

Arc Flash Protection & Electrical Safety™

For a schedule of open enrollment classes or to bring this training to your plant or facility, contact us @

1-877-97-TRAIN

www.AmericanTrainco.com

Based on the *NEW* 2009 NFPA 70E® Standard for Electrical Safety in the Workplace®



College Credit & Testing Available with this Course

This course now carries American Council on Education (ACE) College Credit Recommendations.

NFPA 70E® and NFPA 70E® Standard for Electrical Safety in the Workplace® are Registered Trademarks of the National Fire Protection Association.

“An eye opener... I wish all my co-workers could attend.”

Donald Siglar – Maintenance Mechanic
Harrah’s Casino

“I walked out with an interest in living longer.”

Bill Gabriel
Building Engineer, AAOMS

*John- Whats This “70E” stuff I Keep Hearing About?
-DL*

- This seminar can also be presented at your facility for larger groups
- Reserve Your Space Now! **CALL 1-877-97-TRAIN**
- Check us out online at **www.AmericanTrainco.com**
for a complete listing of all seminars coming to your area

Real World Training...for Real World Needs™



Arc Flash Protection & Electrical Safety™

▶ *"After 20 years, I think it's time to change the way I've been doing things."*

PURPOSE OF TRAINING

This program is designed to save lives, prevent disabling injuries, and prevent damage to plants, building and equipment.

Based on NFPA 70E, which has become the new standard for meeting OSHA training obligations under CFR1910.331-335, students attending this course will gain an immense respect for the power of electricity. They will learn about personal safety for working on or around electrical systems and equipment, how to use proper materials and procedures for doing electrical work – and the potential consequences for themselves or others if they don't.

Taught as if they were our own employees, students are given practical instruction that they can immediately apply when they go back to their workplace.

Whether your employees are machine operators, maintenance personnel or experienced electricians, this course is an absolute "must" for anyone working on or around electrically energized systems and equipment.

WHAT YOU WILL LEARN

- How to identify electrical hazards
- The difference between "qualified" and "unqualified" workers
- Safe approach distances to exposed electrical conductors
- Improvements in PPE (Personal Protective Equipment)
- "Hot Work" rules
- Proper work practices in wet or damp locations
- Lockout/Tagout procedures
- Safety requirements for electrical installations
- Damage caused to equipment from poor electrical safety practices
- Damage caused to people from poor electrical safety practices
- Just how much voltage is too much voltage for the human body to handle
- How OSHA Rules apply to your job & workplace
- What it takes to establish compliance
- OSHA penalties for noncompliance

ABOUT OUR INSTRUCTORS

Our instructors are field experienced master electricians, and not just seminar leaders who read from a book. They have worked in plants & buildings and know firsthand the importance of electrical safety. They can respond to the students' questions when asked about specific situations or electrical equipment since they themselves have spent many years doing *real world* work. In addition, our instructors are highly regarded for their teaching skills honed from thousands of hours of classroom experience, which further insures the student a positive and enjoyable learning experience.

At American Trainco, we don't hire field people without teaching experience, and we don't hire teachers without field experience. They must have both and truly need to be a leader in their field. Quite simply put, when you attend an American Trainco seminar, you will be learning from the best!

UNAFFILIATED & NON-COMMERCIAL

Unlike some training experiences, you won't get a sales presentation at an American Trainco seminar - all you get is an honest, commercially unbiased education. We do not engage in the practice of selling or promoting any other company's products or services, so you know that by attending one of our seminars, your time and money is well spent.

CERTIFICATES-TESTING-COLLEGE CREDIT

After completion of this seminar students will receive a Certificate of Completion and 1.6 CEUs (Continuing Education Units) approved by the Maintenance Training Association of the Americas. Students may also elect to take the MTAA Certification test associated with this topic. Those seeking college credit recommendations must attend both days of this course and successfully pass the MTAA Certification test. This course is recommended by ACE for 1 college credit hour. Transcripts are available through American Trainco.

WHO SHOULD ATTEND

This seminar is a must for anyone who works on or around any electrically energized equipment at industrial plants, utilities or commercial and private building facilities. From machine operators and janitorial personnel, to maintenance workers, experienced electricians and general management – anyone who comes in contact with electrical equipment must receive Electrical Safety training to be in compliance with the requirements of OSHA Standard CFR 1910.331-.335. This includes people who are responsible for safe installation, maintenance, repair or inspection of electrical equipment, building and electrical systems, and general electrical wiring. Those who should not miss this training include...

*Maintenance Technicians Working in –
Hospitals, Water Plants, Mfg. Plants,
Office Buildings and Schools
All Electricians – any level
Maintenance & Electrical Supervisors
Machine Operators
Maintenance Millwrights & Mechanics
HVAC Technicians
Field Service Technicians
Stationary Engineers
Building Engineers
Building and Maintenance Managers
Plant/Facility Superintendents
Plant/Facility Engineers
Environmental Health & Safety Personnel*

▶ *"Excellent course...great presentation"*

Robin Curry
EG&G Technical Services

Reserve Your Space Now! **CALL 1-877-97-TRAIN** Or Online at: www.AmericanTrainco.com

C O U R S E O V E R V I E W

Not only do technicians need to know how to perform maintenance on their electrical systems and equipment, but they also need to know how to perform their work without causing injury or death, to themselves or others. For those who don't perform electrical maintenance tasks, but merely work on or around energized equipment, this course will help them too – by reducing their personal exposure to risk of injury from electrical shock while performing their everyday jobs.

