Assessment: Course Four Column

FALL 2015

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

ECC: ETEC 10:Principles of Engineering Technology

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Six Simple Machines - Student will build the SMET project demonstrating the six simple machines. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Project -** Students will construct a working model of the six simple machines that will operate unattended for 5 seconds. Students will be awarded 1 point for each machine, 1 point for functioning together and 1 point for operating over the 5 seconds. **Standard and Target for Success:** It is expected that the students would average 6 out of the 8 points or 75%.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Not Met 10 students built projects with the lowest outcome 2 points and one student achieving 8 points. The average was 4.5 points. (12/18/2015) **Faculty Assessment Leader:** Eric Carson **Faculty Contributing to Assessment:** Eric Carlson	**Action:** Set up facility so students do not struggle with locating tools and resources. (12/18/2016) **Action Category:** Program/College Support

ECC: ETEC 10A:Principles of Engineering Technology I

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Mousetrap Car - Student will build a mousetrap-powered car. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Project -** The vehicle to demonstrate mastery of this outcome was the mousetrap-powered car, where students working in teams of two used readily available materials to construct a frame and hold wheels and utilized the spring power of a mousetrap to propel the vehicle. The manner in which the spring force was translated to the wheels varied from vehicle to vehicle, yet the materials made available in the classroom were similar. Two contests were added to make the project fun: which was the fastest car and which car went the furthest. The objective of the outcome was for the student to use common materials to demonstrate a principle, in this case using the force of a spring to propel the car. **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. **Reviewer's Comments:** Faculty Assessment Leader: Ron Way Faculty Contributing to Assessment: Nancy Brown, Jason Takamoto, Charles Klimcack, Dana Hagen, Jose Rivas.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 361 students enrolled in 14 sections participated in the activity and mastered the outcome in the Fall 2015 semester. Three one hour class periods were allocated to the assignment. Most teams had functioning vehicles in one period and used the remaining time to refine the performance characteristics. (12/17/2015) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Nancy Brown, Jason Takamoto, Charles Klimcack, Dana Hagen, Jose Rivas.	**Action:** The instructors felt that this SLO was foundational and should remain as a key SLO for the course. Place emphasis on specific design criteria and visual perspectives such as video presentations, and continue to monitor for student success and outcomes. (12/17/2018) **Action Category:** Teaching Strategies

ECC: ETEC 12:Introduction to Engineering Design

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Design Project - Upon completion of the course, the student shall be able to take a design project from problem statement to final production drawings. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Project -** This is a capstone project utilizing the skills learned throughout the course. Students were presented with a design brief which specified the constraints for a particular design. The completed project included a 3D model meeting design requirements and 2D drawings with proper tolerance, notes and part lists applied. The design package was submitted for assessment. **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. **Reviewer's Comments:** Faculty Assessment Leader: Ron Way Faculty Contributing to Assessment: Dan Valladares	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 24 students enrolled in one section mastered the outcome in the Fall 2015 semester. The length of time required for mastery varied widely and averaged six lab periods. This type of work in industry does not receive a grade. Rather, the work is returned and corrected by the student until the design package meets ALL of the requirements. 60% of the students submitted acceptable projects on the first attempt, an additional 25% completed the project in two attempts and the remaining students completed the project on their third attempt. (12/17/2015) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Dan Valladares	**Action:** The instructors felt that this SLO was foundational and should remain as a key SLO for the course. Continue to use demonstration of skills employed in industry from start to finish and continue to monitor for student success and outcomes. (12/17/2018) **Action Category:** Teaching Strategies

