

Course SLO Assessment Report - 4-Column

El Camino College

El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT)

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: ETEC 10 - Principles Engineering Technology - SLO #1 Careers - Students will research engineering and engineering technology careers and create a report. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2016-17 (Spring 2017)</p> <p>Input Date: 11/29/2013</p> <p>Course SLO Status: Active</p>	<p>Assessment Method Description: Students will complete and submit a paper on researched engineering and engineering technology careers including required classes, pay and job prospects.</p> <p>Assessment Method: Essay/Written Assignment</p> <p>Standard and Target for Success: Evaluate student work with 4 levels '4' for addressing complete assignment, '3' for mostly complete, '2' less complete, '1' minimal completion and '0' for no submission. The target for this is 75% of students to achieve a '4' or '3' level of completion</p>	<p>02/25/2014 - 17 students were in the class: 6 students received a grade of '4', 3 students received a grade of '3', 2 students received a grade of '1' and 6 students did not submit a paper. Based on this the target of 75% students receiving a '4' or '3' was not met. Given this it is suggested that the target be lowered or that faculty work to encourage student to complete the assignment for submission.</p> <p>Standard Met? : No</p> <p>Semester and Year Assessment Conducted: 2012-13 (Spring 2013)</p> <p>Faculty Assessment Leader: Eric Carlson</p> <p>Faculty Contributing to Assessment: Eric Carlson</p> <p>Reviewer's Comments: No comment.</p>	
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: ETEC 10 - Principles Engineering Technology - SLO #2 Marble Sorter - Students will build an automated marble sorter. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2013-14 (Spring 2014)</p> <p>Input Date: 11/29/2013</p> <p>Course SLO Status: Active</p>	<p>Assessment Method Description: Student will be assessed on a scale from 0 to 6. Depending on how many elements they build and function (program, hopper, bins, transport system, sensing system, function) each are valued a point.</p> <p>Assessment Method: Project</p> <p>Standard and Target for Success: The standart set for this challenging project is an average of 4 points for the class.</p>	<p>05/16/2014 - Ten students attempted the assignment, 3 students received 3 points, four students received 6 points and 1 student received 0 points. This results in a class average of 3.3 points.</p> <p>Standard Met? : No</p> <p>Semester and Year Assessment Conducted: 2013-14 (Fall 2013)</p> <p>Faculty Assessment Leader: Eric Carlson</p> <p>Faculty Contributing to Assessment: Eric Carlson</p> <p>Reviewer's Comments: Considering the lack of focus and time management of this group, performance was not very below the standard. It is suggested that students be given tips to help in these areas to succeed in this complex assignment.</p>	
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: ETEC 16A - Computer Integrated Manufacturing I - SLO #1 Solid Modeling -</p>	<p>Assessment Method Description: Students will be given dial calipers, micrometers, sketch, machined part, computer, and software. The sketch will be missing dimensions. The</p>	<p>03/27/2014 - 26 students were assigned this project. 24 students completed the assignment. 24 students earned 20 points out of 20 points. One student received 10 out of 20 points. One student did not do the work.</p>	

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
<p>Students will measure and solid model a provided assembly. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2016-17 (Fall 2016)</p> <p>Input Date: 11/29/2013</p> <p>Course SLO Status: Active</p>	<p>students will measure the machined part with dial calipers and micrometers to determine the missing dimensions. Using that information, the students will use a 3D modeling program to draw the solid model on a computer system.</p> <p>Assessment Method: Project</p> <p>Standard and Target for Success: This is a 20 point assignment with 10 points for the measuring and filling in the sketch and 10 points for creating the 3D model on the computer. The student will earn 10 points for successfully measuring the part within a tolerance of +/- .002. If the student should require extra help, the 10 points will be lowered. If the student misreads the measuring tool, points will be lowered.</p> <p>It is expected that the student will need some help. At this point, the students have seen a video, website with practice, and homework on how to read the dial calipers and micrometers. The students have not handled the real measuring tools before, so some help will be needed. After filling in the missing dimensions, the students will use a 3D software package to model the part. The students will use commands to create points, lines, and circles. More commands will be extrude, revolve, holes, and dimensions. Students will turn in a printed sheet of paper with the model drawn on it. Students will "save" work for an assignment for a later date. 10 points will be awarded for the computer work, if complete. Students will receive various levels of points for different levels of work.</p>	<p>24 students showed very good mastery of the subject. 2 students did not show any mastery of the subject.</p> <p>Standard Met? : Yes</p> <p>Semester and Year Assessment Conducted: 2013-14 (Fall 2013)</p> <p>Faculty Assessment Leader: Harold "Ed" Hofmann Jr.</p>	
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: ETEC 16B - Computer Integrated Manufacturing II - SLO #1 Robotic Arm: Palletize - Students will program a robot arm to palletize parts. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2014-15 (Spring 2015)</p> <p>Input Date: 11/29/2013</p>	<p>Assessment Method Description: The students will be given a computer with RoboCell software (robotic programming software). The students will stack 3 blocks from one area of the table to another area on the table. In virtual, the student will create a robotic workstation that includes a platform, robot, 3 blocks at a known location, and a pallet. The student will program the robot to stack the parts. Then, move the parts, one at a time, to a pallet and place in an organized manner. The student will sketch the locations of the blocks and their position numbers. Student will</p>	<p>03/27/2014 - Twelve (12) students were assigned this project. Twelve (12) students completed this assignment. Four (4) students earned 20 points out of 20 points. Seven (7) students earned 18 points out of 20 points. One (1) student earned 15 out of 20 points. Eleven (11) students showed good mastery of the subject material by earning scores at or above 80%. One (1) student showed mastery of the subject with a score of 75%.</p> <p>The implications of the data are that I did a good job with the lectures and demonstration of the software. To</p>	<p>03/27/2014 - The ScoreBot (robotic arm) was not available for this semester. After the students complete the task of programming and simulation of the robotic arm, the students can download the program into the ScoreBot and operate the robotic arm. At present, the robotic arm is being converted on to a rolling cart to be used in other classrooms. It is expected to be completed soon.</p>

