

Residential Wiring (2020 NEC) **Course Name** 

**Credit Hours** 8 Hours

**Course Description** This course will cover the requirements in the 2020 NEC

for installing electrical systems in dwelling units. Code sections for residential wiring installations are organized by equipment type or location in the dwelling and include: service and subpanels, kitchen, pantry and dining rooms, bathrooms and laundry, living areas (and bedrooms), stairways and hallways, luminaires, fans and switches, outdoors, garages, basements, and crawl spaces, heating and cooling, swimming pools and spas, generators, limited energy, installation and wiring methods. The conclusion of the course includes practical exercises using a blueprint.

This course has no pre-requisites.

NFPA 70 National Electrical Code 2020 Edition **Reference Materials** 

At the completion of the course, the learner will be able to: **Learning Outcomes** 

- List all types of grounding electrodes.
- Define the purpose of a grounding electrode conductor.
- Identify the spacing requirements of receptacles.
- Identify where a service disconnect must be located.
- List cord and plug requirements for kitchen appliances.
- Describe when an arc-fault circuit interrupter (AFCI) is required.
- List the ways arc-fault circuit interrupter (AFCI) protection can be provided in a dwelling.
- Explain how many receptacle outlets are required for a hallway.
- Identify switch location requirements throughout a dwelling unit.
- Describe how to locate the weight of a light fixture on a box.
- Identify the working space requirements to permit ready and safe operation and maintenance of equipment.
- Explain the effect a barrier has on a maintenance disconnect for a swimming pool.
- Explain how to properly size a generator for an Optional Standby System.

- Describe where intersystem bonding termination is required to be installed.
- List permitted wiring methods for dwelling units.
- Identify what type of installations require a nail guard.
- List the underground installation requirements for circuits.
- Identify where weather-resistant receptacle outlets are required to be installed.
- List the applications and locations where nonmetallicsheathed cable is not permitted.
- List the depth requirements for flush-mounted box installations.

Given a blueprint, the learner will be able to:

- Calculate how many receptacles are required to be tamper-resistant in a specified area.
- Calculate how many receptacles are required to be ground fault circuit interrupter (GFCI) protected in a specified area.

# **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. 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. 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