ECC: ETEC 12A:Introduction to Engineering Design I

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Making Revisions - Given an incorrect design package and a list of needed revisions, the student shall be able to correctly and effectively incorporate the revisions into the drawings and models. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Project -** This is a traditional entry-level assignment for a basic drafting and design student, yet essential. A daily activity required of workers using CAD systems is making revisions and keeping careful records of changes made to drawings, models and design packages. Students were presented with a completed 3D model along with notes from the design team on changes that need to be made. Each student was required to make the required changes and submit the model for assessment. **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.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 350 students enrolled in 16 sections mastered the outcome in the Fall 2015 semester. The length of time and number of attempts required for mastery varied widely and averaged two lab periods. Students were able to repeat the process in a single attempt 90% of the time and 100% on the second attempt, verifying mastery of the outcome. (01/12/2016) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Joe Carpenter, Jose Rivas, Mike McClendon, Jason Takamoto, Dana Hagen.	**Action:** The instructors felt that this SLO was foundational and should remain as a key SLO for the course. Place emphasis on specific design criteria, and continue to monitor for student success and outcomes. (01/12/2017) **Action Category:** Teaching Strategies

ECC: ETEC 14A:Electronics for Engineering Technologists I

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Unsigned Binary Conversion - Given an unsigned binary number, convert this number to base 10. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Laboratory Project/Report -** In digital logic and computing, a counter is a device which stores (and sometimes displays) the number of times a particular event or process has occurred. While it is possible to build a physical counter on a prototyping board, this laboratory project is done virtually on a computer using Multisim software. Each student will build, test and demonstrate that the circuit counts the units as specified. **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.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 36 students enrolled in 3 sections mastered the outcome in the Fall 2015 semester. Student success of the outcome was demonstrated by completing a laboratory report which graphically represented the counter simulation. (01/12/2016) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Ted Harder and Jose Rivas	**Action:** The instructors felt that this SLO was foundational to an understanding of counters applied in digital logic, and should remain as a key SLO for the course, while emphasizing student practice and simulation, and continuing to monitor student success and outcomes. (01/12/2017) **Action Category:** Teaching Strategies

ECC: ETEC 16A:Computer Integrated Manufacturing I

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 MasterCam Toolpath - Student will create a toolpath using MasterCam from a given solid model. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Laboratory Project/Report -** Robotic arms are modern manufacturing machines used to perform operations traditionally done by humans, especially when the operation was hazardous. There are several means available to program robots. In this laboratory project, the student will use the RobotC software to cause the robot to execute a specified operation within a programmed user frame. **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.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 35 students enrolled in 3 sections mastered the outcome in the Fall 2015 semester. The way in which the outcome was demonstrated varied depending on class site. Students at one site demonstrated mastery virtually through the RobotC simulator, while students at another site demonstrated mastery by demonstrating that a robot arm performed the operation within the user frame without violating the programmed space. Both techniques assessed mastery of the outcome. (01/12/2016) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Lucas Pacheco, Aaron Tostado, Harold Hofmann	**Action:** Consider changing this SLO to the ETEC 16B course. The instructors felt that this SLO was too early for this course, which is the first course in a two course sequence. The SLO is more appropriate for the ETEC 16 B course. (01/12/2017) **Action Category:** SLO/PLO Assessment Process

ECC: ETEC 18A:Engineering Design and Development I

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #3 Design Project - The student will employ the use of technologies and knowledge learned, in this and previous ETECH courses, to construct and test their design project. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Project -** In this capstone course, the student will work on a team to choose, defend, design, build and test a project that solves a problem. There is no rubric for what makes up a project. The product for one team may be a computer program that accomplishes a task while another team builds a complex machine. Completion of this work will be judged by a jury of engineers whom also may serve as mentors. **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.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Not Met 112 students (25 teams) enrolled in 6 sections participated in this activity. None of the student teams completed the specified outcome as it is actually a two-semester course. The teams each began construction of prototypes, but no team had working solutions by the end of the semester. (01/12/2016) **Faculty Assessment Leader:** Ron Way **Faculty Contributing to Assessment:** Ted Harder, Ryan Bucher, Jose Rivas	**Action:** This outcome actually covers the two-course sequence of ETEC 18A and ETEC 18B. Teaching the construction and testing is the primary focus of the 18B course. The SLO needs to be divided into two SLO's. The instructors felt that this SLO should be divided into two separate SLO's, with the first being the selection and research of a problem. The build and validation should be moved into the ETEC 18B course. (01/12/2017) **Action Category:** Curriculum Changes

