High voltage Medium voltage certified program

Course Objective:

1. Understand the principles of high voltage (HV) and medium voltage (MV) electrical systems.
2. Identify and interpret the different voltage levels and classifications within the Plant.
3. Demonstrate proficiency in the safe operation of HV and MV equipment.
4. Apply proper isolation techniques for maintenance and repair activities.
5. Comply with relevant safety regulations, standards, and best practices.
6. Develop the necessary skills for troubleshooting and fault finding in HVMV systems.
7. Gain practical experience through hands-on exercises and case studies.

WHO Should attend?

- The course is intended for electrical engineering, instrumentation and control engineers, project engineers, maintenance engineers, power system protection and control engineers.

Course outline

- **1. Introduction to HVMV Systems**
  A. Overview of high voltage and medium voltage systems
  B. Voltage levels and classifications in the Plant
  C. Safety considerations and hazards associated with HVMV work
  D. Regulatory standards and compliance requirements

- **2. HV and MV Equipment Operation**
  A. Understanding the operation of substations and GEN systems
  B. Control and monitoring of HV and MV equipment
  C. Safety precautions during operation
  D. Emergency response procedures

- **3. Isolation and De-Energization Procedures**
  A. Isolation techniques for HV and MV equipment
  B. Lockout/Tagout procedures for de-energization
  C. Permit-to-work systems and job planning
  D. Verification of isolation effectiveness

Course outline

- **4. Maintenance and Repair of HVMV Systems**
  A. Routine maintenance procedures for HV and MV equipment
  B. Troubleshooting and fault-finding techniques
  C. Isolation considerations for equipment repair and replacement
  D. Documentation and record-keeping for maintenance activities

- **5. Safety Practices and Personal Protective Equipment (PPE)**
  A. Use of PPE specific to HVMV operations
  B. Safety protocols and safe work practices
  C. Electrical grounding and bonding
  D. Emergency response and rescue procedures

- **6. Case Studies and Practical Exercises**
  A. Analysis of real-life scenarios and incidents
  B. Hands-on exercises for isolation and equipment operation
  C. Simulation exercises for troubleshooting and fault finding
  D. Review and discussion of best practices and lessons learned

Course outline

- **7. Assessment and Certification**
  A. Knowledge assessment through quizzes or exams
  B. Practical assessment of isolation and operation procedures
  C. Certification or completion of the HVMV Operator Program