

# TRAINING INDUSTRIAL AUTOMATION







#### Introduction

**ASM Process Automation** is the Regional **PROFIBUS & PROFINET** Association (RPA) in the Middle East and has been a Siemens Solution Partner for more than 10 years.

Being the regional training center under PI international for the middle east, we can offer standard or customized courses all around the region. All trainings offered are International Accredited by the PI International which is the largest Automation Group in the world, www.profibus.com or www.profinet.com.

The training includes certified **PROFIBUS/PROFINET** Engineers Courses, Certified Installers, Trouble-Shooting and Maintenance and a range of Qualified Siemens Training Courses including TIA-SERV, TIA-PRO, S7-1500 and PCS7 standard or batch course.

We offer this training either on-site at our clients plant or at our Training Center in Dubai, U.A.E. We often try to customize the contents of the training that will match and develop your capabilities thus giving a better perspective into their plant.

The training consists of both Theoretical and Practical, but we encourage more of a Hands-On approach to have an in-depth comprehension and to be able to have an insight and visualization of an actual trouble-shooting at their own plant.

Bear in mind, to upgrade your machines, you need to upgrade your capacity, infrastructure of any PLANT, and in line with it, this will require updating your team on the latest know-how and make sure that you are always have the knowledge of the technology you are using. Since proper intervention with an enhanced skill goes hand in hand to prevent lots of downtime and losses.

Let us be your guide as,

We Create Solutions.



# **Contents**

#### **PROFIBUS training**

- PROFIBUS Troubleshooting & Maintenance
- Certified PROFIBUS Installer
- Certified PROFIBUS Engineer
- Certified PROFIBUS PA Module

#### **PROFINET training**

- PROFINET Technical Training
- PROFINET Troubleshooting & Maintenance
- Certified PROFINET Engineer

#### **Product training**

- ProfiTrace Training
- Free ATLAS Training
- ProfiTrace Advanced Training
- ComBricks Demo Day

#### **SIEMENS training**

- S7-SERV1: SIMATIC service 1 in the TIA Portal
- S7-SERV2: SIMATIC service 2 in the TIA Portal
- S7-SERV3: SIMATIC service 3 in the TIA Portal
- S7-PRO1: SIMATIC programming 1 in the TIA Portal
- S7-PRO2: SIMATIC programming 2 in the TIA Portal
- S7-PRO3: SIMATIC programming 3 in the TIA Portal
- S7-PCS7 OS-Engineering: SIMATIC PCS 7 System Course



# **Training guide**

	PROFIBUS Troubleshooting & Maintenance	Certified PROFIBUS Installer	Certified PROFIBUS Engineer	Certified PROFIBUS PA Module	PROFINET Technical Training	PROFINET Troubleshooting & Maintenance	Certified PROFINET Engineer	PROFIBUS Product Development	ProfiTrace Training
Application administrators	X					X			X
Commissioning engineers	X		X			X	X		X
Consultants			X				X		X
Designers			X				X		
Fault technicians	Х					X			X
Hardware engineers	X		X	Х		X	X	X	X
Integrators	X		X			X	X		X
Installers / electricians		X							
Maintenance technicians	X	X							X
Panel builders	X	X				X			
PCB designers								X	
Programmers			X				X		X
R&D managers								X	
Service technicians	X					X			X
Software engineers	X		X	X		X	X	X	X
Teachers			X				X		X
Writers of manuals								X	



# **PROFIBUS Troubleshooting & Maintenance**

Fully maintaining a PROFIBUS system is a big challenge nowadays. This is because repairing PROFIBUS breakdowns takes a lot of time and may result in an unacceptable amount of downtime. During the PROFIBUS Troubleshooting & Maintenance training course, technicians learn how to identify PROFIBUS breakdowns straight away, which means that they can resolve them strategically. The whole lifecycle of your automation process is optimized!

The PROFIBUS Troubleshooting & Maintenance training course is fully tailored to the needs of installers and maintenance engineers who work with PROFIBUS systems. The course comprises a total knowledge package focusing entirely on practical situations. During this course, technicians learn how to analyze, localize and repair a PROFIBUS breakdown. This course includes theoretical information on cable techniques, shielding, grounding, PROFIBUS components and measuring equipment.

The PROFIBUS Troubleshooting & Maintenance course is a two-day training course comprising a theoretical and a practical part. After completing this course, participants will be able to carry out maintenance by themselves and strategically repair breakdowns in PROFIBUS systems.