ECC: MTEC 70:Basic Robotics

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #2 Programming & Debugging - The student will be able to compose logical instructions such as basic navigation and maneuvers for a robot to follow, debug and compile instruction codes onto the robot's micro-controller, and test and run the functional prototype robot. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2012-13 (Fall 2012), 2015-16 (Fall 2015) **Input Date:** 11/29/2013	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. **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.	**Semester and Year Assessment Conducted:** 2012-13 (Fall 2012) **Standard Met? :** Standard Met Results using the rubic 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. Breakdown by score of the 5 students tested: 2 students earned 20 points. 2 students earned 19 points 1 student earned 17 points 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. (03/28/2014) **Faculty Assessment Leader:** Harold "Ed" Hofmann, Jr. **Related Documents:** MTEC 70 assessment - 13 spr.doc	
	Performance - The student will be able to compose logical instructions such as basic navigation and maneuvers for a robot to follow, debug and compile instruction codes onto a robot's micro-controller and test run the functional prototype robot. **Standard and Target for Success:** Students are able to complete the task correctly without any help, level 4. 70% of the students must meet	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 11 students were given this assignment. 10 students completed this assignment at level 4. One student dropped out of class during this assignment. No student that completed this task finished below level 4. Of the 11 people tested, 10 appeared to have a mastery of the information, level 4, 90% or higher. 0 showed a strong understanding; level 3, 80% - 89% 0 had an basic understanding; level 2, 70% - 79%	**Action:** The instructor feels that the competency is foundational and should remain as a key SLO for the course. Continue to reinforce concepts relating to design, safety and testing and monitor test scores for student success and outcomes. (02/05/2017) **Action Category:** Teaching Strategies

Course SLOs	Assessment Method Description	Results	Actions
	this level. Students need a minor amount of help or hints to complete the task, level 3. 80% of the students must meet this level or a higher level. Students need a major amount of help to complete the task, level 2. 100% of the students must meet this level. Even with help, students quit or are unable to do the task, level 1. No student should meet this level.	none fell short of understanding; level 1, below 70% (02/05/2016) **Faculty Assessment Leader:** Hofmann	

ECC: MTT 101 :Introduction to Conventional and CNC Machining

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Measuring and Recording Dimensions - Given a ground steel block of known and verified dimensions, measure and record the three dimensions of the block using a micrometer to a precision of .001 inches. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015)	**Performance -** Given a ground steel block of known and verified dimensions, measure and record the three dimensions of the block using a micrometer to a precision of .001 inches. **Standard and Target for Success:** Students are able to complete the task correctly without any help, level 4. 70% of the students must meet this level. Students need a minor amount of help or hints to complete the task, level 3. 80% of the students must meet this level or a higher level. Students need a major amount of help to complete the task, level 2. 100% of the students must meet this level. Even with help, students quit or are unable to do the task, level 1. No student should meet this level	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 16 students were given this assignment. 16 students completed this assignment at level 4. Of the 16 people tested, 16 appeared to have a mastery of the information, level 4, 90% or higher. 0 students showed a strong understanding; level 3, 80% - 89% 0 had a basic understanding; level 2, 70% - 79% None fell short of understanding; level 1, below 70% (02/05/2016) **Faculty Assessment Leader:** Hofmann	**Action:** The instructor feels that the competency is foundational and should remain as a key SLO for the course. Continue to reinforce concepts relating to design, safety and testing and monitor test scores for student success and outcomes. (02/05/2017) **Action Category:** Teaching Strategies

ECC: MTT 103 :Conventional and CNC Turning

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #2 CNC Lathe Programs - Read, de-bug and edit CNC lathe word address programs and enter Manual Data Input (MDI) CNC word address lathe programs to produce work within the tolerances on engineering drawings. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students were given a test to read, debug and edit a CNC lathe word address program. **Standard and Target for Success:** It is expected that the class average be above 75%.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met The class average for this assessment was 83%. (12/18/2015) **Faculty Assessment Leader:** Eric Carlson **Faculty Contributing to Assessment:** Eric Carlson	**Action:** Continue to monitor test scores for student success and outcomes. (12/18/2016) **Action Category:** Teaching Strategies

