€TRAINING

CCTV System Programming

15 - 26 December 2025
Barcelona (Spain)

CCTV System Programming

Introduction:

This training program on CCTV System Programming is designed to equip participants with advanced skills in configuring and optimizing closed-circuit television CCTV systems. It empowers them to effectively program CCTV devices, enhance system functionality, and deploy robust security solutions tailored to diverse operational environments.

Program Objectives:

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

- Master the principles of CCTV system programming and configuration.

- Design and plan CCTV installations based on operational needs.

- Implement advanced CCTV features such as video analytics and remote monitoring.

- Troubleshoot and maintain CCTV systems to ensure optimal performance.

- Integrate CCTV with other security systems for comprehensive surveillance solutions.

Targeted Audience:

- CCTV Technicians and Installers.

- Security System Integrators.

- IT Professionals involved in security infrastructure.

- Facility and Operations Managers.

Program Outline:

Unit 1:

Introduction to CCTV Systems:

- Fundamentals of CCTV technology and its applications.

- Overview of surveillance system components.

- Introduction to CCTV programming principles.

- Understanding CCTV system architecture.

- Case studies on real-world CCTV deployments.

Unit 2:

CCTV System Design and Planning:

- Principles of CCTV system design.

- Planning CCTV installations based on site requirements.

- Selecting appropriate CCTV equipment and cameras.

- Designing surveillance coverage for optimal security.

- Integration of CCTV with existing security systems.

Unit 3:

CCTV Camera Types and Configurations:

- Types of CCTV cameras and their features.

- Configuring camera settings and parameters.

- Understanding camera resolution and image quality.

- Installation techniques for different camera types.

- Troubleshooting common camera issues.

Unit 4:

Digital Video Recorders DVRs and Network Video Recorders NVRs:

- Overview of DVRs and NVRs in CCTV systems.

- Configuring DVR/NVR settings for optimal recording.

- Managing storage and video retention policies.

- Remote access and monitoring capabilities.

- Backup and disaster recovery strategies.

Unit 5:

Networking for CCTV Systems:

- Basics of networking for CCTV deployments.

- IP addressing and subnetting concepts.

- Configuring network settings for CCTV devices.

- Securing CCTV networks against cyber threats.

- Implementing VLANs and network segmentation.

Unit 6:

Video Management Systems VMS:

- Introduction to Video Management Systems VMS.

- Installation and configuration of VMS software.

- Managing multiple CCTV cameras through VMS.

- Using VMS for live monitoring and playback.

- Integrating VMS with access control systems.

Unit 7:

Video Analytics and Motion Detection:

- Understanding video analytics in CCTV.

- Configuring motion detection and alarms.

- Using analytics for behavior recognition.

- Integrating analytics with alarm systems.

- Case studies on effective use of video analytics.

Unit 8:

Remote Monitoring and Mobile Access:

- Setting up remote monitoring for CCTV systems.

- Configuring mobile access via smartphones and tablets.

- Using cloud services for remote CCTV management.

- Securing remote access channels.

- Troubleshooting remote access issues.

Unit 9:

Integration with Security Systems:

- Integrating CCTV with access control systems.

- Interface protocols and APIs for system integration.

- Configuring alarms and event triggers.

- Case studies on integrated security solutions.

- Ensuring interoperability and system reliability.

Unit 10:

Maintenance and Troubleshooting:

- Best practices for CCTV system maintenance.

- Performing regular system checks and updates.

- Troubleshooting common CCTV system problems.

- Firmware updates and software patches.

- Developing a CCTV system maintenance schedule.