# Repairing system breakdowns yourself

#### Theory

- Summary of PROFIBUS DP and PA
- Features of RS 485 and MBP-IS
- Cable techniques
- Grounding and shielding
- DP/PA segment couplers, repeaters and OLMs
- Breakdown localization strategy
- Measuring equipment

#### Practical exercises

- Protocol and signal analysis using ProfiTrace 2
- Cable measuring using ProfiTrace 2
- Class 2 functions using ProfiTrace 2
- Remote monitoring using ComBricks

- Training methodology: Theory and practice
- **Duration:** 2 days (10 AM 5 PM)



#### **Certified PROFIBUS Installer**

The Certified PROFIBUS Installer training course creates a quality platform for people with a PROFIBUS certificate who are accredited by an official exam. The Certified PROFIBUS Installer status is very important as it provides contractors with a guarantee that the system is installed by qualified installers. This is why most of the projects can only be carried out by qualified PROFIBUS installers. Qualified installer guarantees that your PROFIBUS system will function as it should.

The Certified PROFIBUS Installer training course focuses entirely on technicians whose job it is to install, cable and test PROFIBUS DP/PA equipment. It offers a total knowledge package focusing entirely on practical situations. During this course, technicians learn how to install a PROFIBUS system correctly. This course includes theoretical information on assembly guidelines, grounding and shielding.

This two-day training course provides a theoretical and a practical part. The participants take an exam on the last day. When you pass this exam, you can use the title of Certified PROFIBUS Installer and will be internationally registered as such.

# Make sure you're familiar with the instructions

#### Theory

- PROFIBUS technology
- Basic principles of transmission technology
- Cable techniques
- · Assembly guidelines
- · Grounding and shielding
- Measuring equipment

#### Practical exercises

- Analyzing cable specifications
- Assembling and testing cables
- Installing addresses
- Using the analyzer to carry out protocol analysis
- Using an oscilloscope to carry out signal analysis

- Training methodology: Practice, theory and an exam
- Duration: 2 days (9 AM 9 PM)



# **Certified PROFIBUS Engineer**

PROFIBUS plays a major role in automation technology. This is why professional knowledge of this technology is very important. The Certified PROFIBUS Engineer training course creates a quality platform for people with a PROFIBUS certificate who are accredited by an official exam. This training is acknowledged all over the world. Certified PROFIBUS Engineer status is very important as it enables businesses to stand out on the market compared to other companies working with this innovative technology.

The Certified PROFIBUS Engineer training course offers a total knowledge package focusing on practical situations. This course is based on the needs of technicians who install PROFIBUS systems on a daily basis. Technicians learn how to install a PROFIBUS system correctly. The course includes theoretical information on RS 485 technology, PROFIBUS technology, network components, measuring and testing equipment and bus parameters.

The duration of this training course is two days. It holds a theoretical and a practical part, and participants take an exam on the last day. If they pass this exam, they can use the title of Certified PROFIBUS Engineer and will be internationally registered as such.

# Show them you're the expert

#### Theory

- PROFIBUS technology
- RS 485 technology
- Measuring equipment
- Network components
- Bus parameters and cycle times

#### Practical exercises

- Using configuration tools to build up networks
- Using the ProfiTrace Analyzer
- Installing bus parameters
- Class 2 functions
- · Generating and reading in diagnosis
- Identifying breakdowns

- Training methodology: Practice, theory and an exam
- Duration: 3 days (9 AM 5 PM) and 1 exam (10 AM - 4 PM)



#### Certified PROFIBUS PA module

Most of today's projects can only be carried out by qualified PROFIBUS engineers. The Certified PROFIBUS PA Module training course concentrates entirely on PROFIBUS PA. It offers a quality platform for people with a PROFIBUS certificate who are accredited by an official exam. This is because a qualified engineer guarantees that your PROFIBUS system will function as it should. This module can only be followed by people with a Certified PROFIBUS Engineer certificate.

The Certified PROFIBUS PA module training course focuses entirely on the needs of technicians who work with PROFIBUS PA. We train technicians how to install a PROFIBUS PA system correctly. This course includes theoretical information on MBP technology, DP/PA couplers and links, DP-V1, parameters and profiles, network components and explosion protection.

This module includes a theoretical and a practical part. It is a two-and-a-half-day training course and participants take an exam on the last day. When you pass this exam, you can use the title of Certified PROFIBUS PA Engineer and will be internationally registered as such. This module is given in English only.