ECC: MTT 105 :Conventional and CNC Milling

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #2 Power Machines - Using proper safety procedures and precautions, students will be able to set up and operate vertical and horizontal milling machines, rotary tables, indexing and dividing heads, and vertical milling machines to produce assigned work within the tolerances specified on engineering drawings. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Students set up and operated vertical and horizontal milling machines and associated equipment then tested on their understanding of that work. **Standard and Target for Success:** The expected class average from testing is 75%.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met The average score from testing was 92%. (12/18/2015) **Faculty Assessment Leader:** Eric Carlson **Faculty Contributing to Assessment:** Eric Carlson	**Action:** Continue to monitor test scores for student success and outcomes. (12/18/2016) **Action Category:** Teaching Strategies

ECC: MTT 107:Advanced Manufacturing Processes

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #2 Measuring & Inspection - Students will be able to select and use cylindrical squares, precision height gauges, vernier bevel protractors, gauge blocks and sine bars to inspect assigned work within the tolerances specified on engineering drawings. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Performance -** The student will be able to select and use cylindrical squares, precision height gauges, verniel bevel protractors, gauge blocks and sine bars to inspect assigned work within the tolerances specified on the engineering drawings. This is a three step SLO. First, the student must check that the part is square. They are given an angle plate, cylindrical square and indicator and must check the angle plate. Second, they must layout a part using the vernier height gauge. Last, they must make calculations to use a sine bar and gauge blocks to be able to set part on the required angle. **Standard and Target for Success:** Students are able to complete the task correctly without any help, level 4. 70% of the students must meet this level. Students need a minor amount of help or hints to complete the task, level 3. 80% of the students must meet this level or a higher level. Students need a major amount of help to complete the task, level 2. 100% of the students must meet this level. Even with help, students quit or are unable to do the task, level 1. No student should meet this level.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 22 students were given this assignment. 16 students completed this assignment at level 4. Two students finished at level 3. Two students did not do the assignment and two students dropped out of class during the assignment. Of the 22 people tested, 16 appeared to have a mastery of the information, level 4, 90% or higher. 2 students showed a strong understanding; level 3, 80% - 89% 0 had a basic understanding; level 2, 70% - 79% Two students did not do the assignment . Two students dropped out of class during the assignment. None fell short of understanding; level 1, below 70% (02/05/2016) **Faculty Assessment Leader:** Hofmann	**Action:** Encourage student group interaction and re-assess in 18 months. (09/20/2017) **Action Category:** Teaching Strategies

ECC: MTT 10A:Introduction to CAD/CAM

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #2 2-D Computer Drafting - Students will be able to identify, differentiate between and use computer drafting system hardware, components, software systems and operating systems to create points, lines circles, dimensions and notes in two dimensions. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Laboratory Project/Report -** Working from a mechanical Drawing, students redraw part using our in-house CAD software as geometry, then apply notes and dimensions and create a full dimensioned CAD drawing. **Standard and Target for Success:** Success on this SLO is measured by means of an exam. Based on percentage, 90-95% of students will score 75% or higher on this exam.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 90% of the students scored 75% or higher on the exam. (02/04/2016) **Faculty Assessment Leader:** Victor Delatorre	**Action:** Next time I will spend more one-on-one with students on geometry creation (02/04/2017) **Action Category:** Teaching Strategies
	Performance - After labs lectures and demonstrations, and a supplied drawing, students will able to draw a 2D drawing using computer assisted software using line, circle and dimension techniques. **Standard and Target for Success:** A standard 10 point rubric is used for this assessment. Based on percentage, it is expected that 90% of students will score 75% or above on this SLO. Based on the rubric, it is expected that 85% of students will score 7 or above.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 2 assignments are given for this assessment for a total of 20 points. 14 students scored all 20 points, 1 scored 15 and 2 scored 17. The average score for this SLO is about 19. (02/05/2016) **Faculty Assessment Leader:** Victor De La Torre	**Action:** More one to one interaction with those students that need more help. (02/05/2017) **Action Category:** Teaching Strategies

