



PLC Essentials for Smart Factory

Overview:

Smart Factory takes current manufacturing processes to Industry 4.0 standards; highly agile, efficient and automated production lines capable of data generation and collation. Combined with analytics and machine learning, the factory of the future will have predictive and prescriptive capabilities, contributing to higher productivity & boundless innovation.

The Malaysian Smart Factory (MSF) 4.0 program @ SHRDC offers smart factory competency training through hands-on and online/remote learning approaches, ideal for relevant skillset and talent development towards an Industry 4.0 ready workforce in Malaysia.

Target audience:

Engineers, Technicians, Technical Managers, Production Managers, Academia with relevant background.

Upon successful completion of training, participants will be able to:

Intermediate:

- Define FB, FC and DB
- Solve mathematical operation using PLC program
- Connect analog input to PLC
- Construct PLC program for analog signals
- Run test to the constructed program to check compliance with the required operation

Advanced:

- Create a sequence flowchart using a Grafcet software
- Construct sequential control operation using PLC
- Create scenario using Factory IO software
- Integrate Factory IO scenario with PLC program
- Run test to the constructed program to check compliance with the required operation

Cost per program:

RM5,300 per participant

HRDF INDCERT GRANT* AVAILABLE FOR

- Contributors: 50% of total course fee/participant
- SMEs contributors: 100% total course fee/participant
- Max 5 participants per company

*<https://www.hrdf.com.my/industry-certification-incert/>

Cost fee is inclusive of 6% SST



Course Outline

INTERMEDIATE:

Programming with Function Blocks

- Function block (FB)
- Function (FC)
- Data block (DB)
- Local variable
- Global variable

Programming with Data

- Data Types
- Math Function
- Move Operation

Programming with Analog Signals

- Working with Analog Signals
- Range of Analog Signal
- Comparator Operation
- Conversion Operation

ADVANCED:

Programming with Sequential Control

- GRAFCET
- Sequential Control Operation
- Simulate control operation
- Troubleshoot PLC

Factory IO

- Introduction to Factory IO
- Scenario in Factory IO
- Integration of Factory IO with PLC