



Training course Profile: HMI&SCADA I

Course Title:	Human Machine Interfaces & SCADA
Nominal Duration:	24 Hours
Intended Audience:	Intended for engineers and technicians involved in the support and maintenance of Industrial Automation systems incorporating Citect.
Pre-requisites:	A base knowledge of PLC systems and communications.
Objectives:	To prepare learners for maintaining SCADA HMI systems at their workplace. This unit uses Citect SCADA to present a thorough practical exposure to the SCADA HMI environment. The unit will be undertaken using workplace specific PLC & communications architectures for best learning outcomes.

Day-1

Industrial Automation Overview

- PLC systems
- Local & remote I/O and tagging concepts
- Industrial communication systems
- SCADA visualization systems
- Your site specific context

SCADA HMI system Overview

- What is CitectSCADA
- Software components
- Components that make up the Development system
- Components that make up the Runtime system
- Complete system overview
- Licensing

CitectSCADA Project context

- The Importance of the Include Project
- User defined project
- Including projects
- Navigating the default project

Citect's Project Editor

- Defining a new project
- Defining the I/O device
- Defining variable tags
- Setting up basic communications with an internal I/O device
- Setting up communications with an external I/O device

Citect's Graphics Builder

- Selecting and using predefined page templates
- Assigning page properties
- Drawing graphics objects & creating user libraries
- Assigning object properties
- Animation numbers & animating objects
- Using symbol libraries
- Importing graphic objects

Labwork

- Building a simple project in design mode
 - System configuration
 - Communications setup
 - Creating basic graphic page
 - Creating simple tags to PLC system
 - Creating basic Navigation
- Testing the project in runtime mode
 - Navigating graphics
 - Testing communications
 - Basic Troubleshooting awareness

Days 2 & 3

Commands and Controls

- Touch Commands
- Keyboard Commands
- Getting Operator input
- Creating basic Genies
- Understanding Super Genies

Alarms

- Alarm types
- Alarm categories
- Alarm priorities
- Configuring & displaying alarms pages

Other CitectSCADA Features

- Creating and applying Devices
- Creating and using Events
- Creating and using Trends
- Creating and using Accumulators

CitectSCADA Security

- Creating Users
- Setting user privilege levels
- Setting user passwords
- Setting page areas
- Setting security on pages, controls and objects

Advanced Navigation

- Configuring user menus
- Creating custom page navigation
- Investigating navigation parameters
- Altering Citect.ini parameters

Essential Cicode

- Cicode overview
- Basic Cicode creation
- Troubleshooting cicode

Labwork

- Modifying a project in design mode
 - Fine tuning System configuration & communications
 - Creating multiple graphic pages
 - Creating Trend & Alarm tags to PLC system
 - Building an appropriate Navigation system
 - Using symbol sets & Genies
 - Implementing security

- Testing the project in runtime mode
 - Troubleshooting back to Live PLC