ECC: MTT 10K:3D Numerical Control Graphics Programming

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Creating a 3D Solid Model - Student will correctly create a 3D solid model in CAD software and practice roughing the 3D surface using CAM software. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Performance -** After lectures, labs and demonstrations, students will be able to create a 3D solid model then apply 3D surfacing techniques using CAM software. **Standard and Target for Success:** Success on this SLO is measured by means of a performance exercise. Based on percentage, 90-95% of students will score 75% or higher on this exam.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 50 points are possible for this assignment given on the 6th week. A student earning 45 points or better demonstrates superior proficiency, 40 points demonstrates is above average, and 30 points demonstrates proficiency. 35 students scored all 50 points, 2 scored 40, and 3 scored 30. (02/05/2016) **Faculty Assessment Leader:** Victor De La Torre	**Action:** More hands on approach, and one-to-one interaction. (02/05/2017) **Action Category:** Teaching Strategies
SLO #2 4th and 5th Axis Positioning - The student will be able to describe and demonstrate appropriate 3D editing operations, and use 4th and 5th axis positioning and simultaneous rotary axis machining operations on 3D process models. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015), 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Performance -** After labs, demos, and lectures, students will be able to edit 3d operations, and follow correct procedures to create a 4 and 5 axis machining operation. **Standard and Target for Success:** Based on percentage as a class it is expected that 80 to 90 % of students will score 70% or above for this SLO.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met 50 points are possible for this assignment given on the 10th week. A student earning 45 points or better demonstrates superior proficiency, 40 points demonstrates is above average, and 30 points demonstrates proficiency. 38 students scored all 50 points, 2 scored 40, and 1 scored 30. (02/10/2016) **Faculty Assessment Leader:** Victor De La Torre	**Action:** More one-on-one interaction (02/10/2017) **Action Category:** Teaching Strategies

ECC: MTT 2:Manufacturing Print Reading

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Orthographic Orientation - Student will correctly sketch a part in orthographic orientation. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015), 2018-19 (Fall 2018) **Input Date:** 11/29/2013	**Performance -** Students will draw 3 dimensional view of object represented by 3 sides of object **Standard and Target for Success:** I estimate the 70% of the class should be able to do this at Mastery Level 3. Mastery Level 3: Students could do the assignment without asking for help. Partial Mastery Level 2: Students could almost do this assignment, but required a minor amount of help to set-up or solve the problem. Non-Mastery Level 3: Students required a major amount of help to do the assignment.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met Of the 15 people tested, 10 showed a strong understanding; level 3, 80% - 89% 3 had an basic understanding; level 2, 70% - 79% 2 fell short of understanding; level 1, below 70% (02/16/2016) **Faculty Assessment Leader:** T. Monzello	**Action:** Would like to have more instructional visual examples and practice quizzes (02/16/2017) **Action Category:** Teaching Strategies
SLO #2 Multi-View Orthographic Drawings - Demonstrate basic understanding or Multi-View Orthographic drawings, including part visualization and interpretation and the mechanics of: dimensioning, tolerancing and drawing. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/29/2013	**Exam/Test/Quiz -** Using graph paper, students will represent front, side and top view with correct positioning and tolerance of object **Standard and Target for Success:** I estimate the 70% of the class should be able to do this at Mastery Level 3. Mastery Level 3: Students could do the assignment without asking for help. Partial Mastery Level 2: Students could almost do this assignment, but required a minor amount of help to set-up or solve the problem. Non-Mastery Level 3: Students required a major amount of help to do the assignment.	**Semester and Year Assessment Conducted:** 2015-16 (Fall 2015) **Standard Met? :** Standard Met Of the 16 students who did this lab, 12 students (roughly 78%) were able to do this at Mastery Level 3 and 2 students (roughly 22%) were able to do this at Mastery Level 2, needing a minor amount of help with set-up (02/16/2016) **Faculty Assessment Leader:** T. Monzello	**Action:** Due to the use of graph paper, the dimensions and placement make this more rudimentary. I may change quiz without use of graph paper (02/16/2017) **Action Category:** Teaching Strategies