



Consulting and Training | Reach New Heights

Course Name

S7 Control System

Sector Name

Instrumentation & Controls

Document Type

Generated by Boostlab

[Click Here To Visit Course](#)

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770



S7 Control System

Course Introduction

This training course is designed to equip TAPCO participants with in-depth knowledge and practical skills in using Siemens S7 PLCs and the TIA Portal environment. Over five intensive days, attendees will learn to configure, program, and troubleshoot S7-1200 and S7-1500 PLCs, with a focus on advanced programming techniques and data handling.

The course also covers HMI integration, providing hands-on experience in creating user interfaces and visualizations for enhanced control. Participants will develop essential diagnostic and maintenance skills to ensure the efficient operation of S7 control systems. Additionally, the course explores advanced topics such as distributed I/O, networking, and SCADA system integration, preparing participants to implement and manage comprehensive control solutions in real-world industrial settings.

ABU DHABI: +971 2 449 6000
ABU DHABI: +971 50 412 3294
DUBAI: +971 4 888 6787
KSA: +966 56 416 0617
EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)

S7 Control System

Target Audience

- ✓ Group discussions and exercises
- ✓ Facilitated discussions
- ✓ Table-top exercises
- ✓ Manuals, workbooks, and references
- ✓ Assessing competencies
- ✓ References and further reading

ABU DHABI: +971 2 449 6000
ABU DHABI: +971 50 412 3294
DUBAI: +971 4 888 6787
KSA: +966 56 416 0617
EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)

S7 Control System

Learning Objectives

- ✓ Develop a thorough understanding of Siemens S7 control systems, including S7-1200 and S7-1500 PLCs, and their configuration using the TIA Portal environment.
- ✓ Master advanced PLC programming techniques, including the use of function blocks, data handling, and analog signal processing.
- ✓ Learn to effectively integrate and configure Human-Machine Interfaces (HMIs) for enhanced system control and visualization.
- ✓ Acquire diagnostic and troubleshooting skills to maintain and resolve issues in S7 control systems efficiently.
- ✓ Gain knowledge in advanced topics such as distributed I/O systems, networking with PROFINET and PROFIBUS, and integration with SCADA systems for comprehensive control solutions.

ABU DHABI: +971 2 449 6000
ABU DHABI: +971 50 412 3294
DUBAI: +971 4 888 6787
KSA: +966 56 416 0617
EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)



S7 Control System

Course Outline

✓ 01 Day One

Introduction to S7 Control Systems and Basic Configuration

- ✓ Overview of S7 Control Systems
- ✓ Introduction to S7-1200 and S7-1500 PLCs
- ✓ Understanding the TIA Portal Environment
- ✓ Setting Up a New Project in TIA Portal
- ✓ Hardware Configuration and PLC Setup
- ✓ Basic PLC Programming Concepts
- ✓ Creating and Downloading a Simple Program
- ✓ Hands-On Exercises: Basic Configuration and Programming

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

S7 Control System

Course Outline

✓ 02 Day Two

Advanced PLC Programming and Data Handling

- ✓ Structured Programming Techniques
- ✓ Using Function Blocks and Data Blocks
- ✓ Advanced Logic Operations
- ✓ Analog Signal Processing
- ✓ Timers and Counters
- ✓ Data Handling and Memory Management
- ✓ Introduction to S7 Communication Protocols
- ✓ Practical Exercises: Advanced Programming and Data Handling

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

S7 Control System

Course Outline

✓ 03 Day Three

HMI Integration and Configuration

- ✓ Introduction to HMI Devices and Interfaces
- ✓ Configuring HMIs in TIA Portal
- ✓ Creating HMI Screens and User Interfaces
- ✓ Connecting HMI to S7 PLCs
- ✓ HMI Programming and Visualization Techniques
- ✓ Alarms and Event Handling in HMI
- ✓ Data Logging and Trend Analysis
- ✓ Hands-On Exercises: HMI Configuration and Integration

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

S7 Control System

Course Outline

✓ 04 Day Four

Diagnostics, Troubleshooting, and Maintenance

- ✓ Diagnostic Tools in TIA Portal PLC System Diagnostics and Error Handling
- ✓ Using the Online Tools for Troubleshooting
- ✓ Maintenance Best Practices for S7 Systems
- ✓ Backup and Restore Procedures
- ✓ Firmware Updates and System Upgrades
- ✓ Practical Exercises: Diagnostics and Troubleshooting
- ✓ Case Studies and Real-World Problem Solving

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

S7 Control System

Course Outline

✓ 05 Day Five

Advanced Topics and Real-World Applications

- ✓ Introduction to Distributed I/O Systems
- ✓ Networking and Communication with S7 PLCs
- ✓ Configuring PROFINET and PROFIBUS Networks
- ✓ Integration with SCADA Systems
- ✓ Safety and Redundancy in S7 Systems
- ✓ Energy Management and Optimization Techniques

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

S7 Control System

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 22, 2026	June 26, 2026	5 days	4950.00 \$	England , London
Nov. 23, 2026	Nov. 27, 2026	5 days	4250.00 \$	UAE , Dubai
Jan. 24, 2027	Jan. 28, 2027	5 days	4250.00 \$	KSA , Dammam
Sept. 28, 2026	Oct. 2, 2026	5 days	4250.00 \$	UAE , Abu Dhabi

ABU DHABI: +971 2 449 6000
ABU DHABI: +971 50 412 3294
DUBAI: +971 4 888 6787
KSA: +966 56 416 0617
EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

info@boostuae.com info@boostorg.com

Generated by BoostLab •

