

Assessment: Course Four Column



Courses (CTE) - Electrical Systems Technology

ELM 135:Natl Elec Code 430

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
<p>Article 430 of the National Electrical Code - An in depth study of Article 430 of the National Electrical Code and its application to Motors. Course Outcome Status: Active Next Assessment: 2020-2021 Start Date: 08/31/2016</p>	<p>Exam - Testing on motors and motor applications, hands-on work on motor disassembly and internal parts. And correct installation of motors. Use of special testing devices designed for motors. Criterion: Testing on the contents of Article 430 in the NEC, test equipment used on motors and motor applications.</p>	<p>Reporting Period: 2015-2016 Criterion Met: Yes Students achieved recognizable efficiencies with motor information contained within article 430 of the NEC. This was demonstrated through a variety of tests, motor exercises and hands-on tests. The criteria for this outcome was achieved as indicated by the 80%+ testing average by the class (08/31/2016)</p>	<p>Action: Improved student education on this subject to be achieved by increased field work/observation of motors in use in commercial/industrial situations. (08/31/2016)</p>
<p>Short circuit ground fault - Determine the rating of short circuit ground fault and overload protection devices required in a motor circuit. Course Outcome Status: Active Next Assessment: 2016-2017 Start Date: 06/18/2014</p>	<p>Exam - The understanding of these concepts will be demonstrated by testing on Article 430.32, 430.37, and Table 430.52 Criterion: Assigned reading in the NEC and the Holt text on the articles containing this material. Testing on specific material showed Students had achieved significant knowledge on the subject of motors and how to properly size overload, ground-fault and short-circuit protection.</p>	<p>Reporting Period: 2015-2016 Criterion Met: Yes The testing results showed significant gains in student knowledge on this subject. Test scores were consistently high as well as a good working knowledge of motor test equipment was achieved. The criteria for this outcome was achieved as demonstrated in home-work assignments and reading, hand –out material and quizzes, as well as in depth tests on motors (08/31/2016)</p>	<p>Action: Continue to work from the NEC, Article 430, on this subject Utilize the motor information contained within the NCCER text on motors. Also to utilize the information on motors obtained from MSHA, OSHA and motor manufacturers. (08/31/2016)</p>
<p>Calculate the correct wire size motor feeder - Calculate the correct wire size motor feeder. And tap conductors used as well as branch</p>	<p>Exam - Correct usage of the multiple parts of the NEC to accomplish this complex task. Criterion: Success of this outcome to</p>	<p>Reporting Period: 2015-2016 Criterion Met: Yes Students showed significant increases in proper motor conductor sizing and protection with testing results</p>	<p>Action: Introduce motor principles in the curriculum as early as possible. Introduce an increase in the amount of labs and hand-on work on</p>

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circuit conductors Course Outcome Status: Active Next Assessment: 2020-2021 Start Date: 08/31/2016	be determined by correct use of Articles 430.22-430.24, Table 310.15(B)16, and Article 430.72	averaging in the low 80% range. This criteria was met as evidenced by the knowledge displayed by the students on the subjects of motor conductors. (08/31/2016)	conductors. (08/31/2016)