



2021 Residential Electrical Inspector

Course Outline

Cost: \$207, allowing for 120 days of access.

Course Description: This **12-module course**, followed by a two-hour practice examination, is based on Chapters 34 through 43 of the *2021 International Residential Code (IRC)*. It teaches the practical application of those chapters of the IRC. Each module consists of an integrated video presentation, including presentation slides, explanation, examples, and review quizzes. Modules are designed to be approximately 30 to 90 minutes in length.

Course Objectives: This course is designed to prepare you for the *International Code Council's (ICC)* Residential Electrical Inspector exam (E1), utilizing the *2021 IRC*. This course also serves as a review for those already familiar with the IRC and may serve as an update course for those unfamiliar with the 2021 edition of the code.

Texts and Readings: The *2021 International Residential Code* is the textbook for this course. An optional secondary reference for this exam is the *2020 National Electrical Code*. It is highly recommended that you purchase a paper-back copy of these codes, which are available online at www.iccsafe.org. A physical copy can be utilized during the actual exams, which are open book, and serves as a valuable reference for field inspections.

Course Outline of Topics:

Module:	Topics:	Readings:	Quiz:	Duration:
1	General Requirements	Chapter 34	Y	90 min.
2	Electrical Definitions	Chapter 35	Y	49 min.
3	Services Part I	Chapter 36 E3601-E3606	N	61 min.
4	Services Part II	Chapter 36 E3607-E3611	Y	66 min.
5	Branch Circuits and Feeders Part I	Chapter 37 E3701-E3704	N	42 min.
6	Branch Circuits and Feeders Part II	Chapter 37 E3705-E3706	Y	59 min.
7	Wiring Methods	Chapter 38	Y	29 min.
8	Power and Lighting Distribution Part I	Chapter 39 E3901-E3902	N	43 min.
9	Power and Lighting Distribution Part II	Chapter 39 E3902-E3905	N	82 min.
10	Power and Lighting Distribution Part III	Chapter 39 E3906-E3909	Y	79 min.
11	Devices and Luminaires	Chapter 40	Y	34 min.
12	Appliances, Pools and Class 2 Circuits	Chapter 41, 42 & 43	Y	68 min.
	8 Quizzes 90 Questions, 2 min. each	2021 IRC		180 min.
	Practice Exam	2021 IRC		120 min.
	Total Course Hours			16.5 hours



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Quizzes and Exams: Each topic covered in this course will be followed by an assessment quiz of varying length. A passing score of 75% is required in order to advance to the next module. At the conclusion of the course is a timed practice exam. The exam is similar in length, content, and duration to the actual ICC exams, with 60 questions selected at random from a larger pool of questions. A passing score of 75% is required in order to obtain a certificate of completion from WC³ for this course. Topics in both the exam and the quizzes may or may not have been covered in the video modules. A thorough reading of the code may be necessary in order to progress through this course.

Expectation of Participants: This course requires you to watch each training video, complete each quiz, as well as the exam. You are expected to read portions of the applicable code and become familiar with its layout and organization. We recommend 2 hours of personal study, for each module. Marking, tabbing, and highlighting in the code book is highly recommended. We have laid out a plan and method to help you learn the material, but it's up to you to put in the work necessary for you to master the material. You can progress through this course at your own pace; however, you only have access for 120 days.

Continuing Education Credits: Completion of this course results in **1.65 CEUs** (16.5 hours) being provided by ICC, as West Coast Code Consultants is a Preferred Provider.

Instructor:



Doug Smith, MCP, CBO currently serves as Energy Division Lead for West Coast Code Consultants (WC³) and has been an inspector/plan reviewer for over 15 years. He has obtained 19 ICC certifications, including Master Code Professional and Certified Building Official. Mr. Smith has performed well over 10,000 plan reviews for renewable energy projects, including solar PV and energy storage systems. Mr. Smith currently serves as a Standards Technical Panel (STP) Member for the following UL Standards: UL 9540 (Energy Storage Systems and Equip.), UL 9540A (Test Method for Evaluating Thermal Runaway...in Battery Energy Storage Systems), UL 1741 (Inverters, Converters, Controllers...), and UL 1703/61730 (PV Modules/Panels). Mr. Smith was also recently appointed by IAEI to be on Code Making Panel #10 for the National Electrical Code (NEC). He is considered an expert regarding energy storage and solar PV systems and has taught many courses on the subjects.



David Leckie serves WC³, and our jurisdictional clients offering solar services, as a plans examiner and inspector. With years of experience managing a team of technicians for residential solar installations, David is extremely knowledgeable in solar photovoltaic (PV) technologies and associated battery energy storage systems. He holds multiple International Code Council (ICC) certifications as an Electrical Inspector and Electrical Plans Examiner, and is licensed by the State of Utah as a Limited Building Inspector. His background and training in various manufacturers' battery installation procedures serve him well when combined with his knowledge of the applicable code.