Upon completion of this seminar, attendees will have gained an immense respect for the power of electricity, which will motivate them to abide by safe work practices for the benefit of themselves and others. Any qualified or unqualified employees who "...face a risk of electrical shock that is not reduced by electrical installation requirements..." must receive electrical safety training as outlined in OSHA Standard CFR 1910.331 through 1910.335. Using the NFPA 70E standard as our guide, this seminar is designed to meet and exceed this standard.

C O U R S E O U T L I N E

I. Electrical Safety and the Qualified Electrical Worker

- A. Background, Responsibilities & Requirements
- B. Safety Standard Types: NFPA 70E® & Others
- C. OSHA Electrical Safety Regulations Overview

II. Electrical Hazards

- A. Power of Electricity – Shock, Arc Flash & Arc Blast
- B. How to identify electrical hazards
- C. Electrical Fires
- D. Electrical Burns
- E. Static Electricity
- F. Accident Prevention
- G. Emergency Response

III. Safety Related Work Practices

- A. Definitions
- B. General Requirements
- C. Establishing Safe Work Conditions
- D. Electrical Lockout / Tagout
- E. Working on or near Energized Parts
- F. Safe Approach Distances
- G. Energized Work Permit
- H. Conducting an Arc Flash Analysis
- I. Reading Arc Flash One Line Diagrams
- J. Determining PPE Requirements from the Arc Flash Analysis

IV. Safety Related Maintenance Requirements

- A. General Maintenance Requirements
- B. Substations, Switchgear, Switchboards, Panelboards, Motor Control Centers, Disconnect Switches
- C. Premises Wiring
- D. Controller Equipment
- E. Fuses & Circuit Breakers
- F. Rotating Equipment
- G. Hazardous (Classified) Locations
- H. Batteries & Battery Rooms
- I. Portable Electrical Tools & Equipment (PPR)

V. Safety-Related Work Practices & Requirements for Special Equipment

- A. Electrolytic Cells
- B. Batteries & Battery Rooms
- C. Lasers
- D. Power Electronic Equipment

VI. Electrical Safety Program

- A. Setting up an Electrical Safety Program
- B. Implementing an Electrical Safety Program
- C. Complying with NFPA 70E®
- D. Interpreting Arc Flash Analysis Reports
- E. Determining your PPE Requirements

SEMINAR AGENDA

7:30 am	Registration
8:00 am	Class Begins
12:00 -1:00 pm	Lunch (on your own)
4:30 pm	Class Ends

SEMINAR FEE

\$985 Both Days

IN-HOUSE PROGRAMS TO MEET ALL YOUR TRAINING NEEDS

You can bring these or any other maintenance training programs directly to your plant or facility. Simply call us and tell us what you're looking for. In addition to our own American Trainco seminars and instructors, we have established relationships with literally hundreds of other expert instructors and consultants who conduct training in virtually all areas of maintenance; and our custom training staff is among the most experienced in the industry. Chances are good we will be able to meet your needs.

Call **1-877-97-TRAIN** and ask for Dan or Adam, or email AdamC@AmericanTrainco.com.

You may also visit us on the web at www.AmericanTrainco.com

SPANISH INSTRUCTION AVAILABLE

Some of the other training topics we can bring to your site include:

- **Basic Electricity for the Non-Electrician™**
- **Electrical Troubleshooting**
- **Air Conditioning & Refrigeration**
- **Boiler Operation, Maintenance & Safety™**
- **Arc Flash Protection & Electrical Safety™**
- **2008 National Electrical Code®**

And 20+ other courses in the following areas:

- **Electrical / Electrical Controls**
- **HVACR**
- **Mechanical**
- **Facility & Plant Management**
- **Fluid Power**
- **Pumps / Piping**
- **Codes / Standards / Safety**

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NO RISK REGISTRATION and MONEY-BACK GUARANTEE

If you're not yet sure you'll be able to attend this seminar, you can still make a reservation to hold your space in class. While payment is due prior to the start of the seminar, you may choose a full refund or credit for cancellations made at least 24 hours in advance. Student substitutions can also be freely made at any time prior to the start of the seminar. Refunds will not be issued for registered attendees who fail to show up and have not given a notice of cancellation. In the rare event that you do not receive the expected value after attending our seminar, simply notify us in writing of your reasons and your money will be promptly refunded.

Arc Flash Protection & Electrical Safety™

An up-to-date road map for meeting the latest workplace requirements

We also offer:

ARC FLASH LABELING and ENERGY ASSESSMENTS

Please call for more information and a quote!

FIVE EASY WAYS TO REGISTER:

- 1) Internet www.AmericanTrainco.com
- 2) Fax (303) 531-4565
- 3) Phone Toll Free 1-877-97-TRAIN 1-877-978-7246 or (303) 531-4560
- 4) Mail this form to: American Trainco, Inc. P.O. Box 3397 Englewood, CO 80155
- 5) E-mail the information requested on this form to: Sales@AmericanTrainco.com

SEMINAR FEE
\$985 Both Days

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www.AmericanTrainco.com

Primary Contact/Authorizing Supervisor: Name _____
 Title _____ Company Name _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Fax _____ Email _____

Billing Information: (Please fill out this section only if the "Bill To" name and address is different than the Authorizing Person's name and address above.)

Individual's Name _____ Title _____
 Company Name _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Fax _____ Email _____

Seminar Attendees:	Name	Title	E-Mail	Seminar City

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Available in Spanish

Arc Flash Analysis & Labeling

Are You In Compliance? If Not, Call 1-877-978-7246

Payment Method:

- Visa MasterCard Discover American Express

Card Number: _____

Expiration Date: _____

Name on Card: _____

Signature: _____

Check Enclosed (Make payable to: American Trainco, Inc.)

Bill Purchase Order #: _____



PO Box 3397
Englewood, CO 80155



PROMOTION CODE

X05