

Allen Bradley RSLogix5000 +HMI- Basic + Intermediate+ Advance (5 days) PLC Programming Training Course & Pricing Outline.

• **Training Course Objectives:**

The course is for technicians and engineers who are required to make changes to existing Logix 5000 programs. Programming theory is kept to a minimum; the course is hands on with great emphasis on the practical aspects of Programmable Logic Controller applications. The course is based around Compact/ControlLogix range of PLCs and RSLogix 5000 software; however, it is suitable as a general introduction to PLCs. The course is run using RSLogix 5000 software and may be customised to include functions relevant to your control applications.

Day 4 and 5 will be Advance Function AIAO programming with HMI.

• **Training Course Content:**

PROGRAMMABLE LOGIC CONTROLLERS (PLC). ***Allen Bradley ControlLogix/CompactLogix+HMI***

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.
- Outputs and Addressing.
- Power Supplies.
- Memory Types.



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LESSON 4 – Programming Equipment

- Programming Software.
- RSLogix 5000 overview.
- File Format.
- Hardware Connection.
- Communication (USB;Serial; Ethernet)

LESSON 5 – Basic Instructions

- Symbols ...
- Ladder Logic.
- Common Instructions.
- Function Blocks

LESSON 6– Develop and Edit Programs

- Launching RSLogix5000.
- Creating a New Project.
- RSLogix 5000 programming Software

- Tag Based addressing
- Controller Tags
- Program Tags
- Base Tags
- Alias Tags
- Data Types
- Tags Scope
- Tasks
- Main Routine
- Sub Routine
- System I/O Configuration
- Communicating with the PLC
- Downloading and Uploading PLC programs
- Monitoring PLC programs
- Application Functions
- Commenting of programs
- Monitoring techniques
- Fault finding and searching
- Testing and forcing techniques

- 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 etc. Program Examples and programming functions.
- Indirect Addressing.
- Best Practices in Programming (GPP)
- 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 HMI Vsoft and Tellus. Various Functions display in HMI.
- Various Functions display in HMI.
- Creating Tags for Import and Export for HMI to PLC
- Mixer Tank Project creation in PLC. Downloading to PLC and Debugging.
- Creating Screens to Control Mixer Tank and Monitor.
- Establishing communication To PLC and HMI.
- Debugging and Monitoring.
- Creating V-Server and Tellus PC based.

Day4

LESSON 9 – Advance programming using Function Blocks

- Introduction to Analog input and Output.
- Programming Analog Input and Analog Output.
- Scaling Analog Input.
- Scaling Analog Output.
- Downloading and Testing with Signal Injector.

Day5

- Integration of AIAO to Mixer Tank Project creation in PLC Downloading to PLC and Debugging.
- Creating Screens to Control Mixer Tank and Monitor. Establishing communication To PLC and HMI.
- Debugging and Monitoring.
- Creating V-Server and Tellus PC based.
- Project Methods (FDS;FAT;SAT;Project Commissioning).

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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.
- Utilize advanced troubleshooting tools.

4) Durations:

Duration is 5 Days

5) Recommended Audience:

Electricians, Technicians, Engineers, Maintenance Personnel, Control Engineers, Individuals who need to be able to understand the advanced capabilities of Allen Bradley PLCs.

6) Prerequisites:

- Basic computer skills are required.
- Basic Electricity.
- Basic Knowledge on Electrical /Electronics.

7) Equipment:

- PLC Allen Bradley ControlLogix/CompactLogix Model, Touch Panel Hakko, Fluke Process Meter.
- Training Laptop with RSLogix5000 software & HMI Software 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.

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9) Pricing:

- Basic & Intermediate & Advance, 5 Days for Per Pax: **RM 4900**.
- **1 Pax: RM4900 (Per Pax), 4 Pax: RM4000 (Per Pax), 8 Pax: RM3800 (Per Pax).**
- **(*Need 4 Participant to be claimable under HRDF for company sponsor, depends on company HR). Depending on company.**
- **Negotiable through phone call 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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AS AUTOMATION SERVICES
NO 9-01, Jalan Pertama 5,
Pusat Perdagangan Danga Utama,
81300 Johor Bahru.
Tel No: +075596470 Fax No: +075500351

