



Content  
Community  
Connection

United States  
The Electricity Forum Inc.  
One Franklin Square, Suite 212A  
Geneva, NY 14456  
Tel 289-387-1025

Canada  
The Electricity Forum  
1885 Clements Rd, Unit 218  
Pickering, ON L1W3V4  
Tel 905-686-1040  
Fax 905-686-1078  
Toll Free 855-824-6131

---

## NFPA 79 Training - Electrical Standard For Industrial Machinery

Course details: <https://www.electricityforum.com/electrical-training/nfpa-79-training>

NFPA 79 Training - Electrical Standard For Industrial Machinery - Our 12-hour instructor-led, live online course teaches proper production equipment uptime and reliability. This course is designed for employees who maintain or repair machine electrical controls as part of a company's production process.

NFPA 79-2021 provides safeguards for industrial machinery to protect operators, equipment, facilities, and work-in-progress from fire and electrical hazards.

NFPA 79-2021 is the Electrical Standard for Industrial Machinery and thus one of the most important industry-specific standards in North America. As of the standard's current 2018 edition, surge protection is now also a mandatory component of all industrial machinery.

Worker and equipment safety is the key when working with industrial machinery, not only the kind of safety that protects and preserves lives but also the procedures that help protect your valuable equipment. Avoiding equipment downtime from accidents and disruptions, as well as the added costs of replacing damaged equipment, is the focus of this course.

NFPA 79-2021 Electrical Standard For Industrial Machinery is the key regulatory standard

for administering a safety protocol in any business that uses industrial machinery. This standard provides information that helps managers and workers apply the provisions of the standard to electrical equipment or systems.

It applies to electrical or electronic equipment (or apparatus or systems) of industrial machines “supplied from nominal voltage of 1000 volts or less.” The standard applies to the “point of connection of the supply circuit conductors to the electrical equipment of the machine.”

The standard is designed to protect equipment, operators, the facilities, and jobs in progress from electrical and fire hazards.

Our course helps students to understand NFPA 79-2021 and its relationship with other NFPA codes. Learn how to effectively use the Standard as a guideline for wiring, sizing conductors and overcurrent protection for industrial machines operating from a nominal voltage of 1000 volts or less.

The NFPA 70 addresses how that equipment can be electrically installed; but the NEC stops at the outside of the piece of equipment. NFPA 79-2021 picks-up inside the equipment and addresses how the wiring and grounding of the actual piece of equipment is done.

When equipment does need maintenance or repair, workers need to understand why the electrical controls and components were designed and installed the way they are so you can keep it that way.

By taking this course, you should experience:

- Less down time due to improperly maintained equipment, and
- Understand why reoccurring problems are happening
- Perform more effective maintenance tasks

Register for our newly update NFPA 79 training course if you are responsible for:

- Repair of your equipment’s electrical components correctly for safety,
- Standards compliance,

- Want to extend your equipment use,
- Want to adopt better Preventative Maintenance procedures

### WHO SHOULD ATTEND

Workers responsible for repairing and maintaining the electrical components of industrial machines:

- Safety directors
- Electrical contractors
- Electricians
- Maintenance electricians
- HVAC maintenance and Repair
- Machine Builders
- Engineers making modifications to existing machinery
- Technicians
- Plant & facility maintenance technicians
- Electrical engineers

### STUDENTS RECEIVE

- FREE 100-Page Digital Electrical Safety Handbook (Value \$20)
- \$100 Coupon Toward Any Future Electricity Forum Event (Restrictions Apply)
- 1.2 Continuing Education Unit (CEU) Credits (12 Professional Development Hours)
- FREE Magazine Subscription (Value \$25.00)
- Course Materials In PDF Format

### COURSE OUTLINE

**NFPA 79 Training - Electrical Standard For Industrial Machinery.**

**DAY ONE**

## **INTRODUCTION TO NFPA 79**

- Machine history
- The need for training and developed standards
- NFPA 79-1 and Article 670
- Major changes in 2021

## **MODERN MACHINE TOOL ELECTRICAL EQUIPMENT**

- NFPA 79 compared to NFPA 70, 70B and NEC
- Evolution of machinery and NFPA 79

## **DEFINITIONS**

- NFPA official definitions
- Determination of ordinarily accepted meaning
- Referencing terms

## **GENERAL REQUIREMENTS AND OPERATING CONDITIONS**

- Electrical supply voltage
- Continuous allowed variation
- Limits for temperature, humidity, and altitude

## **DISCONNECTING MEANS**

- Machine supply circuit conductor and termination requirements
- Machine supply circuit disconnecting device requirements
- Handle requirements

## **PROTECTION FROM ELECTRICAL HAZARDS**

- Basic Protection
- Fault Protection
- PELV control panels
- Residual voltage

## **PROTECTION OF EQUIPMENT AND GROUNDING**

- Overcurrent protection of control devices and equipment
- Fuse and wire sizing
- Equipment grounding

## **CONTROL CIRCUITS AND CONTROL FUNCTIONS, OPERATOR INTERFACE AND CONTROL DEVICES**

- Control circuit and control function requirements
- Operating device arrangement and color
- Control panel arrangement

## **DAY TWO**

### **CONTROL EQUIPMENT LOCATION, MOUNTING, AND ENCLOSURES**

- Enclosure construction compliance
- Subpanel mounting
- Cabinet working space depths and prohibitions

### **CONDUCTORS, CABLES, AND FLEXIBLE CORDS**

- Sizing
- Correction factors
- Protection

### **WIRING PRACTICES**

- Color codes
- Material and sizing of rigid metal conduit

### **ELECTRIC MOTORS**

- Motor Installation
- Motor Protection

### **LIGHTING AND ACCESSORIES**

- Accessory requirements
- Lighting installation and protection

### **MARKING AND SAFETY SIGNS**

- Required Marking
- Safety Sign Placement

### **TECHNICAL DOCUMENTATION**

- Documentation Types
- Required Documentation

### **TESTING AND VERIFICATION**

- Types of testing
- Testing requirements

### **SERVO DRIVES AND MOTORS**

- Protection for Servo Drives and Motors

### **Questions and Answers**

### **COURSE SCHEDULE:**

Start: 10 a.m. Eastern Time

Finish: 4:30 p.m. Eastern Time

Contact us Today for a FREE quotation to deliver this course at your company's location.

<https://www.electricityforum.com/onsite-training-rfq>