



UTILITIES MONITORING SYSTEM FOR IR 4.0

Course Introduction

The Utilities Monitoring System for Industrial Revolution 4.0 course provides hands-on, practical learning on how IoT, system integration, and device communication transform utilities management in industrial environments. Participants will gain skills in real-time monitoring, data analysis, and performance optimization to enhance operational efficiency and support digital transformation initiatives.

Training Administrative Details:

**Venue**

SHRDC, Shah Alam

**Duration**

7 Days

**Time**

9-5 pm

**HRDF Claim**

YES

REGISTER TODAY!

RM6,480 /pax

Standard Price

RM3,240* /pax

*AMEICC Subsidy available for an employee of a Japanese organisation or supplier of a Japanese company

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Course Content

DAY	CONTENT
Day 1	<ul style="list-style-type: none"> • Introduction to Utilities Monitoring System. • Introduction to IoT Gateway. • Setting up IoT Gateway • Introduction to MODBUS Protocol • Hands-on wiring and setup on Modbus Devices • Working with Modbus Communication
Day 2	<ul style="list-style-type: none"> • Introduction to Power Consumption Monitoring • Hands-on wiring and setup on smart meter/power devices • Calculation of parameters using power consumption data • Monitor power consumptions related data • Monitor utilities data based on Modbus Protocol
Day 3	<ul style="list-style-type: none"> • Introduction to IO-Link • Wiring IO-Link Sensor • Setting up IO-Link Sensor • Reading IO-Link Sensor web server • Introduction to OPC-UA • Setting up OPC-UA Communication for IO-Link • Read IO-Link data via OPC-UA • Monitor IO-Link sensor data in a dashboard
Day 4	<ul style="list-style-type: none"> • Introduction to SVG (Scalable Vector Graphics) • Drafting SVG Design • SVG Data Integration • Customize SVG Dashboard
Day 5	<ul style="list-style-type: none"> • Participant are required to pull data from Modbus and OPC-UA protocol and customize their own SVG dashboard.
Day 6	<ul style="list-style-type: none"> • POC Project Scoping • System Architecture Design • System Architecture Simulation • System Architecture Testing
Day 7	<ul style="list-style-type: none"> • System architecture Full Setup • System Architecture Verification • Final Project Presentation



Training Methodology

The program adopts a people-centered, experiential learning approach that blends theory with hands-on application. Participants engage in:

- Instructor-led sessions to understand key concepts of IoT, data communication, and utilities monitoring.
- Practical, hands-on exercises using real devices and sensors to simulate industrial environments.
- Project-based learning, where participants develop and implement their own utilities monitoring solutions aligned with workplace challenges.
- Coaching and post-training project monitoring (up to 16 contact hours) to ensure successful application of skills and measurable workplace impact.

Learning Outcomes

By the end of the program, participants will be able to:

- Understand and implement utilities monitoring systems
- Configure and apply Modbus and IO-Link protocols
- Set up and integrate smart devices for data collection and analysis
- Visualize data through customized SVG dashboards
- Optimize utilities usage based on real-time data insights

Why Attend This Program

This training builds the workforce capability to lead Digital (DX) and Green Transformation (GX) by integrating IoT-based utilities monitoring with data-driven decision-making and sustainable operations. Through hands-on projects, participants apply practical solutions that enhance productivity, resource efficiency, and carbon reduction, ensuring measurable impact and long-term competitiveness for their organizations.

