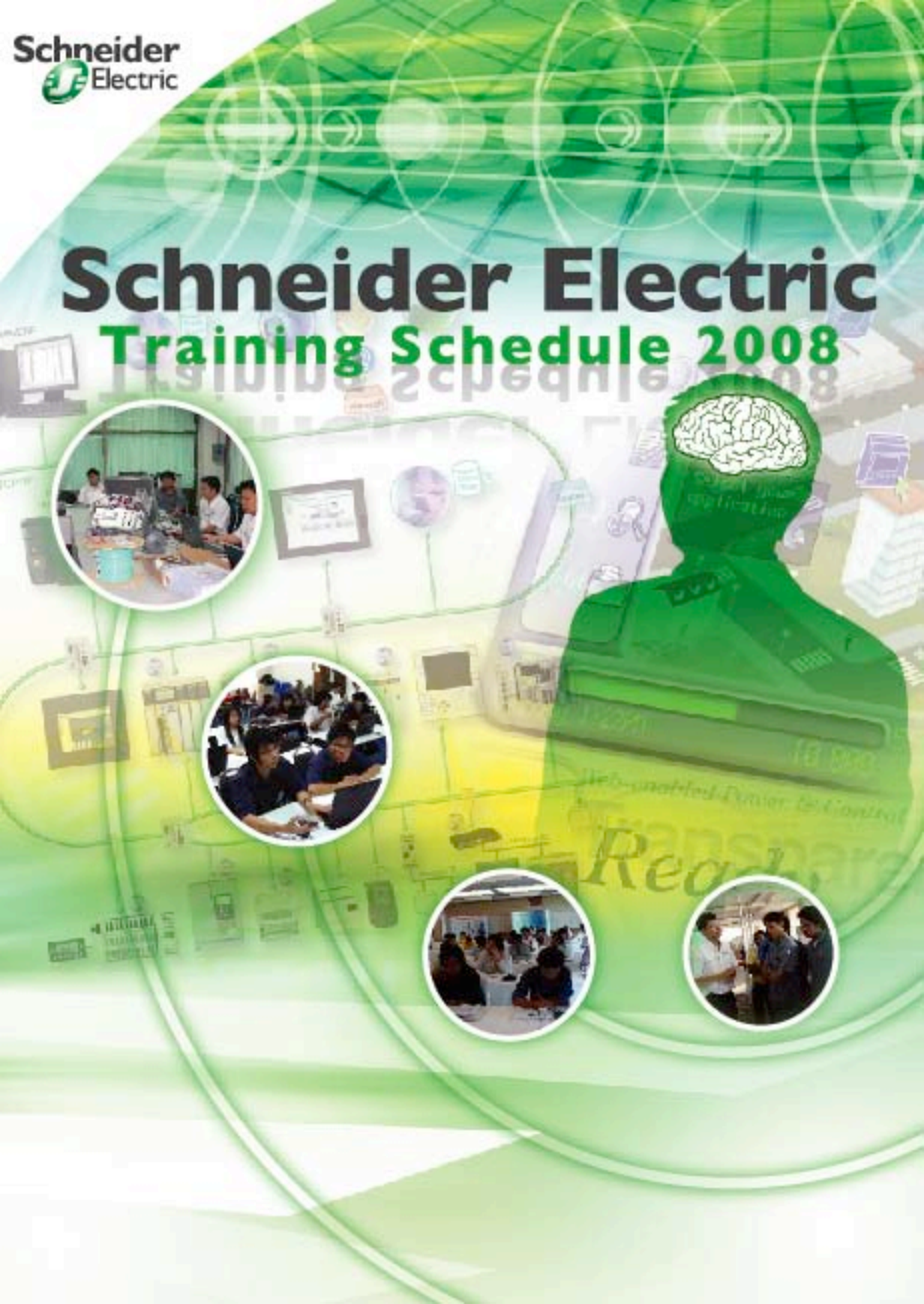


# Schneider Electric

## Training Schedule 2008



# PL7 Pro Programming

Course Title : PL7 Pro Programming

Course Code : EXS01

Price : 18,000 Baht

Duration : 3 days

## Course Description

Existing Premium PLC Programming using PL7 Pro

- Application Management
- Configuration
- Application Structure
- Introduction to Programming
- Programming and Debugging
- Ladder Diagram
  - Basic Ladder Diagram
  - Timer using
  - Counter using
  - Customer hand on exercise
  - Application testing
- Function Block
  - Basic Function Block
  - Timer using
  - Counter using
  - Customer hand on exercise
- GRAFCET-SFC
  - Customer hand on exercise
- DFB - Derived Function Block
- Communications
- Addressing Principles



