

# National Electrical Safety Code® (NESC®) for Day-to-Day Utility Work

(Presented online or in-person at your organization)

## Benefits of IKE's NESC training courses



### Save time and money

Save on travel time and out-of-office expenses



### Training together

Entire departments can be trained together



### Designed for your needs

The presentation can be designed to meet the needs of your organization



### Train on your schedule

Our training schedule can be modified to meet your team's needs

## Class highlights

### Gain understanding of the NESC rules

Provides a general overview of each part of the National Electrical Safety Code. Including a Day 2 focus on understanding rules found in the NESC Codebook.

### Learn through practical application

Curriculum focused on practical applications supported by examples, diagrams, and conversations.

### Specifically designed classes

This class is designed for: Engineers, Staking Technicians, Power Lineworkers, Communication Lineworkers, Safety Personnel, and Inspectors.

### Up to date information

This class conforms to the 2023 National Electrical Safety Code®.

# About the instructor



## Grant D. Glaus, P.E.

*NESC and OSHA Training Instructor, at ikeGPS*

Grant Glaus is a registered professional electrical engineer with more than 25 years of experience in Electric Utility Engineering, NESC, and OSHA training, and is now leading IKE's training programs. Grant brings vast knowledge and extensive background, including his role on the NESC Subcommittee 5 for Overhead Lines – Strengths and Loadings, and 15 years of experience supervising and managing the engineering department at Columbia Rural Electric Association. Before that, Grant worked with David Marne for ten years, providing consulting and NESC and OSHA training services.

# About the class

*National Electrical Safety Code (NESC) for Day-to-Day Utility Work* is a 1 or 2-day class focusing on the rules in the National Electrical Safety Code. This class provides a general overview of each part of the NESC. Applying the Code to day-to-day work will also be stressed by focusing on practical NESC examples and applications.

### During this 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

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## 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.

## Who should attend?

Attendees are not required to have prior working knowledge of the NESC. This class is designed for:

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

## Class format and learning methods

This class is presented either in-person or online and includes:

- Real time Q&A
- Curriculum focused on practical applications supported by examples, diagrams, and conversations
- Ample time for questions and class discussion
- Exercises consisting of looking up Code Rules and applying the Rules to field construction

## Class objectives

Upon successful completion of this class attendees will be able to:

01

Understand the organization, scope, purpose, and general application of the National Electrical Safety Code.

02

Apply the NESC to common situations found on overhead and underground distribution, transmission, and communication lines and in substations.

03

Recognize how the Code is integrated into design and construction standards and operating practices.

04

Identify and take action to correct Code violations and safety hazards.

05

Design and build facilities that comply with Code requirements.

06

Understand the actions needed to work safely.

07

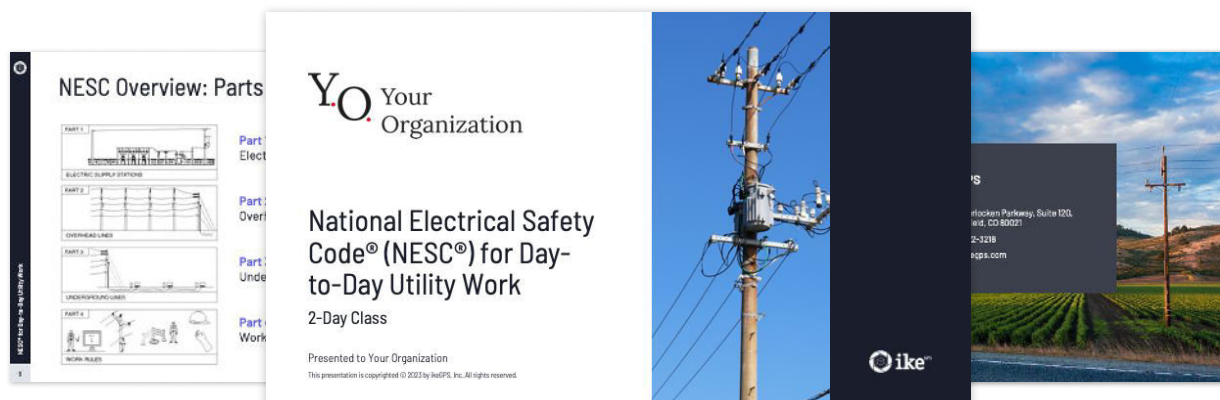
During the 2nd Day, interact with class attendees and understand how to independently find rules in the Codebook.

