Course Name	Residential Wiring (2023 NEC)
Credit Hours	8 Hours
Instructor(s)	Jerry Durham
Fee	$85.00
Reference Materials	NFPA 70 National Electrical Code 2023 Edition

Course Description

This online course is based on the 2023 NEC and provides users a room-by-room walkthrough of a modern dwelling unit from the electrician's perspective. Using the 2023 NEC as their guide, licensees will be presented the general requirements for successfully assembling a dwelling unit electrical service, as well as minimum branch circuit requirements, receptacle outlet requirements, GFCI and AFCI protection requirements, lighting requirements, and special equipment and systems requirements for each room and the exterior of the dwelling unit.

Learning Objectives

At the completion of the course, electricians will be able to:

- Organize the steps to building a NEC-compliant single-phase dwelling unit electrical service;
- List the NEC minimum branch circuit requirements for each room of a dwelling unit;
- Describe the receptacle outlet requirements per the NEC for each room of a dwelling unit;
- Apply GFCI and AFCI protection requirements to each room of a dwelling unit according to the NEC;
- Explain tamper-resistant receptacle technology and identify where the NEC requires these receptacles in each room of a dwelling unit;
- Apply NEC lighting outlet and control requirements to each room of a dwelling unit;
- Understand NEC special equipment and system requirements common to dwelling units;
- Meet the minimum electrical requirements for the exterior of a dwelling unit.

Equipment Requirements

You must have an active, working internet connection to access this course online, as well as a platform to access the internet, such as a computer, tablet, or phone. All popular web browsers are supported, including Google Chrome, Mozilla Firefox, Safari, and Opera. No specialized software, speaker, microphone, or web camera is required.

Schedule and Location

This course is available online at any time at www.TradesmanCE.com. Upon enrolling in the course, students will have access for 365 days or until the agency issued course expiration date, whichever comes first. After the access expiration date, the student may re-activate their course if the course approval has not expired. If they do not re-activate, the course will be removed from the student's account and any progress in the course will be lost. Before the access expiration date, the student may sign in and out of the course as many times as needed to complete the course.

Student Support

Both general and technical support is available to the student before, during, and after taking the course online. Students have access to general customer support via phone, chat, and email. Students have access to the course instructor via email. All questions, concerns, and comments received will be responded to within one business day.

Participation/Interactivity Verification

Timed Logs - Per our company's record retention policy, each student's every log-in, log-out, and lesson/assessment completion time is tracked and retained as part of the student record.

Review Questions - After each section of text, students must answer a review question. Students cannot progress in the course until the question between sections has been answered correctly.

Global Timer - Students will not get credit until they spend a minimum of 400 active minutes total in the course.

Identity Verification

Unique Username/Password - Each student that wants to complete a training course with us must create and account by registering a unique personal email address and password. The student must enter this unique identifier every time they take a break from the course.

Assessment Details

Review Questions - The licensee must complete all 100 multiple-choice questions between sections correctly to get credit for the course. If their first response is incorrect, students will have to try again until they choose the correct answer. Question choices are randomized so each participant will have a unique testing experience. 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.

Regulatory Auditor Access

To review and audit this course, please go to www.TradesmanCE.com. Click on the Login button on the top right and sign into the learning system using the login information below.

Username: uteltester
Password: UTELtester

Residential Wiring (2023 NEC) Timed Syllabus

Section	Title	Questions	Minutes
	Electrical Service		
1	National Electrical Code (NEC) History and Development	**1**	**5**
2	Navigating the NEC	**1**	**6**
3	Introduction to a Dwelling	**1**	**6**
4	What is an Electrical Service?	**1**	**6**
5	Locating an Electrical Service for a Dwelling	**1**	**5**
6	Sizing an Electrical Service for a Dwelling	**1**	**7**
7	Components of an Electrical Service	**1**	**6**
8	Installation of Electrical Service Components	**1**	**7**
9	Installation of Service Conductors	**1**	**7**
10	Grounding and Bonding an Electrical Service	**1**	**7**
	Garages (Attached and Detached)		
11	Garages - History and Do They Require Power?	**1**	**6**
12	Minimum Branch Circuit(s) Required	**1**	**7**
13	Receptacle Requirements (LOCATION)	**1**	**5**
14	Receptacle Requirements	**1**	**6**
15	Receptacle Requirements (TAMPER-RESISTANT)	**1**	**5**
16	Lighting Requirements (LOCATION & TYPE)	**1**	**6**
17	Equipment in Garages	**1**	**6**
18	Electric Vehicle Charging in Garages	**1**	**6**
	Laundry Area		
19	What is a Laundry Area?	**1**	**6**
20	Minimum Branch Circuit(s) Required	**1**	**7**
21	Receptacle Requirements (LOCATION)	**1**	**5**
22	Clothes Dryer Receptacle Requirements	**1**	**6**
23	Receptacle Requirements (GFCI PROTECTION)	**1**	**7**
24	Receptacle Requirements (AFCI PROTECTION)	**1**	**6**
25	Receptacle Requirements (TAMPER-RESISTANT)	**1**	**5**
26	Lighting Requirements (LOCATION & TYPE)	**1**	**6**
	Dining Room		
27	Minimum Branch Circuit(s) Required	**1**	**5**
28	Receptacle Requirements (LOCATION)	**1**	**7**
29	Receptacle Requirements (GFCI PROTECTION)	**1**	**6**
30	Receptacle Requirements (AFCI PROTECTION)	**1**	**6**
31	Receptacle Requirements (TAMPER-RESISTANT)	**1**	**5**
32	Lighting Requirements (LOCATION & TYPE)	**1**	**5**
	Kitchen		
33	What is a Kitchen?	**1**	**6**
34	Minimum Branch Circuit(s) - 2 Small Appliance Circuits	**1**	**6**
35	Receptacle Requirements (LOCATION-WALL SPACES)	**1**	**7**
36	Receptacle Requirements (LOCATION-COUNTERTOPS)	**1**	**6**
37	Receptacle Requirements (LOCATION-ISLAND and PENINSULA)	**1**	**5**
38	Receptacle Requirements (GFCI PROTECTION)	**1**	**5**
39	Receptacle Requirements (AFCI PROTECTION)	**1**	**6**
40	Receptacle Requirements (TAMPER-RESISTANT)	**1**	**6**
41	Outlets for Ranges and Dedicated Appliances	**1**	**5**
42	Lighting Requirements (LOCATION & TYPE)	**1**	**6**