# Concept Programming

Course Title : Concept Programming

Course Code : EXS02

Price : 18,000 Baht

Duration : 3 days

## Course Description

Existing Quantum PLC Programming using Concept

- Introduction to Concept and IEC Programming
- Concept Security and Program Preferences
- Concept and the Executive
- Project Structure and Theory of Operation
- PLC Configuration and I/O Mapping
- Variables setting
  - Structured Variables and Derived Data Types
- Programming
  - Introduction to Function Block Diagram Programming
  - Introduction to IEC Derived Function Blocks
  - Introduction to IEC Macros
  - Introduction to IEC Ladder Diagram Programming
  - Introduction to IEC Structured Text Programming
  - Introduction to IEC Instruction List
  - Introduction to IEC Sequential Function Chart
- Program testing with simulation
- Program testing with Quantum PLC
- Program monitoring
  - Locating and Monitoring Objects in the Program
- Concept Utility Functions



# Zelio Logic Programming

Course Title : Zelio Logic Programming

Course Code : BAS001

Price : FOC

Duration : 1 days

## Course Description

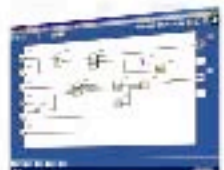
Fundamental automation programming by Zelio Logic

- Create new project
  - Hardware configuration
  - Option module
- Programming
  - Ladder diagram
    - Basic control program
    - Timer function
    - Counter function
- Function block
  - Block diagram
    - Basic control program
    - Timer function
    - Counter function
  - Function Chart
  - Logic diagram
  - Macro

- Program testing in simulation mode
- Program download & Test with Zelio Logic
- Supervisory screen using
- Time schedule using
- Communication option module
- HMI panel communication & control



LADDER



FBD

(Functional Block Diagram)



# Twido PLC Basic Programming

Course Title : Twido PLC Basic Programming

Course Code : BAS002

Price : 12,000 Baht

Duration : 2 days

## Course Description

Basic automation programming Twido PLC

- Create new project
  - Hardware configuration
- Programming
  - Ladder diagram
    - Basic control program
    - Timer function
    - Counter function
  - Instruction List
    - Basic control program
    - Timer function

- Program testing in simulation mode
- Program download & Test with Twido PLC
- Animation table to monitor data
- Modbus communication option module setting
- HMI panel communication & control



# Modbus Communication Networking

Course Title : Modbus Communication Networking

Course Code : EXS003

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce simple network solution using Twido, HMI, ATV & Power meter

- Twido PLC
  - Create new project
  - Hardware configuration
  - Modbus communication option module setting
- HMI panel communication & control
  - Create new project
  - Communication configuration
  - Basic control object
- AC Drive communication & control
  - Basic parameter setting
  - Communication setting
- Power meter communication & data monitor
  - Communication setting
- Automation Application
  - Control AC Drive from HMI screen
  - Monitor Power parameter from HMI



# Basic Unity Programming

Course Title : Basic Unity Programming

Course Code : AUT001

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce customer to know basic performance of Unity PLC

- Automation theory ( PLC & SCADA )
  - Automation theory Part 1
    - Introduction to PLC
    - PLC history
    - PLC system concept
  - Automation theory Part 2
    - Automation application
    - PLC network & communication
    - What is SCADA system ?
- PLC hand-on programming
  - New project settings
  - IEC Language : LD (Ladder Diagram)
    - Application testing
    - Derive Function Block ( Customize Function Block )
    - Diagnostic & Debug functions
    - Basic Operator Screens ( Customize HMI Screen )
  - IEC Language : FBD
  - IEC Language : SFC overview
  - IEC Language : IL overview
  - IEC Language : ST overview



# Advance Unity Programming & HMI

Course Title : Advance Unity Programming & HMI

Course Code : AUT002

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce Unity PLC work with Magelis HMI panel in basic level

- Advance PLC Programming
  - Mathematic Function
  - Compare Function
- Using Analog Input & Output
  - Hardware configuration
  - Variable assignment
  - Analog function programming
  - PID Programming & Testing
- Advance Operator Screen using
  - Create multi screen
  - Using Numeric data display & entry
  - Using bar graph & Trending
- PLC communication setup
  - Setup Ethernet network
- HMI new project create
  - Communication setup
  - Create variable tag
- Basic using HMI Panel
  - Using Digital Push button & Pilot lamp
  - Using Numeric data display & entry



