

Assessment, Improvement, Measurement (AIM) Report: 09/25/2014

Plan Year: 2013-2014

Unit: Electrical Technology

Coordinator(s): 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	Assess Month
Students will be able to evaluate optimal solar installation sites, and install simulated solar photovoltaic systems, both stand alone storage battery, and grid tie solar systems .	Use a lab rubric to assess students' ability to choose solar photovoltaic system site locations, including azimuth, inclination, and latitude; for optimum system performance.	All students performing a shading and solar irradiation study , using a solar (true south) evaluation tool will successfully evaluate various locations for solar arrays at a 90% success rate.	1. Students used an azimuth and elevation instrument with a sun chart to find the proper position and evaluate the solar irradiance and possible shading of a solar array. The students found the longitude and latitude and made the proper declination for the location in the U.S., thus finding the optimum position for a solar array on Leestown Campus in Lexington Ky. The students first found the magnetic south, located level on the instrument, and evaluated the percent of shading. this procedure was performed at a better than 95% accuracy. This procedure, along with a solar irradiance evaluation could have been better performed, but with the cloudiness, and extreme winter weather during our class time; eliminated any repetitiveness, and practice for this evaluation.	Partially Met	The results could have been better if the weather cooperated. The technique performed was as good as possible. Everything worked as well as possible. The lesson was taught, and the students learned. However, scheduling student labs at alternate times where labs can be planned around adverse weather conditions, would be a possible remedy.	April
	Comprehensive evaluation of simulator trainer project produced by students using a lab evaluation. Graded lab worksheet, and	The acceptable level of lab performance must be 90% or the lab will be repeated until 100% is achieved. To be performed and evaluated in the last part of April 2014	The field trainer for the lab was constructed, but not used due to poor, and cloudy weather conditions in the field. The lab was simulated on the lab-volt	Partially Met	Not Applicable	April

	performance rubric used by the instructor.	Spring semester.	trainer using artificial light . Lab was completed, but not evaluated, because it was deemed by the instructor not to be as good as a field assessment.			
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.	Students performed a final project with limited time, (November 2013), because of the length of time needed to perform the competencies and tasks required by the course. The students did not fully complete the final project, thus rendering the results as unusable. The planning procedure was accurate, and material gathering with proper sizing and identification completed. Final installation and circuitry operation not completed 50%.	Partially Met	Either cut some of the competencies or objectives in the course, or go at a faster pace. The final project was completed by the previous class with good results; but this class was given the same conditions, and were not able to get everything completed in working order. Close lab space and limited space cause all participants difficulty. About 50% of the project was accomplished. It has been recommended by the Program Coordinator for more than 5 years to increase storage and lab space.	November
SLO 3 (New) - Students will be able to convert relay logic to ladder logic, and programming PLCs.	Lab Assessments - from simple elementary: two line control, Low difficulty: three line control, moderate difficulty: AND,OR, NOR, XOR control; then students will program PLCs using three assessed labs with narratives describing conditions of control: moderate to high difficulty: timer, counter, program control. High difficulty: comparison, move, math	The first three assessed labs will be converting relay logic to ladder logic, ranging from simple elementary, low difficulty, and moderate difficulty. Students will program at an accuracy rate of 90% without supervision. The second group of labs using narratives describing conditions of control, ranging from moderate to high difficulty, high difficulty, and complex advanced control, will be programmed by students at a	Students performed at an optimum, and exemplary level. The students completed all tasks from the novice level to a highly difficult level, at a 98% efficiency, with little supervision. Students successfully converted relay logic, gate logic, and Boolean algebra with given conditions and narratives to complete working programs; and also performed debugging, and	Met	All goals achieved, no other adjustments need to be made at this time. This outcome will be rolled over and re-assessed in 2014-2015 to verify students' success.	April

	functions, Complex advanced: shift registers, sequential output, integer files , data manipulation.	rate of 50% accuracy with limited supervision.	troubleshooting procedures in addition to the assigned labs.			
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