# **Knowledge for process automation**

#### Theory

- DP and PA field of application
- DP/PA couplers and links
- MBP technology
- Network components
- Explosion protection
- DP-V1
- Parameters and profiles

#### Practical exercises

- Using configuration tools to build up networks
- Installing parameters on instruments
- Generating and reading in diagnosis
- · Measuring with an oscilloscope
- · ProfiTrace with PA Probe
- Calculating electric currents and voltage

- Training methodology: Practice, theory and an exam
- Duration: 2 days (9 AM 5 PM)
   and half-day exam (10 AM 1 PM)



# **PROFINET Technical Training**

PROFINET is a user-friendly technology with a lot of advantages. To benefit from these advantages you need to know how PROFIBUS works. The PROFINET Technical Training provides an in-depth summary of all the options that PROFINET automation and production processes have to offer. Continual comparisons with PROFIBUS are a recurring theme. This training gives technicians an insight into how they can benefit from PROFINET so that they can make the best possible use of this technology.

The PROFINET Technical Training is fully tailored to the needs of technicians who work with this technology. During this course, technicians learn what PROFINET is all about, and what the advantages to this innovative technology are. This course includes PROFINET background information and theoretical information on Ethernet and PROFINET technology. Each theme finishes with a demonstration in order to forge direct links between theory and practice.

This training is a one-day workshop comprising a theoretical part and demonstrations. After taking part in this training, participants will feel self-confident about taking decisions on the application of this automation system.

# **Discover all the advantages of PROFINET**

#### Theory

- PROFIBUS: current situation
- PROFINET: background information
- Ethernet technology
- PROFINET technology

#### **Demonstrations**

- Configuring a PROFINET system
- Integrating a PROFIBUS segment
- Testing a PROFINET system
- Using an Analyzer to analyze messages
- Mounting a connector plug
- · Exchanging devices

- Training methodology: Theory and demonstrations
- **Duration:** 1 day (10 AM 5 PM)



# **PROFINET Troubleshooting & Maintenance**

Industrial Ethernet technology is difficult to understand because of all the abbreviations and IT jargon. Even the network components function in a contradictory way compared to regular fieldbus technology. This means that measuring and repairing PROFINET breakdowns takes a lot of time and may result in an unacceptable amount of downtime. During the PROFINET Troubleshooting & Maintenance training course, technicians learn how to identify PROFINET breakdowns straight away, which means that they can resolve them strategically. In return this prevents downtime and guarantees business continuity.

The PROFINET Troubleshooting & Maintenance training course is fully tailored to the needs of installers and maintenance engineers who install and maintain PROFINET systems. The course comprises a total knowledge package focusing entirely on practical situations, so that participants can use a simple methodology to familiarize themselves with the missing links in modern Ethernet networks. During this course, technicians learn how they can use the necessary tools to analyze, localize and resolve a complicated PROFINET breakdown. This course includes theoretical information on cable techniques, shielding and grounding.

The PROFINET Troubleshooting & Maintenance course is a two-day training course that includes a theoretical and a practical part. After completing this course, participants will be able to carry out maintenance by themselves and strategically resolve breakdowns in PROFINET systems.

# Become a troubleshooting and maintenance expert

#### Theory

- Summary of PROFINET
- Basic principles of Industrial Ethernet and TCP/IP
- PROFINET cable guidelines
- · Grounding and shielding
- Switches
- PROFINET protocol
- Breakdown localization strategy

#### Practical exercises:

- Installing cables
- Using a cable tester to measure cables
- Using a switch to make a network diagnosis
- Using Wireshark to carry out protocol analysis
- Using Netilities to carry out network management and analysis

- Training methodology: Theory and practice
- Duration: 2 days (10 AM 5 PM)



#### **Certified PROFINET Engineer**

PROFINET plays a major role in automation technology. The Certified PROFINET Engineer training course creates a quality platform for people with a PROFINET certificate who are accredited by an official exam. PROFINET plays a major role in automation technology. It is very important that PROFINET engineers are qualified. Certified PROFINET Engineer status is very important as it enables businesses to stand out in the market compared to other companies working with this technology.

The Certified PROFINET Engineer training course instructs technicians how to install a PROFINET system correctly and how PROFINET is integrated using existing PROFIBUS systems. It offers a total knowledge package focusing entirely on practical situations. This course includes theoretical information on Ethernet technology, PROFINET technology, PROFINET IO technology and PROFINET tools.

