

Incorporated with HRDF Registered **AS Automation Systems Training Centre PLT.**

## **Siemens V5.5 & WinCC Flex – Basic+ Intermediate + HMI Scada (3 days) PLC Programming Training Course & Pricing Outline.**

### **1) Training Course Objectives:**

This training program for Siemens Simatic Manager V5.5 and WinCC Flexible. Basic & Intermediate PLC Programming course provides a deep understanding of Siemens S7-300/400 PLCs programming capabilities. Control strategies and programming will be reviewed. Data Movement, Floating Point Math, Shift, Compare, Distribute, Collection, Transfer, and other instructions will be covered.

### **2) Training Course Content:**

#### **PROGRAMMABLE LOGIC CONTROLLERS (PLC). *Siemens S7-300/400***

##### **Course Contents**

#### **Day1**

##### **LESSON 1 – Introduction and Overview**

- Course Objectives.
- Course Prerequisites.
- Computer Numbering Systems.

##### **LESSON 2 – Number Systems**

- Binary Numbers.
- Hexadecimal Numbers.
- Octal Numbers.
- Binary Coded Decimal.
- Integer (16/32 Bit).
- Decimal (16/32 Bit).

##### **LESSON 3 – Hardware Review**

- Hardware Components. Inputs and Addressing.
- Inputs and Addressing.
- Outputs and Addressing.
- Power Supplies.
- Memory Types.

##### **LESSON 4 – Programming Equipment**

- Programming Software Simatic Manager Overview
- File Format
- Hardware Connection.
- Communication (MPI; Profibus; Profinet).

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## **LESSON 5 – Basic Instructions**

- Symbols ..
- Ladder Logic.
- STL (Statement List).
- FBD

## **LESSON 6– Develop and Edit Programs**

- Launching Simatic Manager.
- Creating a New Project.
- Editing the Ladder.
- Exercise – *Contacts and Coils*. Program Transfer.
- Online Editing.
- Monitor the Program Operation.
- Forcing Bits and Changing Registers.

### **Day2**

## **LESSON 7 – Programming Functions with Projects**

- Timers, Counters Math functions, MOV, other Functions.
- Program Examples and programming functions
- Best Practices in Programming (GPP)
- Indirect Addressing.
- Monitor the Program Operation. Forcing Bits and Changing Registers.
- Troubleshooting Methodology. Additional Timer Commands.
- Exercise – *Timers, Counters*,
- Exercise – *Conveyors*.

### **Day3**

## **LESSON 8 – Integration to HMI & SCADA**

- Introduction to WinCC Flexible and Runtime. Various Functions display in HMI.
- Mixer Tank Project creation in PLC. Downloading to PLC and Debugging.
- Creating Screens to Control Mixer Tank and Monitor. Establishing comm To PLC and HMI.
- Debugging and Monitoring.
- Creating WinCC Flexible Runtime PC based.

## **3) Training Course Aims:**

**Upon completion of this course, the students will be able to:**

- Construct, test and run PLC programs using instructions.
- Utilize advanced trouble shooting tools online.
- Download, Upload, Save and copy programs.
- Formulate a control strategy for creating PLC programs.
- Fully document a PLC program.
- Use multiple PLCs in a project.



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- Utilize advanced troubleshooting tools.

#### **4) Durations:**

Duration is 3 Days

#### **5) Recommended Audience:**

Electricians, Technicians, Engineers, Maintenance Personnel, Control Engineers, Individuals who need to be able to understand the advanced capabilities of Siemens S7-300/400 PLCs.

#### **6) Prerequisites:**

- Basic computer skills are required.
- Basic Electricity.

#### **7) Equipment:**

- PLC S7-300, Simatic Touch Panel
- Training Laptop with Simatic Manager V5.5 & WinCC Flexible Installed for 2 Person Share.

#### **8) Trainer's Introduction:**

**Mr. Sunderasen (TSoon)** has more than 25 years of industry experience in PLC and HMI programming as a Project Engineer in Singapore. Trained in Australia as an Electrical and Instrument Engineer, he then got his formal PLC and Robotics Training from Ngee Ann Poly Singapore. Mr.TSoon has worked in an OEM company for machine fabrication as a programmer and has commissioned machines in Germany, Thailand, India, China, Philippines and Malaysia. Throughout his years of industry experience, he has undergone specialized training and massive exposure towards different PLC systems, i.e. Siemens (Siemens Singapore), Allen Bradley (Rockwell Singapore), Omron (Precision Singapore), Adept Robot (Adept Singapore), and GE Fanuc (TDS Singapore). He has also vast experience in Building Management System, integrating HVAC, Security, Fire Fighting System, Electrical and Utilities into one centralized monitoring station.

#### **9) Pricing:**

Basic & Intermediate, 3 Days for Per Pax: **RM 4500.**

**(\*Need 4 Participant to be claimable under HRDF for company sponsor).**

**(Negotiable through phone call with us).**

Registration can be done by direct call through **Whatsapp: +60163329691 (MR.TSoon)** and date conformation will be done through Email.

\*Price may vary according to Market Condition.



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