

NFPA 110® - Emergency & Standby Power Systems-2022



A DIVISION OF ECPI UNIVERSITY

This course is based on the requirements of NFPA 110, Standard for Emergency and Standby Power Systems. The course addresses the installation, operation and maintenance requirements of standby generators, transfer switches, batteries and UPS Systems. It starts with an introduction to the various applicable standards and electrical generation principles. Generator set operation including the engine, the generator and controls are explained. Typical troubleshooting problems and maintenance is covered. The course also covers practical information on diesel engines, their major components and diesel fuel issues.

Maintenance requirements are discussed in detail referencing such documents as NFPA 70B, Recommended Practice for Electrical Equipment Maintenance; the IEEE 3007 Series Power Systems Maintenance, Operations, and Safety and, the NETA Maintenance Test Specifications. The testing requirements of NFPA 110 are addressed with special emphasis on load bank testing methods and practical applications.

WHAT THIS COURSE COVERS

- Standards and Requirements
- Generators
- Electrical Theory
- Generator Loading and Control
- Natural Gas and Diesel Engines
- Troubleshooting and Maintenance
- Installation Requirements
- Stationary Systems
- Operational Systems
- Safety Precautions

WHO SHOULD TAKE THIS

- Facilities Maintenance Personnel
- Electricians
- Generator Technicians
- Plant Operators
- Engineering Staff
- Maintenance Supervision

COURSE OUTCOMES

- Understanding the Performance Requirements of NFPA 110.
- Understand and be able to Maintain Equipment to NFPA 110 Requirements for:
 - Generators and their Prime Movers and Auxiliary Systems
 - Transfer Systems and Equipment
 - Uninterruptible Power Supply (UPS) Systems
 - Stationary Battery Systems

COURSE AGENDA

- Standards and Requirements Overview
- Generator Overview, Pressure and Directional Control Valves
- Electrical Theory for Generating Electrical Power
- Generator Control
- Generator Loading and Control
- Natural Gas and Diesel Engines as Prime Movers
- Troubleshooting and Maintenance of Standby Generators
- Basic Generator Installation Requirements
- Transfer Switch Equipment
- Stationary Battery Systems
- Uninterruptible Power Supply (Ups) System
- Operational Systems and Equipment Testing Requirements



Lecture



Hands-on



ONSITE: 2-days (16 hours)



LIVE ONLINE: 2-Days (16 hours)



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