The Certified PROFINET Engineer course is a three-day training course comprising a theoretical and a practical part, and participants take an exam on the last day. If they pass this exam, they can use the title of Certified PROFINET Engineer and will be internationally registered as such.

# **Become an Industrial Ethernet expert**

#### Theory

- PROFIBUS: current situation
- PROFINET: background information
- Ethernet technology
- PROFINET technology
- PROFINET IO technology
- PROFINET tools

#### Practical exercises:

- Installing the connectors
- Testing the cable
- Configuring the switches
- · Analyzing messages
- Building up a PROFINET system
- Integrating a PROFIBUS segment

- Training methodology: Practice, theory and an exam
- Duration: 2.5 days (9 AM 5 PM) and half-day exam (1 PM - 5 PM)



#### **Free ProfiTrace Training**

Fully maintaining any system is a big responsibility. It is absolutely essential to repair breakdowns in a PROFIBUS network with all speed in order to guarantee the highest possible uptime. Knowledge of ProfiTrace 2 is needed to do this. Our free ProfiTrace training focuses entirely on this innovative PROFIBUS tool. The course instructs technicians how to identify complicated PROFIBUS breakdowns quickly and efficiently in order to prevent downtime in the future.

Our free ProfiTrace training is especially interesting for installing, commissioning and maintenance engineers who use ProfiTrace 2 in their daily work. It offers a total knowledge package focusing entirely on practical situations. During the course, technicians learn how to use ProfiTrace to analyze, localize and repair PROFIBUS breakdowns. This course includes theoretical information on how to connect to a system, Live List, statistics, oscilloscopes, triggers and filters.

The free ProfiTrace Training is a one-day course comprising a theoretical and also a practical part. After completing this course, participants will be able to use ProfiTrace to carry out maintenance by themselves and strategically repair breakdowns in PROFIBUS systems.

# Become an expert in the most popular PROFIBUS tool

#### Theory

- Connecting to the system
- Statistics
- Oscilloscopes
- Network Manager
- Live List
- Recording messages
- Installing triggers and filters
- Storing and exchanging files

#### Practical exercises:

- Installing software
- Installing GSD files
- Protocol analysis (messages, statistics)
- Signal analysis (oscilloscope, bar graph)
- Generating a network topology
- Generating a report
- Using ProfiCaptain to carry out tests

#### **Details**

- Training methodology: Theory and practice
- **Duration:** 1 day (10 AM 5 PM)
- Price: Free\*

\*if this product is purchased



#### **Free ATLAS Training**

Driven by the need for high performance, integration between factory installations and IT-systems, there has been a growing acceptance of Industrial Ethernet within industrial automation. With this, system complexity will continue to increase. Our Atlas products are a perfect solution for diagnostics in your network, preventing you from unexpected and expensive downtime.

This free training is focused on Atlas, a powerful troubleshooting tool for Industrial Ethernet networks. You will learn how to use the powerful features to identify errors, speed up maintenance, accelerate commissioning and optimize network performance.

In just two hours the participants will learn how to use Atlas in order to analyze, localize and solve Ethernet faults. With a hands-on approach, the participants will put theory into practice.

# Become a master of this powerful ethernet tool

#### Theory

- · Structure of the user interface
- Connecting Atlas to a network
- The definition of the Q-factor
- The definition of the topology

#### Practical exercises:

- User interface
- Topology
- Device list
- Q-Factor
- Report
- Generating a report
- Alarms

- Training methodology: Theory and Live demonstration
- Duration: 2 hours
- Price: Free\*

<sup>\*</sup>if this product is purchased



#### S7-SERV1: SIMATIC service 1 in the TIA Portal

# **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

In this first part of the SIMATIC TIA Portal service training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of programming. You also receive an overview of HMI, PROFINET IO, and connecting drives.

You will learn to diagnose and clear simple hardware faults and software errors.

You will thus be capable of reducing downtimes in your plant.

- Overview and significant performance characteristics of the SIMATIC S7 system family
- The components of the TIA Portal: STEP 7, WinCC, communication
- Program execution in automation systems
- Setup and assembly of the automation system
- Addressing and wiring the signal modules
- Hardware and software commissioning of the SIMATIC S7 automation system with the TIA Portal
- SIMATIC S7 hardware configuration and parameterization
- Presentation of a Touchpanel
- · Presentation of the drive
- Setup and parameterization of PROFINET IO
- Saving and documentation of the implemented program changes with the TIA Portal
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model



#### S7-SERV2: SIMATIC service 2 in the TIA Portal

# **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

In this first part of the SIMATIC TIA Portal service training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of programming. You also receive an overview of HMI, PROFINET IO, and connecting drives.

