

Grounding, Bonding, Lightning Protection & Surge Protection Certification Training

September 12-13, 2013

Day 1: Corporate College East — 4400 Richmond Rd. | Warrensville Hts., OH
 Day 2: ERICO International Corporation — 34600 Solon Road | Solon, OH



DAY 1 Corporate College East		
7:30 – 7:45 AM	Registration	
7:45 – 8:00 AM	Introduction	Background of Electrical Industry Grounding and Bonding concerns.
8:00 – 10:00 AM	Fundamentals of Grounding	Electrical engineering fundamentals for grounding, grounding system design (utilities, commercial & industrial, residential) and specifications (IEEE® and NFPA® 70).
10:00 – 10:15 AM	Break	
10:15 – 11:00 AM	Ground Resistance Measurement	Theory of fall of potential ground resistance and resistivity measurements.
11:00 – Noon	Grounding Design and Exothermic Welding	IEEE 80 design philosophy and computer assisted substation grounding grid design. Test requirements for ground system components.
Noon – 12:45 PM	Lunch	
1:00 – 3:00 PM	Fundamentals of Lightning Protection	Discussion on lightning risk, essential elements of a lightning protection system, lightning protection standards, and non-conventional methods of lightning protection.
3:00 – 5:00 PM	Surge Protection	Explanation of electrical transients, technical standards and codes for surge suppression, and recommended performance ratings.

DAY 2 ERICO International Corporation		
7:30 – 8:00 AM	Sign-In	
8:00 – 9:30 AM	Ground Resistance Lab	Measure ground resistance and soil resistivity using actual test devices.
9:30 – Noon	Counterpoise and Substation Grid Installation Lab	Install a grid, ground rods and equipment pigtailed using exothermic connections.
Noon – 1:00 PM	Lunch	
1:00 – 2:00 PM	Surge Protection Lab	

*ERICO has met the standards and requirements of the Registered Continuing Education Providers Program. Credit earned on completion of this program will be reported to RCEP. A certificate of completion will be issued to each participant. As such, it does not include content that may be deemed or construed to be an approval or endorsement by NCEES or RCEPP.

PROGRAM INFORMATION

Program Purpose:

The purpose of ERICO's Electrical Grounding Certification Training is to provide electrical engineers and contractors with the training necessary to understand the fundamentals of facility electrical protection related to Utility Grounding, Commercial & Industrial / Residential Grounding and Telecommunications Grounding applications.

Course Content:

This 2-day seminar provides an overview of electrical grounding, bonding, lightning protection and surge protection. Day 1 will cover Electrical engineering principles and relevant Utility and Commercial & Industrial grounding designs and the incorporation of lightning protection and surge protection devices will also be discussed. Day 2 is devoted to hands-on workshops designed to reinforce presentation materials.

PDH Credit:

Individuals who successfully complete this seminar will receive 13 PDH credits, submitted to RCEP* on their behalf. Attendees will retrieve their certificate from the RCEP web site.

Who Should Attend:

Facility owners, electrical designers and engineers, electrical contractors who install grounding systems or cell site installers.



REGISTER Today!

There is no fee to attend this seminar. Registration includes hotel**, local transportation***, lunch each day and group dinner on Day 1. Airfare and breakfasts are not included. For more information regarding complaint and cancellation policies, please contact (440) 542-3928.

Fax or email registration form to:

Victoria Fliegel, ERICO

Fax: (440) 848.8490

Email: vfliegel@erico.com

Airport:

Cleveland Hopkins International Airport (CLE)

Hotel:

Cleveland Marriott East

26300 Harvard Road, Warrensville Hts, OH
(216) 378-9191

<http://www.marriott.com/hotels/travel/cleem-cleveland-marriott-east/#>

** Reservation secured at time of registration confirmation. 9/11/13 Check-In, 9/13/13 Checkout. Please do not contact hotel for reservations.

*** Local transportation includes airport to hotel, airport drop-off, and transport between hotel and training locations.

About the Instructor:

Frank Fitzgerald, P.E. | Proprietor, FFPE

Frank Fitzgerald graduated from SUNY Plattsburgh in 1974 with a bachelor's degree in chemistry. He attended Oregon State University from 1975-77 working toward a Ph.D. in physical chemistry. Completing his Professional Registration in electrical engineering in 1994, he had his own electrical engineering consulting company in North Carolina. He has worked as an electrical engineer and engineering manager for Raychem and ERICO. Frank has been a member of the IEEE Power Engineering Society for 20 years and has written several papers on electrical field mitigation and FEA modeling of electrical stresses and grounding stability. He is a registered engineer in NC, OH and OR where he has also taught classes on grounding, NEC code changes, transformer design and specifications, MV cable terminations and splicing design and installation.

Registration:

Name to appear on certificate:

Company: _____

Address: _____

City: _____

State: _____ Zip: _____

Email: _____

Primary License State: _____

Primary License #: _____

Special Meal Request: _____

Attendance records will be reported to the Registered Continuing Education Program at RCEP.net. When attendance is reported, individuals receive a free, basic subscription to RCEP.net

Please return this registration form to:

Victoria Fliegel — vfliegel@erico.com

Fax: (440) 848.8490 | Ph: (440) 542.3928

ERICO is a leading global manufacturer and marketer of superior engineered electrical and fastening products for niche electrical, mechanical and concrete applications.

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