08

During the 2nd day, participate in code discussions and apply the rules in the Codebook to actual field construction situations.

## Provided 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.



# Standard 1-day class schedule

(All times Central Time Zone)

Day 1 Agenda	
8:00 a.m.	Log in and set up
8:30 a.m.	Welcome and introduction
8:45 a.m.	<p>2023 NESC General Overview</p> <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, Safety Signs, Storage, Clearances, Guards</li></ul></li></ul>
10:15 a.m.	Break (15 min)
10:30 a.m.	<p>Part 2 – Overhead Lines</p> <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>
12:00 p.m.	Lunch (1 hr)
1:00 p.m.	<p>Part 2 – Overhead Lines (continued)</p> <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    Communication Worker Safety Zone</li><li>• Grades of Construction</li><li>• Overload and Strength Factors</li></ul>
2:30 p.m.	Break (15 min)
2:45 p.m.	<p>Part 3 – Underground Lines</p> <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> <p>Part 4 – Work Rules</p> <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>
4:15 p.m.	Adjourn

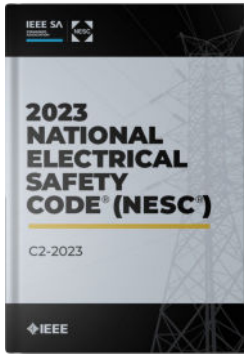
## Standard 2-day class schedule

(All times Central Time Zone)

Day 1 Agenda		Day 2 Agenda	
8:00 a.m.	Log in and set up	8:00 a.m.	Log in and set up
8:30 a.m.	Welcome and introduction	8:30 a.m.	Welcome and introduction
8:45 a.m.	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, Safety Signs, Storage, Clearances, and Guards</li> </ul> </li> </ul>	8:45 a.m.	Substation Examples & Exercises
10:15 a.m.	Break (15 min)	10:15 a.m.	Break (15 min)
10:30 a.m.	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>	10:30 a.m.	OH Line Examples & Exercises
12:00 p.m.	Lunch (1 hr)	12:00 p.m.	Lunch (1 hr)
1:00 p.m.	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 Communication Worker Safety Zone</li> <li>• Grades of Construction</li> <li>• Overload and Strength Factors</li> </ul>	1:00 p.m.	OH Line Examples & Exercises
2:30 p.m.	Break (15 min)	2:30 p.m.	Break (15 min)
2:45 p.m.	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> 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>	2:45 p.m.	UG Line Examples & Exercises
4:15 p.m.	Adjourn	4:15 p.m.	Adjourn

# External resources for your training

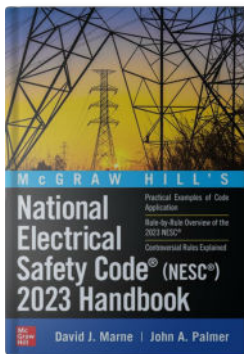
For Day 1, attendees are encouraged (but not required) to bring a copy of the NESC Codebook and McGraw Hill's NESC Handbook. For Day 2 of the class, attendees are **required** to have a copy of the 2023 NESC Codebook for class exercises.



## 2023 National Electrical Safety Code® (NESC®) C2-2023

[Purchase Now on Amazon >](#)

available at  
**amazon**



## McGraw Hill's National Electrical Safety Code® 2023 (NESC®) Handbook

[Purchase Now on Amazon >](#)

available at  
**amazon**

## See more of IKE's NESC® or OSHA training classes

[Training Classes for Individuals](#)

[Training Classes for Groups](#)



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