



ike<sup>GPS</sup>



Marne and Associates, Inc.

2

Day  
Course

# Applying the 2023 National Electrical Safety Code® (NESC®) to Day-to-Day Utility Work

(Presented In-House at your Utility/Association or Presented as a Live Web Seminar)

## Highlights

- Provides a general overview of each part of the NESC® (Day 2 focuses on looking up rules in the NESC Codebook, so a copy of the Codebook is required.)
- Designed for:
  - Engineers
  - Staking Technicians
  - Power Lineworkers
  - Communication Lineworkers
  - Safety Personnel
  - Inspectors
- Rich in graphics and practical applications.

Conforms to the 2023 National Electrical Safety Code® (NESC®)



## About the Seminar

*Applying the 2023 National Electrical Safety Code (NESC)* is a 2-day class focusing on the rules in the National Electrical Safety Code (NESC). This class provides a general overview of each part of the NESC and applying the Code to day-to-day work will be stressed by focusing on practical NESC examples and applications. During this 2-day class you will learn:

- Scope and Purpose of the Code
- Clearances of Overhead Lines
- Loading and Strength of Overhead Lines
- Underground Line Rules
- Grounding Requirements
- Supply Station Rules
- Work Rules

## Course Objectives

Upon successful completion of this course the learner will be able to:

1. Understand the organization, scope, purpose, and general application of the National Electrical Safety Code.
2. Apply the Code to common situations found on overhead and underground distribution, transmission, and communication lines and in substations.
3. Recognize how the Code is integrated into design and construction standards and operating practices.
4. Identify and take action to correct Code violations and safety hazards.
5. Design and build facilities that comply with Code requirements.
6. Understand the actions needed to work safely.
7. During the 2nd Day, interact with class attendees and understand how to independently find rules in the Codebook.
8. During the 2nd Day, participate in code discussion and apply the rules in the Codebook to actual field construction situations.

## Who Should Attend

- Engineers
- Staking Technicians
- Power Lineworkers
- Communication Lineworkers
- Safety Personnel
- Inspectors

(Prior working knowledge of the NESC is not required)

## Continuing Education Units

This course provides 1.2 Continuing Education Units (CEUs) or 12 Professional Development Hours (PDHs). This class has not been registered with and State Licensing or Education Board.

## Class Format/ Learning Methods

- Presented in person or via the web
- Lecture format
- Real time Q & A
- Presentation slides rich in graphics and practical applications
- Ample time for questions and class discussion
- Exercises consisting of looking up Code Rules and applying the Rules to field construction

## About the Instructor

David J. Marne, P.E., is a registered professional electrical engineer. Mr. Marne is the author of *McGraw-Hill's National Electrical Safety Code® (NESC®) 2023 Handbook* and is a nationally recognized speaker on the NESC.

He serves on NESC Subcommittee 4 Overhead Lines Clearances, Subcommittee 7 Underground Lines, and the Interpretations Subcommittee. He is company president and senior electrical engineer for Marne and Associates, Inc. in Bozeman, MT where he specializes in National Electrical Safety Code (NESC) training, OSHA training for power and communication workers, and expert witness services related to the NESC, the OSHA Standards for Power and Communication workers, and California's General Orders G095, G0128, and G0165.

Mr. Marne has over 35 years of experience in the utility industry engineering and managing transmission and distribution line projects, substation projects, electrical system planning studies, joint use (power and communication) projects, and providing training and expert witness services.



