

# Syllabus ET 2014 Electrical Code Update - 15 hours

## **APPROVED COURSE:**

This course is approved by the State of Michigan, Department of Licensing and Regulatory Affairs, Bureau of Construction Codes. **Approval ID number: 15-014-14.**

## **OBJECTIVES OF COURSE:**

1. Learn the scope the extent of application of the *National Electrical Code (NEC)*, *Michigan Residential Code (MRC)*, and Michigan's *Part 8 Electrical Rules*.
2. Develop a better understanding of how to use and interpret the *Michigan Electrical Code, (MEC)*.
3. Learn about the reorganization of articles and sections within articles of the *NEC*.
4. Learn the major changes from the 2011 to the 2014 editions of the *NEC* and the *MEC*.
5. Learn the major changes in the *MRC* and where it differs from the *MEC*.
6. Practice finding answers to electrical questions from the *2014 Michigan Electrical Code* and *2015 Michigan Residential Code*.
7. Review the rules in *Public Act 217 of 1956* and *Public Act 230 of 1972* as presently amended.

## **NECESSARY CLASS ITEMS:**

You will need to refer to the following items for lectures, completion of sample problems and for the final exam.

- *2014 National Electrical Code*, National Fire Protection Association (NFPA).
- A calculator.

## **SUGGESTED CLASS ITEMS:**

You will be referring to the following text book for lectures.

- *2015 Michigan Residential Code*, International Code Council (ICC).

## **COURSE STRUCTURE:**

This course consists of five lessons and a final exam. Each lesson, in this course, consists of background reading material, a lecture and student practice problems. It is anticipated that a minimum of 15 hours total will be required to complete this course.

Background readings are from *Tech Notes*, which are papers dealing with specific subjects. Some *Tech Notes* will have much more detail than is required for the topic. You may use these same *Tech Notes* in later lessons.

The student practice problems are designed for the licenced electrician to apply the topics in the lesson. These practice problems are not graded, but are intended as a learning aid. Upon completing a problem set, you will be shown the answers and the method by which each question was answered. The practice problems will help the licenced electrician judge their abilities against the course objectives.

**TECHNICAL HELP:**

If you need technical assistance at any time during the course or to report a problem, you can visit the *Desire 2 Learn* help site. Technical assistance will provide help with:

- accessing the course
- viewing the online lectures or student practice problems
- hearing the online lectures
- viewing or printing the reading material for the course
- getting feedback on student practice problems
- determining your final exam score

For assistance, navigate to <https://d2l.msu.edu> in your favorite web browser and follow the link for "Help". A toll free phone number is provided that is staffed 24/7.

**TIME LIMIT:**

You may complete course requirements at your own personal pace, however, you will be limited to a **maximum of three-months** to complete this code update course. From the date that the course fee is paid, you have three-months to complete the course requirements. Failure to pass the course within the three month time period will require you to repay the course tuition fee, to continue in this State of Michigan Approved electrical code update course.

**PASSING THE COURSE:**

To pass this course, you must completely viewed **all** of the online lectures and student practice **and** successfully pass the final examination with a minimum score of 75%, within the three-month time period.

If you fail the examination, it is permitted to go back and re-study the course material and take the examination again, until a passing grade is achieved.

When a passing grade is achieved, notify the course instructor, via an email.

**FINAL EXAM:**

Each final exam will consist of 32 questions. The questions will be similar in nature to the student practice problems. To achieve a passing grade you will have to correctly answer 24 of the 32 question.

Have your Code book, State of Michigan Part 8 Rules, a copy of Tech Note 107 and calculator available. They will be a necessity to complete the exam. You will be given only two hours to complete the exam. It is suggested that you block out the appropriate amount of time to minimize interruptions and distractions. Once you open the exam, your two hours start.

You will know the results of the final exam immediately upon its completion.

**OBTAINING A CODE UPDATE CERTIFICATE:**

A Code update certificate will be granted to each Michigan licenced journey and/or master electrician who has completely viewed **all** of the online lectures and student practice **and** successfully pass the final examination with a minimum score of 75%, within the three-month time period.

Once you successfully passed the course, email Jon Althouse, [althous2@msu.edu](mailto:althous2@msu.edu) include your:

- Name as it is listed on your electrical license
- Master and/or Journey Electrician license number
- Mailing address
- Phone number

The course instructor will verify that you have successfully completed the course requirements, and will process a Code Update Certificate. Please allow 5 working days for your copy of the Code update certificate to be emailed to you.

**STUDY HINTS:**

To be successful at understanding the course material, the following method is suggested.

1. First, skim through the reading assignments to become familiar with the material.
2. Second, view the online lecture. Make sure you have your calculator, *National Electrical Code* book, and reading exercises handy. Have a notepad and work the examples as they are presented, to re-enforce the concepts. Take notes during the online lecture to help you recall topics at a later time.
3. Third, read the *Tech Notes* and any other reading assignments, to aid in comprehending the material.
4. Finally, answer the student practice questions.

**QUESTIONS:**

Participants in this program and instructors may not be online at the same time. However, if you have any questions about the course material, there is a discussion board that will allow for interaction between the learners and course instructors. The interaction may not happen in real-time, but rather in a delayed format. Under most conditions, questions will be answered electronically within two business days of posting a question.

**GETTING HELP:**

For help with:

- determining your start date
- obtaining a receipt
- determining your log-in information (community ID & password)

Navigate to <https://noncredit.msu.edu/> in your favorite web browser. For assistance on any item at this site follow the link for "Contact Us", a toll free phone number is provided that is staffed 24/7.

**COURSE OUTLINE:**

	<b>Topic</b>	<b>Reading Assignment</b>
	Introduction	Syllabus
<b>I</b>	<b>State of Michigan Administrative Rules</b>	Michigan Electrical Code Rules, Part 8  Public Act 217 of 1956  Public Act 230 of 1972  Tech Note 252
<b>II</b>	<b>Michigan Electrical Code Changes, Part I</b> <i>NEC Articles 90, 100, 110, 200, 210, 220, 240, 300, 310, 400, 490 and 590.</i>	Michigan Electrical Code Rules, Part 8  Tech Note 107
<b>III</b>	<b>Michigan Electrical Code Changes, Part 2</b> <i>NEC Articles, 215, 225, 230, 240, 250, 285, 399, 445, 450, 480, 680, 690, 692, 694 and 705.</i>	Michigan Electrical Code Rules, Part 8  Tech Note 107
<b>IV</b>	<b>Michigan Electrical Code Changes, Part 3</b> <i>NEC Articles 312, 314, 320, 324, 328, 330, 332, 334, 336, 338, 340, 342, 344, 350, 352, 354, 356, 358, 360, 362, 366, 376, 378, 382, 386, 388, 393, 404, 406, and 410.</i>	Michigan Electrical Code Rules, Part 8  Tech Note 107
<b>V</b>	<b>Michigan Electrical Code Changes, Part 4</b> <i>NEC Articles 409, 422, 426, 430, 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, 516, 517, 518, 525, 545, 550, 551, 553, 600, 604, 605, 620, 645, 646, 647, 675, 685, 695, 700, 701, 702, 703, 725, 730, 760, 800, 810, 820, 830 and 840.</i>	Michigan Electrical Code Rules, Part 8  Tech Note 107
<b>VI</b>	Final Exam	-----