - Analyze the preparation, training, practice, obligations, and ethics required in the engineering profession. (Created By El Camino: Course SLOs (MATH) - Pre-Engineering)**

**Course SLO Assessment Cycle:** 2013-14 (Spring 2014) 2015-16 (Spring 2016)

**Input Date:** 11/21/2013

**Course SLO Status:** Active

**Assessment Method Description:** Students were asked to solve the following problem on an exam: Determine the reactions at the beam supports for the given loading if \( w_0 = 300 \text{ pounds} \). See attached diagram.

**Assessment Method:** Exam/Test/Quiz

**Standard and Target for Success:** Since this should not be a difficult problem for students at the Engineering 9 level, a 100% success rate for this SLO was approximately 68%, so, the target of 100% was not met. In addition, nearly a quarter of the students showed virtually no understanding. Though the problem was not any more difficult than in previous exams from earlier years, this group of students was not as talented as those in the past few years. All of the exam scores were lower this semester, than in past years.

**05/21/2014** - This Spring 2014 semester for the one and only section of Engineering 9 offered this academic year, 7 students earned a score of 0 (22.5%), 3 students earned a score of 1 (10%), 14 earned a score of 2 (45%), and 7 earned a score of 3 (22.5%). The success rate for this SLO was approximately 68%, so, the target of 100% was not met. In addition, nearly a quarter of the students showed virtually no understanding. Though the problem was not any more difficult than in previous exams from earlier years, this group of students was not as talented as those in the past few years. All of the exam scores were lower this semester, than in past years.

**05/27/2015** - Investigate publisher workbooks for use.

**Action Category:** Teaching Strategies
success rate has been set as a target. The rubric was based on a 4 point scale with the lowest being 0, corresponding to No Understanding, 1 corresponding to Some Understanding, 2 corresponding to Most Understanding, and 3 corresponding to Complete Understanding. Students earning a 2 or 3 are deemed successful at mastering the SLO, while those scoring 0 or 1 were Unsuccessful. If a student sketched a completely incorrect Free Body Diagram, their score was 0. If the FBD was mostly correct, the student earned 1 point. If the FBD was completely correct, but there was a major algebraic error in the solution, the student earned a score of 2, while if only a minor error occurred, the student earned a score of 3, which is the maximum.

Standard Met? :
No
Semester and Year Assessment Conducted:
2013-14 (Spring 2014)
Faculty Assessment Leader:
Jill Evensizer
Faculty Contributing to Assessment:
Milan Georgevich