# Vijeo Designer (HMI) Programming

Course Title : Vijeo Designer (HMI) Programming

Course Code : AUT003

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce HMI panel application , Web technology & Networking

- HMI basic configuration
  - HMI new project create
  - Communication setup
  - Create variable tag
- Basic using HMI Panel
  - Using Digital Push button & Pilot lamp
  - Using Numeric data display & entry
- HMI Panel advance programming
  - Create multi screen
  - Using bar graph & Trending
- HMI communication via serial port
- HMI communication via Ethernet
- Multi PLC control by single HMI
- Multi HMI control single & multi PLC
- Using Web gate to control & monitor system via Internet Explorer
- Control system by using Java Script



# Variable Speed Drive for Automation Application

Course Title : Variable Speed Drive for Automation Application

Course Code : AUT004

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce AC drive feature from theory level to application level

- AC motor theory
  - How AC motor work
  - Motor starting method
  - The way to control motor speed
- AC drive theory
  - How AC drive control motor speed
  - Why we must use Variable Speed Control technology
- AC drive basic configuration
  - Basic parameter require to make first run
- AC drive advance configuration & parameter
  - What have to be done to make AC motor run efficiently
- AC drive & PLC communication
  - AC drive & PLC modbus communication setting
  - Control AC drive by PLC
- AC drive & PLC & HMI communication setting
  - AC drive , PLC & HMI panel modbus communication setting
  - Control AC drive directly from HMI panel
  - Control AC drive by HMI via PLC program



# Ethernet Communication Networking

Course Title : Ethernet Communication Networking

Course Code : AUT005

Price : 18,000 Baht

Duration : 3 days

## Course Description

Introduce PLC ,HMI ,AC Drive on Ethernet solution & Web technology

- Ethernet communication configuration
  - PLC Ethernet configuration
  - HMI Ethernet configuration
  - Ethernet Gateway configuration
- Programming via Ethernet network
  - PLC programming
  - HMI programming
  - AC Drive parameter loading
- HMI , PLC , AC Drive control on Ethernet
  - Control AC drive directly from HMI panel
  - Control AC drive by HMI via PLC program
  - HMI control via web page by Internet Explorer
  - PLC control via HMI panel by Internet Explorer
  - AC Drive control via HMI panel by Internet Explorer

Web-based Power to Control

Transparent Ready™



# Communication Networking with Schneider Electric Controller

Course Title : Communication networking with Schneider Electric Controller

Course Code : AUT006

Price : 12,000 Baht

Duration : 2 days

## Course Description

Introduce communication protocol Modbus, CANopen, Ethernet

- Communication network overview
  - Overview network characteristic
  - Choose network type to fit your requirement
- Modbus communication network hand on
  - M340 PLC
  - Twido PLC
  - Zelio Logic
  - AC Drive
  - Power meter



- CANopen communication network hand on
  - M340 PLC
  - AC Drive
- Ethernet modbus communication network hand on
  - M340 PLC
  - Twido PLC
  - Zelio Logic
  - Ethernet Gateway
    - AC Drive
    - Power meter

# Vijeo Citect SCADA Programming

Course Title : Vijeo Citect SCADA Programming

Course Code : AUT007

Price : 18,000 Baht

Duration : 3 days

## Course Description

Introduce SCADA system using Vijeo Citect with Unity PLC

- Introducing
  - Understanding the Vijeo Citect Environment
  - Configuring Vijeo Citect Projects
- Securing SCADA Projects
- Tagging Process Variables
- Defining Common Object Properties
  - Defining Commands and Controls
- Configuring and Processing Alarms
  - Configuring Events
- Using Find and Replace in Your Projects
- Using Accumulators
- Logging and Trending Data
- Using Objects
- Understanding Statistical Process Control



- Defining and Drawing Graphics Pages
- Reporting Information
- Using Security
- Using Labels
- Using Devices
- Exchanging Data with Other Applications
- Using Genies and Super Genies
- Working with Multi-Language Projects
- Using the Computer Setup Wizard
- Communicating with I/O Devices
  - Using Memory and Disk I/O Devices
- Using the Communications Express Wizard
- Building Your Vijeo Citect Project
- Using Vijeo Citect on a Network



# Comprehensive PowerLogic Systems

**Course Title** : Comprehensive PowerLogic Systems

**Course Code** : PL001

**Price** : 12,000 Baht

**Duration** : 2 days

## Course Description

Learn to manage the PowerLogic system best suited for your facility by developing an understanding of PowerLogic system software and hardware

During this course you will:

- Use the latest versions of PowerLogic System Manager Software to set up your PowerLogic system and gather data
- Retrieve real-time information in the forms of tables, meters and bar charts
- Produce graphical or tabular historical reports using Information Manager
- Configure the Circuit Monitor and Power Meter to record data and capture events
- Gain useful information on how power disturbances occur, and how to use your PowerLogic system to manage your utility usage
- Modify System Manager Software to automatically perform resets, print reports, etc.



