

# Capacitor Theory and Applications Training

## Info Sheet

### Course Information

**Course Length** – 4 hours

**Course Description** - Capacitors provide unique hazards that require additional knowledge, skills, work practices, and personal protective equipment to work on or around them. Persons responsible for maintaining, working with or on, or working in the vicinity of capacitors need to be aware of these hazards and the appropriate mitigating methods. This course provides fundamental capacitor knowledge including terminology, construction, charging and discharging characteristics, applications, hazards, maintenance practices and the associated safe work practices.

**Who Should Attend** - This course is appropriate for anybody that is involved with capacitor installation, replacement, maintenance, procurement, as well as capacitor-involved work oversight, risk assessment, or work planning. This would include apprentices, electricians, supervision, management, planners, and engineers.

**Accreditation** - This course is certified for Continuing Education Credits (CEUs) in Washington, Oregon, Idaho, and Colorado, but can be certified elsewhere upon request.

### Terminal Objective

Upon completion of training, the student shall be able to understand the construction, operation, applications, unique hazards, and safe work practices when maintaining capacitors.

### Topics Covered:

- Capacitor fundamentals
- Capacitor applications
- Capacitor shock and arc flash hazards
- PPE requirements for various capacitor maintenance tasks
- Capacitor safety requirements in accordance with NFPA 70E

### References

1. NFPA-70E Standard for Electrical Safety in the Workplace, 2021 edition
2. NFPA-70B Recommended Practice for Electrical Equipment Maintenance 2019 edition
3. NFPA-70 National Electrical Code, 2020 edition
4. 29 CFR 1910 OSHA General Industry
5. 29 CFR 1926 OSHA Construction