You will learn to diagnose and clear simple hardware faults and software errors.

You will thus be capable of reducing downtimes in your plant.

- Overview and significant performance characteristics of the SIMATIC S7 system family
- The components of the TIA Portal: STEP 7, WinCC, communication
- Program execution in automation systems
- Binary and digital operations in the function block diagram (FBD)
- Setup and assembly of the automation system
- Addressing and wiring the signal modules
- Hardware and software commissioning of the SIMATIC S7 automation system with the TIA Portal
- SIMATIC S7 hardware configuration and parameterization
- Presentation of a Touchpanel
- Presentation of the drive
- Setup and parameterization of PROFINET IO
- Saving and documentation of the implemented program changes with the TIA Portal
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model



#### S7-SERV3: SIMATIC service 3 in the TIA Portal

#### **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

The third part of the SIMATIC TIA Portal service training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal service courses 1 and 2, including SIMATIC STEP 7, HMI and PROFINET IO. You will expand your knowledge in terms of program troubleshooting and error handling and learn how to display these errors in an operator control and monitoring system. A HMI will be connected to the realtime process communication. You will set up communication between SIMATIC CPUs (based on Industrial Ethernet) to send process data and status information. You will work with Technology Objects e.g. Motion Control Functions. The basis for this is to also interpret and expand existing programs in the programming languages Ladder Diagram(LAD) / Function BlockDiargram (FBD), Structured Control Language (SCL) and Structur Text Language (STL).

Thanks to this comprehensive understanding, you gain new impetus and ideas to optimize your plant and can thus reduce or eliminate downtime in your entire plant.

- Commissioning a TIA system with software troubleshooting and debugging
- Error analysis and handling per SIMATIC STEP 7 program:
- Possible uses for error organization blocks
- Reading out, evaluating, and display of diagnostic messages
- Diagnosis of errors in a PROFINET IO system with an HMI device
- Diagnosis of SIMATIC S7 system errors with an HMI device
- Configuration of CPU CPU communication via Industrial Ethernet
- Working with Ladder Diagram(LAD) / Function BlockDiargram (FBD), Structured Control Language (SCL) and Structur Text Language (STL).
- Working with Technology Objects
- Deeper understanding of contents through practical exercises on SIMATIC S7-1500 system model



# **S7-PRO1: SIMATIC programming 1 in the TIA Portal**

# **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

In this first part of the SIMATIC TIA Portal programming training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of standard PLC programming. You also receive an overview of HMI, PROFINET IO, and connecting drives.

- Overview and significant performance characteristics of the SIMATIC S7 system family
- The components of the TIA Portal: STEP 7, WinCC, Startdrive
- Program execution in automation systems
- STEP 7 block types and program structuring
- Binary and digital operations in the function block and ladder diagram (FBD/LAD)
- Programming of parameterizable blocks
- Data management with data blocks
- Programming organization blocks
- Test tools for system information, troubleshooting, and diagnostics
- Hardware configuration and parameterization of the SIMATIC S7 modules, a PROFINET IO system (ET-200), a Touch Panel, and a drive
- Program Cycle, Process Image and Procee Image Partiion
- Explanationn and using different organization blocks
- Startup of a drive (G120) an cummunication with standard telegram 1
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model



# S7-PRO2: SIMATIC programming 2 in the TIA Portal

# **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

The second part of the SIMATIC TIA Portal programming training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal programming 1 course, including STEP 7, SIMATIC S7, HMI, connection of drives, and PROFINET IO. You will expand your knowledge of complex operations and you get an introduction in the programming language statement lists (STL), Structured Control Language (SCL) and S7-GRAPH. Along with analog value processing and data administration with complex data types, the evaluation and handling of program-related errors are also considered. Building on this, you will learn how to display messages on the operator control and monitoring system (HMI).

Thanks to the knowledge imparted, you will gain new impetus and ideas for efficient PLC programming.

