

Assessment, Improvement, Measurement (AIM) Report: 10/08/2013

Plan Year: 2012-2013

Unit: Electrical Technology

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Reviewer: Paul Turner

Objective or Outcome	Measure(s)				
	Measure Text	Achievement Target	Results	Achievement Target Result	Use of Findings/Next Steps
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 functions, Complex advanced: shift registers, sequential output, integer files , data manipulation.	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 rate of 50% accuracy with limited supervision.	The first lab component measured by all the students converting relay logic to ladder logic was completed successfully at 100% accuracy, without supervision. The second set of labs of moderate difficulty with narratives used to create program control was successfully completed at 100% accuracy without supervision. The third set of labs demonstrating advanced programming skills using sequencer outputs with timed events was completed by all the students with 80% accuracy, with limited supervision. All labs were completed above the projected goal percentages.	Met	The methods and lab skills taught will be continued, and refined in the future in order to achieve the excellent results achieved this semester. In addition students will be given more time to practice to achieve a higher level of competency in the advanced section of the lab assessment. The students will be given more opportunity to demonstrate their skills in advanced level programming. As a result of this assessment a higher standard will be set forth in the future.
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 final project of designing, and installing electrical metallic tubing, associated wiring and equipment in an industrial workshop was successfully completed within the specified time given. All students participated on the project with an average of 96%, with the exception of one student that scored 80% due to not following instructions. All equipment installed was in accordance with the 2011 National Electrical Code, and operated as designed by the manufacturer, and designed floor plan.	Met	Follow the same plan design, and emphasis to the students how mistakes can be avoided by following the plan and the instructions given by the instructor.
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<p>SLO 2 - Students will be able to perform accurate code calculations, including; branch circuit calculations and apparent load calculations with emphasis on transformer calculations.</p>	<p>The final exam component specific to code calculations will be used to assess their ability to perform the calculations.</p>	<p>Eighty percent of the students will score a 75% or higher on this component of the final examination.</p>	<p>Student all tested at a rate of above 90% for branch load calculations and transformer feeder calculations, above the target goal of 75%.</p>	<p>Met</p>	<p>pretest and review before the final examination as practiced this semester; expanding to other subject content within the National Electrical Code Text. With the results of this assessment students performing calculations proficiently will enhance their ability to be successful in a capstone class, and the final assessment to be given. Components of this assessment will be used in the electrical technology program capstone class. (Note: this has been assessed in two cycles and will continue to be monitored; however a new outcome related to install of solar systems will be added in 2013-2014).</p>
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