

NFPA 70B[®] Standard for Electrical Equipment Maintenance

2 Days, 1.4 CEUs

NFPA 70B[®], titled "Standard for Electrical Equipment Maintenance," is a standard developed by the National Fire Protection Association (NFPA[®]) in the United States. It provides guidelines and best practices for the maintenance of electrical equipment to ensure its safe and reliable operation. This course is designed to cover the standard and the wide range of topics it discusses, including inspection, testing, and preventive maintenance of electrical systems and equipment. NFPA 70B[®] aims to reduce the risk of electrical failures, accidents, and fires by promoting regular maintenance and addressing potential hazards in electrical installations.

Classroom Attire

AVO Training Institute is committed to the personal safety of each participant and require long pants and ANSI rated "safety-toe" work shoes for lab activities. Lecture courses may involve a tour of a work or shop area and for this reason open-toe shoes and shorts are not considered appropriate attire for the classroom.

Learning Objectives

To receive 1.4 CEUs, participants must attend 2 days of class (14 contact hours) and attain a minimum grade of 80% on the final exam. Upon completion of this course the participants will demonstrate that they are able to:

- Outline the overall scope and purpose of the NFPA 70B
- Illustrate the benefits of an effective electrical preventative maintenance program
- Demonstrate a basic knowledge of the fundamentals of electrical equipment maintenance
- Explain the need for and use of electrical power system studies
- Utilize the NFPA 70B standard for electrical equipment maintenance and testing
- Practice correct electrical equipment maintenance in hazardous locations
- Use the NFPA 70B to maintain cord-and plug-connected equipment

SCOPE

Day 1* (7 contact hours)

- I. Introduction
- II. Application and Definitions
 - A. Chapter 1 Administration
 - B. Chapter 2 Referenced Publications
 - C. Chapter 3 Definitions
- III. Testing Methods and Maintenance Intervals
 - A. Chapter 4 General
 - B. Chapter 5 Personnel Safety
 - C. Chapter 6 Single-Line Diagrams and System Studies
 - D. Chapter 7 Fundamental Tests
 - E. Chapter 8 Field Testing and Test Methods
 - F. Chapter 9 Maintenance Intervals

IV. Specific Equipment

- A. Hazardous Location Electrical Equipment
- B. Power and Distribution Transformers
- C. Substations and Switchgear
- D. Panelboards and Switchboards
- E. Busways
- F. Circuit Breakers, Low- and Medium-Voltage
- G. Fuses
- H. Switches
- I. Power Cables and Conductors
- J. Cable Tray
- K. Grounding and Bonding

Day 2 (7 contact hours)

- L. Ground-Fault Circuit Interrupters and Ground-Fault Protection of Equipment Systems
 - M. Lighting
 - N. Wiring Devices
 - O. Uninterruptible Power Supplies (UPS)
 - P. Rotating Equipment
 - Q. Motor Control Equipment
 - R. Portable Electrical Tools and Equipment
 - S. Photovoltaic Systems
 - T. Wind Power Electric Systems and Associated Equipment
 - U. Battery Energy Storage Systems
 - V. Electric Vehicle Power Transfer Systems
 - W. Public Pools, Fountains, and Similar Installations
 - X. Protective Relays
 - Y. Stationary Standby Batteries
- V. Conclusion
- A. Review
 - B. Exam

*Class scheduling times may vary based on discussions and size of class



CLIENT EQUIPMENT LIST
NFPA 70B® Electrical Equipment Maintenance

REV: Dec 2023

COURSE NO. 434

BY: C. HELMICK

DAYS: 2

NOTE: All items indicated with an asterisk (*) indicate which equipment must be provided by client, everything else is provided by AVO

TEXT (PER 1 STUDENT)	
QUANTITY	ITEM
1	<i>NFPA 70B® ELECTRICAL EQUIPMENT MAINTENANCE COURSE NO. 434 NOV 2023</i>
1	<i>2023 NFPA 70B® RECOMMENDED PRACTICE FOR ELECTRICAL EQUIPMENT MAINTENANCE</i>

EQUIPMENT (PER STUDENT)	
QUANTITY	ITEM
1	CALCULATOR
1	PENCIL

MATERIALS NEEDED (PER CLASSROOM)	
QUANTITY	ITEM
*1	PROJECTOR OR TV WITH PROJECTION CAPABILITIES
*1	DRY ERASE BOARD WITH MARKERS AND ERASERS
*10	STUDENT TABLES
*10	STUDENT CHAIRS

FOR VIRTUAL CLASSES:
CONTENT MATERIAL WILL BE PROVIDED IN DIGITAL FORMAT