**Industrial Automation Workshop
– PLC & SCADA Systems**

ورشة عمل متقدمة في أنظمة السكادا وأجهزة التحكم

27 September – 01 October 2020

Dubai / United Arab Emirates

Projacs Training and Development

بروجاكس للتدريب والتطوير

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Introduction

This workshop is intended to provide advanced engineering aspects of Programmable Logic Controllers (PLC). Emphasis shall be laid on topics relevant to Programmable Logic Controllers programming and troubleshooting. Operation, characteristics and selection of Programmable Logic Controllers will be studied.

Also, features and applications of SCADA systems will be explored. SCADA systems architecture, their interface to the process hardware will be demonstrated.

Extensive practical examples will be examined using PLC system.

Objectives

By the end of this course practitioners shall learn to:

- Features of various types of Programmable Logic Controllers
- Programmable Logic Controllers selection for varies applications
- Programmable Logic Controllers programming and interface
- Features and applications of SCADA systems
- SCADA systems architecture and interface
- System troubleshooting
- Testing and operating problems

Who Should Attend?

This workshop is targeted to Senior Technicians and Engineers working in Operation, programming and Maintenance of Programmable Logic Controllers and SCADA systems.

Course Outline

Day One:
- Introduction to Programmable Logic Controllers.
- Programmable Logic Controllers Design,
- Programmable Logic Controllers structure
- Programmable Logic Controllers Operation
- Programmable Logic Controllers Selection

Day Two:
- Programmable Logic Controllers Interfacing
  - Interfacing Digital Devices.
  - Interfacing Analog Devices.
  - Programmable Logic Controllers Programming
  - Ladder programming

Day Three:
- SCADA System Project Planning
- SCADA Definitions
- Communication Systems
- Consumer Information Service (CIS)
- Geographical Information System (GIS)
- System Openness – Use of Industrial Standards
- Applicable Processes
- Elements of a SCADA System

Day Four:
- Dependence on Communications and Computers
- Remote Control
  - Safety Instrumented Systems
  - Regulatory Requirements
- Operator
  - Security Considerations
  - Alarming
  - Control Change Screens
  - Status Screens
  - Graphics and Trending
  - Reports
  - Parallel Operator Interface

Day Five:

- Application examples
  - o Start/Stop Motor.
  - o Motor Speed Control.
  - o ON/OFF Temperature Control
  - o Power system protection
- Industrial application
- System maintenance
- System troubleshooting

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:
- Technical Session   08.30-10.00 am
- Coffee Break   10.00-10.15 am
- Technical Session   10.15-12.15 noon
- Coffee Break   12.15-12.45 pm
- Technical Session   12.45-02.30 pm
- Course Ends   02.30 pm

Course Fees*

- **2,950USD**
  VAT is Excluded If Applicable

مقدمة

تهدف ورشة العمل إلى تغطية العديد من التطبيقات الهندسية للمتحكمات القابلة للبرمجة. ويركز هذا البرنامج على دراسة تشغيل وخصائص المتحكمات القابلة للبرمجة وكذلك أسس اختيارها واختبارها. كما يعرض البرنامج الخصائص والمميزات الأساسية لنظم SCADA وكذلك عرض للتركيب البنائي لذلك النظام و طرق دمج هذا النظام في المنظومة العامة الخاصة بالتحكم في منظومات التحكم الحديثة. وتدم ورشة العمل العديد من التطبيقات العملية.

الحضور

المهندسون والفنيون المتقدمون العاملون في مجال تشغيل و صيانة المتحكمات القابلة للبرمجة و أنظمة SCADA