Assessment: Course Four Column

Courses (CTE) - Electrical Systems Technology

ELM 131:National Electric Code

Course Outcomes	*Assessment Measures*	*Results*	*Actions*
National Electrical Code and the general requirements for electrical installations - Students must state and learn the purpose of the National Electrical Code and the general requirements for electrical installations. **Course Outcome Status:** Active **Next Assessment:** 2020-2021 **Start Date:** 08/31/2016	**Assignment - Lab -** Students will participate in special code skill-building exercises as detailed in the text used for this class in lab and the classroom. **Criterion:** The criteria for initial understanding and concept of the NEC will be in the form of home-work assignments, definition –of –electrical terms testing and lab activities utilizing the NEC electrical basics.	**Reporting Period:** 2015-2016 **Criterion Met:** Yes Assigned home-work was returned in a timely manner pertaining to beginning NEC work in the Code book. Tests given on purposes and definitions averaged in the upper 80's percentile for student grades. The Criterion for this outcome was met by student participation and work on the NEC and evidenced in their testing and assigned work on this area of the code. (08/31/2016)	**Action:** Continue to stress the importance of understanding this text as it is the basis for the electrical portion of the curriculum. Sample code questions from areas throughout the Code will continue to be given to increase student participation and use of the NEC. (08/31/2016)
Correct Electrical concepts concerning the principles of grounding vs. bonding - Learn to differentiate between the correct Electrical concepts concerning the principles of grounding vs. bonding. **Course Outcome Status:** Active **Next Assessment:** 2020-2021 **Start Date:** 08/31/2016	**Assignment - Lab -** Make use of handouts explain grounding terms, their definition, and where they are correctly applied in the commercial, residential, and industrial settings. Stress the difference between grounding and bonding as discussed in Article 250 of the NEC and administer exams, lab assignments and physical examination of grounding systems in use here in the DCIT Building and outside equipment. **Criterion:** Testing from Article 250 of the NEC and use of the Holt text	**Reporting Period:** 2015-2016 **Criterion Met:** Yes Student testing average on this subject was at an 80%+ average. The additional text used, Understanding the 2014 NEC, was additionally a great training tool along with illustrations and power points, to stress the importance of this subject. The Criterion for this subject was met and students performed well. Hands on exercises dealing with grounding connections and exothermic welding aiding in the successful achievement of this subject. . (08/31/2016)	**Action:** Continue to work on exercises and hands-on work with grounding and bonding. More detailed work on definitions and terminology associated with grounding and bonding. Stress safety, fire haza1rds, arc-flash and correct tool usage. (08/31/2016)

Course Outcomes	Assessment Measures	Results	Actions
	Understanding the 2014 NEC.		
Value of correct application of Overcurrent Protection, the devices used, and the terminology - Teach students the value of correct application of Overcurrent Protection, the devices used, and the terminology. **Course Outcome Status:** Active **Next Assessment:** 2020-2021 **Start Date:** 08/31/2016	**Exam -** To accomplish this goal, Students were assigned a variety of tasks dealing with Overcurrent Protection utilizing Article 240 of the NEC, and the NCCER Trainee Guide, a section of which was devoted to this topic in addition to the Holt text, Understanding the 2014 NEC. **Criterion:** Students were given tests to determine correct fusing and circuit breaker sizes. Discussion and testing on GFCI'S and AFCI's was significant.	**Reporting Period:** 2015-2016 **Criterion Met:** Yes Students learned the correct way to size Overcurrent Protection using the NEC and other texts and handouts provided. Testing results showed grades well above average with several students scoring in the 90% range. The Criteria for this subject was achieved through the methods listed. (08/31/2016)	**Action:** Continue with the use of the NCCER text and the NEC specializing in understanding and correct application of devices for this subject. (08/31/2016)