

**Course Title:**            **Introduction to SCADA Systems**

**Contact Hours:**        6.0

**CEU Value:**             0.6

**Course Description:**

This course will provide participants with an in-depth understanding of the present day SCADA (Supervisory Control And Data Acquisition) systems. Participants will learn about the various components of the SCADA system and what purpose each serves in the system.

**Areas of study include:**

- Introduction to SCADA Systems
  - Purchase and function of the SCADA system
  - Organization and hierarchy of the SCADA system
  - Levels of functionality
- Field Devices, PLCs, and Data Representation
  - Types of signals used – discreet and analog
  - Representation of field data in PLCs
  - Conversion of field data into PLC formats
- PLCs and SCADA Systems
  - Characteristics of the PLC/RTU
  - Functions performed by the controller
  - Illustration of the roles of the PLC and the HMI workstation
- Human Machine Interface
  - Purpose and function of the HMI
  - Methods of conveying information through the HMI
  - Retrieving and collecting data operations
  - Current and historical database information
  - Methods of effecting control of field controllers through the HMI
  - Display types available to the operator through the HMI
- Administrative Operations
  - Purpose and function of the administrative level
  - Reports and conclusions derived from SCADA information
  - Maintenance and analysis reporting using field information