UR

PLATFORM

TRNG-URPL

Interactive Learning CD Available
See Page 56

What Will I Learn From This Course?

This course provides a systematic approach to understanding how to integrate the control and common platform-wide Protection elements within the Universal Relay. The students will review the UR's specifications, hardware selection, installation and wiring procedures. Practical Hands-On Lab assignments will be used to test protection and control elements for a feeder application. This course is applicable to the following UR Relays: B30, B90, C30, C60, D30, D60, F35, F60, G30, G60, L60, L90, M60, T35 and T60.

Who Should Attend?

This course is designed for engineering staff responsible for substation designs that require a detailed understanding of the Universal Relay's protection and control capabilities in addition to the procedures necessary to properly configure and apply the Universal Relay.

Tuition

$ 1,800 US*

Prerequisites

- An understanding of protective relaying and associated electrical control circuits
- The UR Applications I Interactive Learning CD would be an asset
- Fundamentals of Modern Protective Relaying course an asset

Course Duration

3 Days

CEU Credits Offered

2.1 Credits

Agenda

This class includes fully equipped Hands-On Lab exercises.

Day 1

- System overview
- Universal Relay Hardware overview
  - Block diagram
  - UR Modular design concept
  - UR Family members
  - Hardware configuration
  - Specifications
- Mechanical installation and wiring
- Trip and Close circuit voltage and current monitoring
- Options and ordering
- EnerVista UR Setup Software
  - Interface, device and site creation
- Settings
  - Product Setup
    - Security and displays
    - Overview of communications
    - Real Time Clock and IRIGB setup
    - Oscillography/Data Logger setup
    - User Programmable LED Lab
  - System Setup
    - AC Inputs (Current & Voltage)
    - Power System
    - Signal Sources
  - Inputs/Outputs
    - Contact Input
    - Contact Outputs
    - Virtual Inputs
- Commands
  - Virtual Inputs
  - Clear Records
  - Set Date and Time
- Actual Values
  - Front Panel
  - Status
  - Metering
- Hands-On group Lab

Day 2

- Introduction to FlexLogic
  - Gates: AND, NAND, OR, NOR, NOT, XOR, LATCH
  - Positive/Negative edge triggered One-Shot
  - Dual edge triggered One-Shot
- Breaker Hands-On Labs
- Setting Groups
- Digital Elements
- Timers
- Counters
- FlexElements

Day 3

- Oscillography and Event Log Lab
- Saving/loading settings files
- Protection and Control
  - Grouped Elements
  - Sources
- Hands-On Lab testing of the following platform Protection elements:
  - Instantaneous Overcurrent
  - Timed Overcurrent
  - Under/Overfrequency
  - Voltage Restraint
  - Under/Overvoltage
  - Autoreclosing

25% off the price of the training CD when purchased with the in-class course

** Tuition shown is for scheduled courses. Contact us for custom and on-site pricing.*