Assessment, Improvement, Measurement (AIM) Report: 04/03/2013

Plan Year: 2011-2012
Unit: Electrical Technology
Coordinator(s): Bobby Royalty Jr, Karman Wheeler, Paul Turner
Reviewer: Paul Turner

Objective or Outcome	Measure(s)				
	Measure Text	**Achievement Target**	**Results**	**Achievement Target Result**	**Use of Findings/Next Steps**
SLO 1 - Students will demonstrate the competencies and ability to wire a workshop including organizational skills and improved efficiency.	Project Assessment - Students will demonstrate the competencies and ability to wire a workshop including organizational skills and improved efficiency.	This year's assessment of the project will focus on their organizational skills and improved efficiency in addition to developing a floor plan, take off (Materials list), install electrical metallic tubing and pull in associating wiring, high intensity lighting system, and overhead door motor system). A ten point rubric will be used with students scoring at least 80% on their project.	The planning and physical wiring of a workshop was completed, and evaluated using a 100 point rubric. A floor plan was developed using a layout of customer needed electrical service in the proposed workshop. Once the floor plan was completed and agreed upon; the ﷺ for materials was listed. An estimate for material costs with customer markup, and man-hour cost was created. Excellent cooperation and collaboration was observed. The final planning was also exemplary. Students gathered needed materials, and then decided individual tasks. A foreman from the group was selected, to help and advise workers. The tasks started a bit slow, but picked up well; and the installation was accomplished within given time allotment, and was an above average installation. All electrical equipment and components operated as normal. All categories of the rubric were excellent with exception of one which was handling of materials, which was 8 out of 10. All students were assessed at 97.5% .	Met	"Faculty will continue to use the model for electrical construction as the assessment instrument worked well. Also the model follows competencies that would be expected at the worksite. The program will focus on other areas that need improvement next semester. Improvement needed in handling materials. This had to do with the working space, as being confined. The students were instructed on what they needed to do in handling the material in the limited space, and a couple of the students did not follow instructions. Even though the students did an exceptional job; I had to mark them down for it. The fall 2012 class will be informed of what prior problems have been, and they will need to adjust. "

			There was a vast improvement in the areas of concern from the previous class, and an exceptional outcome.		
SLO 2 - Students will be able to perform accurate code calculations, including; branch circuit calculations and apparent load calculations with emphasis on transformer calculations.	The final exam component specific to code calculations will be used to assess their ability to perform the calculations. Eighty percent of the students will score a 75% or higher on this component of the final examination.	Eighty percent of the students will score a 75% or higher on this component of the final examination.	A final examination was given focusing on calculations used with the National Electrical Code. One of the main focuses was transformer installations which accounted for 20% of the test. The final was calculated using the raw score average only. 4 students averaged over 80% and 6 others averaged 70% or below. An overall average of 73% was below projected expectations, of 75%.	Met	The main problem is the lack of practice in these areas. The homework is very similar to the final test questions; however some of the students do not perform some of the most difficult problems, because it does not affect their grade drastically. These transformer calculations are important and some students do not grasp the information in the transformer section, as to what would be expected in industry, or to prepare for the state electricians examination. This is an online class and faculty felt the students did not understand the importance of the transformer calculations. Actions to be taken in 2012-13 will include 1. Calculations assigned a heavier weight in the course grade, a pretest followed by review in WimbaChat, video lectures to show emphasis and importance of electrical codes. Another final examination will be performed and used in the fall 2012 National Electrical Code class. The test will be evaluated for objectivity or more than one

					possible correct answer. Also the distracters in multiple choice questions will be looked at. Focus will be given in the instruction to improve on particular areas that were below expectations.
SLO 3 - Students will be able to properly select, connect and troubleshoot motors.	Capstone laboratory evaluation will be used to assess the students ability to connect and troubleshoot motors with 85% of the students scoring 75% or higher on this specific component of the laboratory evaluation.	Eighty five percent of the students will score 75% or higher on this specific component of the lab evaluation.	Students were assessed on a variety of motors used throughout industry. The administrator of the test used a rubric with identified criteria and spread sheet to assess individual labs and an overall exit test. First students were assessed on DC motors; Series Motors 76%, Shunt motors 82%, Compound motors 100% , DC motors exit test 75% Dc motors Overall Total 79%: Secondly Three-Phase motors assessment, Squirrel Cage Motors 83%, Wound Rotor motors 99.7% , Synchronous motors 100% Three-Phase motor Exit Test 79% Three-phase Overall Total 90% :Finally Single Phase motors were assessed, Resistance Start Induction motor 99%, Capacitor start induction run motor, 100% Permanent Capacitor motor 97% Universal Motors 100% Single Phase motor Exit test 99% Single-phase Overall Total 99%	Met	These assessments overall gave a good account of what our students should know about selecting, connecting and Troubleshooting motors and were very successful. The averages were above the projected 75% for 85% of the students. No other assessments will be used for this class, however this type of assessment will be used on other technical lab classes.