43	Additional Equipment in Kitchens	**1**	**7**
	Great Room/ Living Room/ Den/ Bonus Room/ Library		
44	Great, Living, Bonus Rooms/Dens/Libraries: Habitable Rooms	**1**	**6**
45	Minimum Branch Circuit(s) Required	**1**	**6**
46	Receptacle Requirements (LOCATION—WALL SPACES)	**1**	**6**
47	Receptacle Requirements (LOCATION—COUNTERTOPS)	**1**	**6**
48	Receptacle Requirements (GFCI PROTECTION)	**1**	**6**
49	Receptacle Requirements (AFCI PROTECTION)	**1**	**5**
50	Receptacle Requirements (TAMPER-RESISTANT)	**1**	**6**
51	Lighting Requirements (LOCATION & TYPE)	**1**	**5**
	Foyer		
52	What is a Foyer - Do all Homes Have Foyers?	**1**	**5**
53	Receptacle Requirements (LOCATION—WALL SPACES)	**1**	**5**
54	Receptacle Requirements (GFCI / AFCI / TAMPER RESISTANT)	**1**	**6**
55	Lighting Requirements (LOCATION & TYPE)	**1**	**7**
	Hallway		
56	What is a Hallway?	**1**	**6**
57	Receptacle Requirements (LOCATION—WALL SPACES)	**1**	**5**
58	Receptacle Requirements (GFCI / AFCI / TAMPER RESISTANT)	**1**	**5**
59	Lighting Requirements (LOCATION & TYPE)	**1**	**5**
60	Smoke Alarms Required	**1**	**5**
	Bedroom(s)		
61	Identifying a Bedroom Versus Offices, Dens, Sewing Rooms, etc.	**1**	**7**
62	Minimum Branch Circuit(s) Required	**1**	**7**
63	Receptacle Requirements (LOCATION—WALL SPACES)	**1**	**5**
64	Receptacle Requirements (SWITCHED RECEPTACLES)	**1**	**7**
65	Receptacle Requirements (GFCI / AFCI / TAMPER RESISTANT)	**1**	**6**
66	Lighting Requirements (LOCATION & TYPE)	**1**	**7**
67	Smoke Alarms Required	**1**	**6**
	Bathroom(s)		
68	What is a Bathroom?	**1**	**5**
69	Minimum Branch Circuit(s) Required	**1**	**7**
70	Receptacle Requirements (LOCATION—ADJACENT TO SINK and WALL SPACES)	**1**	**6**
71	Receptacle Required (GFCI PROTECTION)	**1**	**7**
72	Receptacle Requirements (AFCI / TAMPER RESISTANT)	**1**	**7**
73	Lighting Requirements (LOCATION & TYPE)	**1**	**7**
74	Additional Equipment Requirements	**1**	**5**
	Basements		
75	Basements (Finished Versus Unfinished) Minimum Branch Circuit(s) Required	**1**	**7**
76	Receptacles/ Outlets for Wall Spaces/ Equipment Requirements	**1**	**7**
77	Receptacles/ Outlets (GFCI PROTECTION)	**1**	**6**
78	Receptacle Requirements (AFCI PROTECTION)	**1**	**6**
79	Receptacle Requirements (TAMPER RESISTANT)	**1**	**6**
80	Lighting Requirements (LOCATION & TYPE)	**1**	**8**
	Crawl / Attic / Storage		
81	What is Considered Attic/Crawl/ or Storage Space?	**1**	**6**
82	Minimum Branch Circuit(s) Required	**1**	**6**
83	Receptacle Requirements (LOCATION)	**1**	**7**
84	Receptacle Requirements (GFCI PROTECTION)	**1**	**7**
85	Receptacle Requirements (AFCI / TAMPER RESISTANT)	**1**	**5**

86		Lighting Requirements	**1**	**7**
87		Smoke Alarms Required	**1**	**5**
	Exterior Electrical Requirements			
88		Electrical Demands and Branch Circuits	**1**	**5**
89		Receptacle Requirements (LOCATION)	**1**	**6**
90		Receptacle Requirements (GFCI / AFCI PROTECTION)	**1**	**7**
91		Receptacle Requirements (TAMPER/WEATHER-RESISTANT, WEATHERPROOF, EXTRA DUTY)	**1**	**7**
92		Heating and Air Conditioning Equipment	**1**	**6**
93		Lighting Requirements	**1**	**5**
94		Accessory Buildings	**1**	**8**
	Additional Installations			
95		Additional Installations at Dwellings	**1**	**6**
96		Generators	**1**	**7**
97		Solar PV systems	**1**	**8**
98		Swimming Pools	**1**	**7**
99		Well Pumps	**1**	**8**
100		Landscape Lighting	**1**	**7**
		Totals:	**100**	**612**
		Time Required to Complete Course:		**400**