BLACKBIRD FOR TRAINING

Information Systems & IT Infrastructure Fundamentals

9 – 13 August 2027
Düsseldorf (Germany)



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Introduction

In the modern digital era, Information Systems & IT Infrastructure Fundamentals form the backbone of every successful organization.

This course provides participants with a comprehensive understanding of how information systems operate and how IT infrastructure supports business continuity and efficiency.

It covers the design, management, and optimization of key infrastructure components including servers, networks, databases, and operating systems.

Through a balanced combination of theoretical knowledge and hands-on practice, participants will gain insight into how IT infrastructure integrates with organizational goals, ensuring reliability, performance, and security.

By the end of this course, attendees will be able to understand, evaluate, and manage core IT systems that drive modern business operations.

Course Objectives

By completing this course, participants will be able to:

- Understand the fundamental components of information systems and their role in business success.
- Analyze the architecture of IT infrastructure and its key elements.
- Identify different types of networks, servers, and operating systems used in enterprises.
- Apply essential principles of network, storage, and system management.
- Recognize and mitigate common technology risks affecting operations.
- Use monitoring and diagnostic tools to improve system performance.
- Implement IT security practices and ensure operational continuity.
- Understand the relationship between information systems, governance, and digital strategy.



Course Outlines

Day 1: Introduction to Information Systems and IT Infrastructure

- Overview of information systems and their importance in business.
- Core components of IT infrastructure: hardware, software, data, networks, and people.
- The relationship between IT systems and organizational management.
- Types of information systems operational, management, and executive.
- Overview of the IT system lifecycle.
- Practical activity: analyzing an existing information system in a sample organization.

Day 2: IT Infrastructure Components

- Types and roles of servers in enterprise environments.
- Network devices: switches, routers, and access points.
- Operating systems and their functions in managing resources.
- Storage systems: local, networked, and cloud-based.
- Network architecture and communication fundamentals.
- Lab exercise: designing a small-scale IT infrastructure model.

Day 3: Data and System Management

- Introduction to databases and their operational importance.
- Data management: quality, consistency, and security.
- Backup and recovery fundamentals.
- System administration: monitoring, performance tuning, and updates.
- Identifying and resolving technical issues.
- Workshop: developing an enterprise data management plan.

Day 4: Information Security and IT Governance

- Core principles of information security: confidentiality, integrity, and availability.
- Common security threats and vulnerabilities.
- Access control management and authorization policies.
- IT governance and its role in ensuring performance and compliance.
- Standards and policies for technology management.
- Practical exercise: analyzing a simulated security incident and response plan.



Day 5: Business Continuity and Infrastructure Optimization

- Concepts of business continuity and disaster recovery.
- Strategies for performance enhancement and system resilience.
- Emerging trends in IT infrastructure: cloud computing, virtualization, and automation.
- Evaluating system effectiveness through key performance indicators KPIs.
- Developing a sustainable IT improvement plan.
- Final workshop: implementing a secure and optimized infrastructure framework.

Why Attend This Course? Wins & Losses!

- Build a solid foundation in information systems and IT infrastructure.
- Learn to design, manage, and optimize modern IT environments effectively.
- Gain hands-on experience in configuring systems and managing data.
- Understand cybersecurity principles and governance best practices.
- Strengthen your ability to align IT systems with business objectives.
- Learn strategies for ensuring operational continuity and system efficiency.
- Enhance your professional competence in IT management.
- Improve career opportunities in information systems and infrastructure management.

Conclusion

Information Systems & IT Infrastructure Fundamentals are essential for organizations aiming to achieve digital transformation and operational excellence.This course offers a well-balanced combination of theoretical knowledge and hands-on experience, equipping participants to design, manage, and secure enterprise IT environments effectively.

By mastering these fundamentals, attendees will be capable of supporting their organization's strategic objectives through reliable, efficient, and secure technology infrastructure.