- Tools for program creation (e.g. structograms)
- · Analog value processing
- Functions, function blocks, and multi-instances using the IEC-compliant timer/counter as an example (International Electro technical Commission)
- Jump commands and battery operations
- Indirect addressing
- Classical software error handling and evaluation with error organization blocks (OBs)
- Evaluation of diagnostic data
- Troubleshooting and alarms with an HMI device (Touchpanel)
- Introduction into Structured Control Language (SCL) and S7-GRAPH
- Deeper understanding of contents through practical exercises on SIMATIC S7-1500 system model



# **S7-PRO3: SIMATIC programming 3 in the TIA Portal**

## **Description**

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

The third part of the SIMATIC TIA Portal programming training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal programming courses 1 and 2, including STEP 7, SIMATIC S7,HMI, connection of drives, and PROFINET IO. You will expand your knowledge regarding the reusability of STEP 7 blocks and their storage in user libraries. You get an introduction in the programming language statement lists (STL), Structured Control Language (SCL) und S7-GRAPH.

You will create user-specific blocks for reporting, handling and analyzing program errors. To save the machine data, you will learn how to manage recipes in SIMATIC HMI (operator control and monitoring system). You will set up communication between SIMATIC CPUs based on Industrial Ethernet.

The comprehensive knowledge that is imparted to you will allow you to shorten configuration times and to react flexibly to the need to optimize your plant.

- Functions, function blocks, and multi-instances
- Creation and application of complex data structures
- Indirect addressing of complex data structures and parameters
- Library functions for integrated error handling through fault masking
- CPU CPU communication via Industrial Ethernet
- Administration of a recipe database in the operator control and monitoring system (HMI)
- Commissioning of the TIA system model with distributed I/O on PROFINET IO
- Overview of the engineering tools for all aspects of the TIA Portal
- Deeper understanding of contents through practical exercises on SIMATIC S7-1500 system model



# S7-PCS7 OS-Engineering: SIMATIC PCS 7 System Course

## **Description**

In this course you will learn how to implement the diversity of engineering possibilities in a structured and efficient way with SIMATIC PCS 7 process control system. By doing exercises on original SIMATIC PCS 7 training units, you will implement software for the process automation of a plant right up to the HMI level. Features of SIMATIC PCS 7 such as integration of all subsystems, plant-oriented engineering, data management and project management are supplemented by advanced functions that enable efficient and cost-effective engineering.

Utilize the benefits of Totally Integrated Automation (TIA) for yourself and learn how to get an integrated view of your plant! Because of this integration you will be able to diagnose faults quickly and correct them with safely. In addition, projects can be created in advance in such a way that you can work with multiple application. This enables time-optimized and cost-effective engineering.

This blended-learning course combines Web-based training on the Internet with a 10-day attendance course: To prepare you for the attendance component, you will receive the Web-based courses (WBTs) "Process control engineering for beginner". This allows you to improve your personal learning achievement in the attendance course.

- System design and component specification
- Project setup
- Station and network configuration
- Connection to the process
- Basics control functions
- Basics Operating and Monitoring
- Implementation of Automatic and Manual Mode Control
- Projektierung der Ablaufsteuerung im SFC
- Customizing the OS

- Archiving System
- Locking functions and operating modes
- Mass data engineering
- Final steps of configuration
- User block attributes and visualization
- Demonstration Server-Client System
- Syntax Rules
- PCS 7 Documentation and Support



#### **About ASM Process Automation**

With 10 years of expertise in industrial process automation has rendered ASM a top spot in the industry. High standards of quality and exceptional service are the two key factors that have propelled ASM to be a market leader. Over the years the company has been striving to perfection, and has made optimal use of its resources to develop, define and deploy process automation solutions.

ASM is the official distributor of Procentec in the Middle East & Saudi Arabia. Cutting edge technology and cost-effective solutions are what we stand for.

ASM is synonymous with innovation, and has become a reliable source for process automation requirements across the industrial landscape of Saudi Arabia and Middle East. ASM focuses on providing its clients a competitive edge in their respective segment.

We help you achieve your goals for a sustainable business growth





# Application form

E: info@asm.net						
First name: Last name: Company name: Ordering number: VAT number: Billing address: Zip code: Phone: Email: Please book a room	at the Atlantic H	······································				M O F
Training Training	persons will	Date	Name	on the following  Special meal	g dates:  Email/phone number	Hotel
				O		0
				O		O
				0		
				0		
				0		
Date: Signature:				PROCESS AUTOMATIO	Tower A, 14th floor, office	IPSON gineer مهندم (VC)
Jeddah: +				ASM.net	PO. Box 34781, U.A.E Tel : +971 4 514 92 Mobile : +971 56 831 6	30



# 10 YEARS IN THE INDUSTRY









# WE CREATE SOLUTIONS

Jeddah: +966126902144 Riyadh: +966114911104 Khobar: +966595663333 Dubai: +97145149230

E: info@asm.net | W: ASM.net