



# Commercial Electrical Inspector & Plans Examiner Part I

## Course Outline

*This course is Part I of a two-part series.*

**Course Description:** This **12-module** course, followed by a **40 question (1.75hour) practice examination**, is based on the **2020 & 2023 National Electrical Code (NEC)**. A total of over **15 hours** of instruction is included. It teaches the practical application of the NEC. Each module consists of an integrated video presentation, including presentation slides, explanation, examples, and review quizzes. Each module has anywhere from 25 to 155 minutes of integrated video presentations.

*Note: While presentations may be broken into more than one video per module for easier viewing, videos do not need to be viewed in their entirety in one sitting. You are able to stop in the middle of a video and pick up where you left off when you return.*

**Course Objectives:** This course is designed to prepare you for the *International Code Council's (ICC)* Commercial Electrical Inspector (E2) and/or Electrical Plans Examiner (E3) exam, utilizing the **2020 or 2023 NEC**. This course also serves as a review for those already familiar with the NEC and may serve as an update course for those unfamiliar with the latest edition of the code.

*Note: This course is Part I of a two-part series, participants will need to complete both parts to fully prepare for the ICC exams.*

**Texts and Readings:** The **2020 or 2023 National Electrical Code** is the textbook for this course. It is highly recommended that you purchase a physical copy of this code, which is available online at [www.iccsafe.org](http://www.iccsafe.org) or [www.nfpa.org](http://www.nfpa.org). A physical copy can be utilized during the actual exams, which are open book, and serves as a valuable reference for field inspections.

*\*While this course covers both the 2020 and the 2023 NEC, all practice questions are based on the 2023 NEC.*

### Course Outline of Topics:

Module:	Topics:	Readings:	Quiz:	Duration:
1	Admin & Electrical Basics	Article 90 & Annex H	Y	49 min.
2	Electrical Definitions	Article 100	Y	97 min.
3	General Requirements	Article 110	Y	106 min.
4	Grounded Conductors	Article 200	Y	24 min.
5	Branch Circuits	Article 210	Y	99 min.
6	Services	Article 230	Y	98 min.
7	Feeders	Article 215	Y	20 min
8	Outdoor Branch Circuits & Feeders	Article 225	Y	43 min.
9	Overcurrent Protection	Article 240	Y	105 min.
10	Grounding & Bonding	Article 250	Y	154 min.
11	General Requirements for Wiring Methods	Article 300	Y	55 min.
12	Conductors for General Wiring	Article 310	Y	84 min.
	<i>12 Quizzes</i>			
	<i>74 Questions, 2 min. each</i>	<i>2023 NEC*</i>		<i>148 min.</i>
	<i>Practice Exam (40 questions)</i>	<i>2023 NEC*</i>		<i>105 min.</i>
	<b>Total Course Hours</b>			<b>20 hours</b>



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**Quizzes and Exams:** Each module associated with 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 and duration as an actual ICC exam. 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.

*\*While this course covers both the 2020 and the 2023 NEC, all practice questions are based on the 2023 NEC.*

*\*\*The length and duration of ICC exams are subject to change. Currently the E2 exam is an 80 question exam with a 3.5 hour time limit. The practice exam included with this course is a 40 question exam with a 1.75 hour time limit and covers only Articles 90 through 310 and Annex H of the 2023 NEC.*

**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 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 **2.0 CEU's (20 hours)** towards renewing your ICC certification(s). West Coast Code Consultants is an ICC 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 more than 20 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 these subjects.