



<b>Course Name</b>	Commercial & Industrial Wiring (2020 NEC)
<b>Credit Hours</b>	8 Hours
<b>Course Description</b>	<p>This course will cover the definitions of 2020 NEC terms and requirements in the 2020 NEC for electrical installations, branch circuits, feeders, outside branch circuits, feeders, overcurrent protection, grounding, bonding, wiring methods, conductors for general wiring, outlet, device, pull, junction boxes, conduit, raceways, flexible cords, cables, switchboards, panelboards, motors, motor circuits, controllers, generators, transformers, temporary wiring, and industrial machinery. This course has no pre-requisites.</p>
<b>Reference Materials</b>	NFPA 70 National Electrical Code 2020 Edition
<b>Learning Outcomes</b>	<p>At the completion of the course, learners will be able to:</p> <ul style="list-style-type: none"><li>• Describe the purpose of the NEC.</li><li>• Define Accessible as applied to equipment.</li><li>• List the qualities that testing agencies check when examining electrical equipment.</li><li>• Identify the minimum value required for the interrupting rating of a circuit breaker.</li><li>• Explain why an equipment's terminal temperature rating is used to select the conductor ampacity.</li><li>• Describe when a feeder disconnect requires ground fault circuit interrupter (GFCI) protection.</li><li>• List examples of continuous and non-continuous loads.</li><li>• Calculate the minimum ampacity required of a feeder tap.</li><li>• Describe the purpose of an effective ground-fault current path.</li><li>• Interpret Table 310.12 to size phase conductors for dwelling unit services.</li><li>• Interpret Table 310.16 to determine cable ampacity.</li><li>• Describe the proper procedure for installing conductors in conduit.</li><li>• Identify when and how PVC, as a complete system, is required to be supported.</li><li>• Identify where flexible cords are permitted to be used.</li></ul>

- Describe the level of detailed required for circuit identification.
- Identify when more than one motor is allowed on a branch circuit.
- Describe how overcurrent protection protects a motor control center (MCC).
- Identify when a motor must have a disconnecting means within sight of the motor.
- Identify installations or activities that require ground fault circuit interrupter (GFCI) protection for personnel.
- Calculate the minimum ampacity required of feeder supply conductors for an industrial machine.

**Course Timed Syllabus**

Attached

**Method of Presentation**

This online course uses text and graphics. Multiple choice questions are used to test how well the student understands the material. Each answer choice has a response which tells the student whether the selected answer is correct or not. A running score is displayed so each person can track their progress through the class. The learning event is asynchronous and formatted as a visual lecture.

**Attendance Verification**

This course uses personal identification questions to verify attendance. A set of five simple personal ID questions are asked of a licensee before they start a course and then again, randomly, throughout the course (at least one question is asked every 30 minutes). All questions have four preset answer choices. The licensee must answer in the same way as they did at the start of the course to be able to continue training.

This course also employs an inactivity timer, which will automatically log a licensee out of the training if the system does not sense a mouse click within 30 minutes. At the end of the course, the licensee must affirm their name, that they are the one who completed the course, and verify that their registration information is correct.

**Method of Assessment**

The licensee must complete all 100 multiple choice questions with a score of at least 75% in order to get credit for the course. Question choices are randomized, so each participant will have a unique testing experience. The course is also timed; participants will not get credit until they spend at least 400 active minutes in the course. Lastly,

this course is set up to allow users to go back through the section questions and re-answer questions while they meet the time requirement.

**Schedule and Location**

This course may be taken at any time at [www.JadeLearning.com](http://www.JadeLearning.com). The student may sign in and out of the course as many times as needed to complete the course.

**Online Review Access**

To review this course, go to [www.JadeLearning.com](http://www.JadeLearning.com). Click on the orange Login button on the top right and sign into the learning system using the login information below.

Username: UTEtester

Password: UTEtester

**Cost**

\$85.00