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
<p>Course SLO Status: Active</p>	<p>print out the program and show instructor the animation for the grade.</p> <p>Assessment Method: Project</p> <p>Standard and Target for Success: 6 points will be awarded by creating the virtual workspace with the software. 10 points will be awarded for creating the robot arm motion without hitting out things in the virtual workspace, picking up and placing the blocks on pallet. 4 points will be awarded for showing the instructor the animation and turning in the sketch.</p>	<p>the students' credit, this software was like playing a video game for them. They had fun with the practice portion of this lesson. The results shows that the students understood the lesson using the RoboCell software.</p> <p>Standard Met? : Yes</p> <p>Semester and Year Assessment Conducted: 2012-13 (Spring 2013)</p> <p>Faculty Assessment Leader: Harold "Ed" Hofmann Jr.</p>	<p>Action Category: Program/College Support</p>
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: MTEC 70 - Basic Robotics - SLO #2 Programming & Debugging - The student will be able to compose logical instructions such as basic navigation and maneuvers for a robot will follow, debug and compile instruction codes onto the robot's micro-controller, and test and run the functional prototype robot. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2015-16 (Fall 2015)</p> <p>Input Date: 11/29/2013</p> <p>Course SLO Status: Active</p>	<p>Assessment Method Description: The original SLO statement was as follows: This is a 5 part activity requiring a student to use and write a program that will control a robot. The 5 parts are: go straight 8 feet, stop, turn 180 degrees, go straight 8 feet and stop.</p> <p>Standard and Target for Success: Students will be scored on a four-points(4) scale for each activity. 1 point: open software for programming 2 point: attempt to program with no help. 3 point: attempt to program with help. 4 point: success with writing a program without help.</p>	<p>03/28/2014 - Results using the rubric with 4 being the highest score and multiplied by the 5 separate activities, the student can earn up to 20 points. 18 points and higher showed that the student mastered the problem. 16 to 17 points showed that the student had good mastery of the problem. 14 to 15 showed that the student has average mastery of the subject. The students in the MTEC-70 class scored an average of 19 points on this problem.</p> <p>Breakdown by score of the 5 students tested: 2 students earned 20 points. 2 students earned 19 points 1 student earned 17 points</p> <p>This problem was worked on in the middle of the semester. All students that dropped the class had dropped by now. I felt that the problem was the appropriate tool to measure the outcomes. Since the scores were high, this demonstrates that the students knew the material. Further, the students tested also finished the class.</p> <p>Standard Met? : Yes</p> <p>Semester and Year Assessment Conducted: 2012-13 (Fall 2012)</p> <p>Faculty Assessment Leader: Harold "Ed" Hofmann, Jr.</p> <p>Related Documents: MTEC 70 assessment - 13 spr.doc</p>	
<p>El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT) - ECC: MTEC 75A - Intgrtd Robtic/Automtd Tech I - SLO #1 Programming a Robot - Students will correctly program a robot</p>	<p>Assessment Method Description: Students construct a robot from VEX components and use Robot C language to program the robot to respond to human intervention via remote control (Open Loop). A</p>	<p>04/03/2014 - 29 students enrolled mastered the outcome in the fall 2013 semester. The number of attempts required for mastery was: 1 attempt = 13, 2 attempts = 8, 3 attempts = 4, 4 attempts = 1, 5 attempts = 3.</p>	<p>12/31/2014 - Subsequent activities will be considered to see which students retain the concepts longest. Those demonstrating mastery after one attempt</p>

Course SLOs	Assessment Methods & Standard and Target for Success / Tasks	Results	Action & Follow-Up
<p>to travel 5 feet turn 180 degrees and return to the start point. (Created By El Camino: Course SLOs (IND) - Automation, Robotics, and Manufacturing (ETEC, MTEC, MTT))</p> <p>Course SLO Assessment Cycle: 2016-17 (Fall 2016)</p> <p>Input Date: 11/29/2013</p> <p>Course SLO Status: Active</p>	<p>two square meter field is set up with objects which must be moved from one location to another. The remote control is programmed by the student to respond to input allowing precise control to accomplish the objective.</p> <p>Assessment Method: Presentation/Skill Demonstration</p> <p>Standard and Target for Success: Based on Mastery. This is a pass-fail outcome. All students are expected to master the concept. Some students will accomplish the objective on the first try, others may require multiple attempts. This outcome is foundational and required for students to progress in the course.</p>	<p>Standard Met? : Yes</p> <p>Semester and Year Assessment Conducted: 2013-14 (Fall 2013)</p> <p>Faculty Assessment Leader: Ron Way</p> <p>Faculty Contributing to Assessment: Nancy Brown</p>	<p>compared to mastery after five attempts. Consider the activity in a following semester to compare number of attempts to demonstrate mastery with first iteration.</p> <p>Action Category: Teaching Strategies</p> <hr/>