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**Three-day Electrical Safety Program Course**

**Establishing an Electrical Safety Program using NFPA 70E**

**Target Audience**

- Plant & Facilities Managers
- Health & Safety Managers
- Plant & Facility Engineers
- Electricians
- Maintenance Managers
- Environmental & HR personnel

**LEARNING OBJECTIVES**

- Recognize the relationship between OSHA, NFPA and your electrical safety program
  - Understand the application of NFPA 70E to your company
  - Understand arc flash, its ratings and application of associated PPE
  - Understand hazards, labeling of live parts and where they apply in your facility
  - Create safe working conditions understood by the workers, supervisors, and management
  - How to train workers, supervisors, and management and when to retrain for a sustainable program
  - Applying PPE, Electrical Work Zones, Electrical Work Permit (includes hands-on demos)
  - Train the trainer to succeed and workers to police themselves
  - Ensure outside personnel are safe inside your program
  - Understand cost of implementation
  - Be able to Start and Implement your program now
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**COURSE OUTLINE**

**DAY 1 Understanding How NFPA 70E Applies to My Company**

**Topic 1:** NFPA 70E Background and Why Needed

- a. History --- including OSHA and NEC
- b. Terminology
- c. Electrically Safe Work Condition – *everyone's goal*
- d. Management and Supervisory involvement

**Topic 2:** Identify Workforce – Develop your scope

- a. Who needs to be trained and why
- b. Qualified vs. unqualified

**Topic 3:** Identify Your Electrical Work

- a. 50V, 120V, 277V, 480V, HV
- b. In-house or contractor
- c. PPE and tools needed

**Topic 4:** Ordering PPE, Labels, and Tools

- a. Levels – breakdown and tailor each
  - b. Maintenance
  - c. Tools
  - d. Meters
  - e. Tracking
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### DAY 2 Establishing a Program and Training Employees

#### ELECTRICAL SAFETY PROGRAM SETUP

- Establish a supervisory team
- Get worker involvement to make it their own
- Defining policy and enforcement

#### TRAINING STEPS

1. Topics and Limitations
2. When to Train
3. Who should attend
  - a. Safety
  - b. Management
  - c. Skilled Workers
4. Qualifications
  - a. Qualified
  - b. Authorized
  - c. Unqualified / Unauthorized
5. Labeling
  - a. General vs. Arc Flash Analyzed
  - b. What works (hands-on)
6. Electrical Safe Work Condition - 4 steps
  - a. *Disconnect*
  - b. *LO/TO*
  - c. *Test*
  - d. *Ground if necessary*
7. Electrical Work Zone
  - a. Boundaries and why
  - b. Distances
  - c. Lifts
  - d. Access
  - e. EWZ setup (hands-on)
8. Personal Protective Equipment (PPE)
  - a. Levels
  - b. Calculations
  - c. Voltages
  - d. Clothing
  - e. Eye/Face/Hands
  - f. Requirements
  - g. Lifts
  - h. Job Compatibility
  - i. Costs
9. Tools/Metering
  - a. Requirements
  - b. Use
  - c. CAT III/IV
10. Electrical/Energized Work Permit
  - a. When needed
  - b. Why needed
  - c. Who must sign
  - d. What is required
11. Training
  - a. Qualifications
  - b. Classroom
  - c. Materials needed
12. Train the trainers
13. Applying what you train
14. Basic training pitfalls
15. Train to Sustain



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### DAY 3

1. Keeping Contractors and Vendors working safely
  2. Management involvement your electrical safety program
  3. Vendor demonstrations
    - a. PPE
    - b. EWZ
    - c. Meters
    - d. Teaching aides
  4. Labeling – when, where and what to label
  5. Arc-flash analysis
  6. One-line diagrams of electrical distribution
  7. What's first? Second? - - - The order to start and implement a program.
    - a. Why you can do implement
    - b. How you can implement this
  - ... Let's Review
  8. Final exam
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