# PowerLogic®

# SMS Administrator Certification

**Course Title** : SMS Administrator Certification

**Course Code** : AUT005

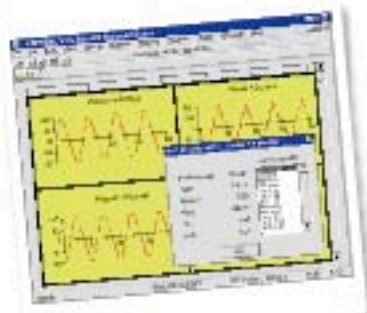
**Price** : 18,000 Baht

**Duration** : 3 days

## Course Description

Learn to install, set up, and use all features of PowerLogic System Manager software on the Microsoft Windows 2000 Server or Window 2003 Server operating system.

- Set up and administer Microsoft Windows 2000 or 2003 Server systems for SMS software users
- Configure Windows user accounts and set up securities and permissions
- Install and configure SMS software including web client access
- Archive and back up databases
- Trigger external tasks from SMS software
- Troubleshoot communications and system problems
- Become a certified SMS System Administrator by scoring at least 80% on the certification test



# Self-Study Course

**Course Title** : PowrLogic Fundamentals

**Course Code** : PL003

**Price** : 6,000 Baht

## Course Description

Learn the basics about electrical power and power distribution systems. With no previous experience using a PowerLogic system, learn the differences in our products and how to apply them to electrical distribution systems.

- Understand the meaning of many common electrical terms
- Understand hardware features of the PowerLogic metering family and how to use them with the software
- Display tables, bar charts, meters, and waveform plots
- View/acknowledge alarms
- View event logs
- Display historical data in different formats



# LV Circuit Breaker Product and Technology

**Course Title** : LV Circuit Breaker Product and Technology

**Course Code** : LV001

**Price** : FOC

**Duration** : 0.5 day

## Course Description

This course will provide basic knowledge to the people to be able to present our LV circuit breaker range and to be more confident in front of customer. Beside the range presentation, they will also be able to explain customer all of our product advantage over other competitors.

Upon completion of the course, participants will be able to:

- Know the product range of Merlin Gerin and Sqaure D circuit breaker
- Circuit breaker terminology (lcu, lcs, lcw,...)
- Fault breaking Technique of LV circuit breaker (Current limiting in MCCB)
- Discrimination and cascading
- Over view of Ecodial software. The software that help you designing the LV electrical system



# LV Surge Arrester

**Course Title** : LV Surge Arrester

**Course Code** : LV002

**Price** : FOC

**Duration** : 0.5 day

## Course Description

This course aims at providing the attendees the knowledge about surge arrester technology

Upon completion of the course, participants will be able to:

- Lightning phenomenon and its effect
- IEC Standard related to lightning protection product and what IEC recommended
- How to match the best solution for your applications



# LV Capacitors and Power Factor (PF) Correction

Course Title : LV capacitors and Power Factor (PF) Correction

Course Code : LV003

Price : FOC

Duration : 0.5 day

## Course Description

This course aims at providing attendees the knowledge about Power Factor correction technique, what should be the most suitable capacitor type for systems with harmonic pollution. Attendees will be able to how to select all the components needed and also to determine the suitable design of capacitor bank.

Upon completion of the course, participants will be able to:

- know the theory of PF correction
- Different type of capacitor (Standard type, H type, detune type)
- How to calculate the size of capacitor bank needed
- Components need inside capacitor bank
- Capacitor panel design







# Schneider Electric Training Schedule 2008

สนใจติดต่อ : แผนกการตลาดและพัฒนาธุรกิจ

447 ชั้น 13-15 อาคารรุ่งโรจน์รพท. ถนนรัชดาภิเษก แขวงจตุจักร กทม. 10310  
โทร. +66 (0) 2617-5500 แฟกซ์ +66 (0) 2617-5501

Customer Care Center : +66 (0) 2617-5555

Toll Free 1800 247 365

E-mail : [helpdesk@th.schneider-electric.com](mailto:helpdesk@th.schneider-electric.com),

<http://www.schneider-electric.co.th>