**David J. Marne, P.E.**

# Class Schedule

## Day 1

<b>8:00 a.m.</b>	Registration begins
<b>8:30 a.m.</b>	Welcome
<b>8:45 a.m.</b>	<div>2023 NESC General Overview<ul style="list-style-type: none"><li>• Introduction - Sections 01, 02, 03, 09<ul style="list-style-type: none"><li>• The Four Parts of the NESC</li><li>• Purpose and Scope of the NESC</li><li>• NESC v. NEC Definitions and References</li><li>• Grounding Methods for Substations and Lines</li></ul></li><li>• Part 1 - Electric Supply Stations<ul style="list-style-type: none"><li>• Substation Fences</li><li>• Safety Signs</li><li>• Storage</li><li>• Clearances</li><li>• Guards</li></ul></li></ul></div>
<b>10:15 a.m.</b>	Break
<b>10:30 a.m.</b>	<div>Part 2 - Overhead Lines<ul style="list-style-type: none"><li>• Inspection and Tests of Overhead Lines</li><li>• Readily Climbable Structures</li><li>• Tree Clearing</li><li>• Understanding a Sag and Tension Table</li><li>• The 10 Rules of Overhead Line Clearance</li><li>• Most Popular Table in the NESC, Table 232-1</li></ul></div>
<b>12 Noon</b>	Lunch
<b>1:00 p.m.</b>	<div>Part 2 - Overhead Lines (continued)<ul style="list-style-type: none"><li>• 2nd Most Popular Table in the NESC, Table 234-1</li><li>• Climbing Space and Working Space</li><li>• Joint Use Overhead Clearances</li><li>• Communication Worker Safety Zone</li><li>• Grades of Construction</li><li>• Overload and Strength Factors</li></ul></div>

## Day 1 (Continued)

<b>2:30 p.m.</b>	Break
<b>2:45 p.m.</b>	<div>Part 3 - Underground Lines<ul style="list-style-type: none"><li>• UG Conduit v. Direct Buried Systems</li><li>• Burial Depths</li><li>• Pulling Tensions and Side Wall Pressures</li><li>• Manholes and Vaults</li><li>• Joint Use Underground Installations</li></ul></div> <div>Part 4 - Work Rules<ul style="list-style-type: none"><li>• NESC v. OSHA</li><li>• Minimum Approach Distance (MAD)</li><li>• General Rules for Employers and Employees</li><li>• Additional Rules for Communication Workers</li><li>• Additional Rules for Supply Workers</li></ul></div>
<b>4:15 p.m.</b>	Adjourn

## Day 2

<b>8:30 a.m.</b>	Welcome
<b>8:45 a.m.</b>	Substation Examples & Exercises
<b>10:15 a.m.</b>	Break
<b>10:30 a.m.</b>	OH Line Examples & Exercises
<b>12 Noon</b>	Lunch
<b>1:00 p.m.</b>	OH Line Examples & Exercises
<b>2:30 p.m.</b>	Break
<b>2:45 p.m.</b>	UG Line Examples & Exercises
<b>4:15 p.m.</b>	Adjourn

### OPTION:

This class can be presented as six 90-Minute Live Web Seminars (1.5-Day) or eight 90-Minute Live Web Seminars (2-Day)

## Benefits of ikeGPS Training

- Save on travel time and out-of office expenses.
- Entire departments can be trained together.
- The presentation can be designed to meet the needs of your organization.
- Training schedule can be modified to meet your needs.

## Enrollment/Pricing/Cancellation

- Please contact us for a quote to have this class presented as a live webinar or presented in person at your utility or association.
- Our live Webinar is typically economical on a per person basis when there are approximately 10 or more individuals to train.
- Our In-House presentation is typically economical on a per person basis when there are 15 or more individuals to train. For in-house training, the utility or association provides the conference room and any desired meals and beverages for the attendees.
- Class cancellations can be made by contacting ikeGPS at any time prior to the presentation date. No payment is due until the class is completed.

## Contact



To schedule classes or for inquiries please reach out to us at:

[training@ikegps.com](mailto:training@ikegps.com)

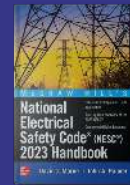
### Class Materials

- Attendees will receive a pdf copy of the class presentation slides. The presentation materials are copyrighted by ikeGPS with permissions from McGraw Hill LLC. Class materials are reserved for class attendees only and may not be duplicated.
- For Day 1, attendees are encouraged (but not required) to bring a copy of the NESC Codebook and McGraw Hill's NESC Handbook. These books are available for purchase on Amazon.
- For Day 2 of the class, attendees are required to have a copy of the 2023 NESC Codebook for class exercises.
- These books are available for purchase on Amazon.



**2023 NESC Codebook**

[Purchase on Amazon](#)



**McGraw Hill's NESC 2023 Handbook**

[Purchase on Amazon](#)

## The PoleOS™ Company

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