



CodePro

Training, Consulting & Development



IT, Networking, and Cloud Computing

Course Syllabus

02-3812001



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יפו 224, ירושלים



COURSE DESCRIPTION

This comprehensive IT, Networking, and Cloud Computing course equips participants with a solid foundation in information technology, networking principles, and cloud computing.

The course progresses from fundamental concepts to advanced networking techniques, server management, virtualization, and culminates in a practical understanding of cloud computing and services. Participants will engage with hands-on activities and real-world scenarios, gaining the skills needed to excel in the dynamic field of IT.

COURSE INFO

Prerequisite knowledge

- Basic understanding of computer hardware and software
- Familiarity with operating systems (Windows, Linux)

Target Audience

- IT professionals seeking to enhance their networking skills
- Entry-level IT professionals aspiring to specialize in networking
- Students pursuing degrees in IT, computer science, or related fields

Additional Information

- Familiarity with virtualization concepts is beneficial but not mandatory.
- Basic command line interface (CLI) knowledge is advantageous.

MODULES

1. Foundations of IT and Networking
2. Network Devices and Infrastructure
3. TCP/IP and Subnetting
4. Advanced Routing and Switching
5. Wide Area Networks (WANs)
6. Server Management Basics
7. Virtualization Essentials
8. Advanced Virtualization Techniques
9. Cloud Computing Fundamentals
10. Cloud Infrastructure as a Service (IaaS)
11. Platform as a Service (PaaS) and Serverless Computing
12. Software as a Service (SaaS) and Cloud Applications
13. Cloud Security and Governance
14. Comprehensive IT Project

Note: The modules and subtopics provided here are suggestions and can be tailored based on the specific requirements.

MODULE 1

Foundations of IT and Networking

- Introduction to Information Technology
- Basics of Computer Networks
- OSI Model Overview
- Networking Protocols
- IP Addressing Fundamentals

MODULE 2

Network Devices and Infrastructure

- Switching and Routing Concepts
- Network Topologies
- LAN and WAN Technologies
- Wireless Networking
- Network Security Fundamentals



MODULE 3

TCP/IP and Subnetting

- Understanding TCP/IP Stack
- Subnetting and IP Address Planning
- DHCP and DNS Configuration
- IPv6 Basics
- Network Address Translation (NAT)

MODULE 4

Advanced Routing and Switching

- Dynamic Routing Protocols
- VLANs and Inter-VLAN Routing
- Spanning Tree Protocol (STP)
- Quality of Service (QoS)
- Network Troubleshooting Techniques

MODULE 5

Wide Area Networks (WANs)

- WAN Technologies Overview
- Point-to-Point Protocols (PPP)
- Frame Relay and ATM
- MPLS Fundamentals
- VPN Technologies

MODULE 6

Server Management Basics

- Introduction to Server Hardware
- OS Installation and Configuration
- Server Roles and Features
- File and Print Services
- Server Security Best Practices

MODULE 7

Virtualization Essentials

- Virtualization Concepts and Types
- Hypervisor Installation and Configuration
- Virtual Machine (VM) Management
- Resource Allocation and Optimization
- Snapshots and Cloning

MODULE 8

Advanced Virtualization Techniques

- High Availability in Virtual Environments
- Storage Virtualization
- Network Virtualization
- Virtual Machine Migration
- Monitoring and Performance Tuning

MODULE 9

Cloud Computing Fundamentals

- Introduction to Cloud Computing
- Cloud Service Models (IaaS, PaaS, SaaS)
- Cloud Deployment Models (Public, Private, Hybrid)
- Cloud Security and Compliance
- Cloud Service Providers Overview

MODULE 10

Cloud Infrastructure as a Service (IaaS)

- Virtual Machines in the Cloud
- Storage Services
- Networking in the Cloud
- Scalability and Load Balancing
- Disaster Recovery in the Cloud

MODULE 11

Platform as a Service (PaaS) and Serverless Computing

- PaaS Overview and Use Cases
- Serverless Computing Concepts
- Containerization (Docker)
- Kubernetes Orchestration
- Building and Deploying Applications in the Cloud

MODULE 12

Software as a Service (SaaS) and Cloud Applications

- SaaS Characteristics and Examples
- Cloud-based Productivity Applications
- Collaboration Tools in the Cloud
- Integration with Cloud APIs
- Customizing and Extending SaaS Applications

MODULE 13

Cloud Security and Governance

- Security Challenges in the Cloud
- Identity and Access Management
- Data Encryption and Compliance
- Incident Response in the Cloud
- Security Best Practices

MODULE 14

Comprehensive IT Project

- Project Planning and Scope Definition
- Infrastructure Design and Implementation
- Deployment and Configuration of Services
- Monitoring and Optimization
- Documentation and Project Presentation

צרו קשר

מי אנחנו?

חברה המעבירה הדרכות והשתלמויות בעולמות הטכנולוגיה וההייטק לארגונים ששואפים גבוה ורוצים לגעת בשיא הטכנולוגיה. ההדרכות מותאמות באופן אישי לכל מטרה, כאשר תכני הלימוד נבנים בהתאם לצורכי הארגון, יעדיו ודרישותיו. CodePro משמשת גם ככוח אדם ומספקת לארגונים מרצים, מפתחים ויועצים טכנולוגים על פי דרישה.

בנוסף לתחום ההדרכה, ל- CodePro בית תוכנה ומחלקת ייעוץ המלווה חברות הייטק וגופים טכנולוגיים בתהליכי פיתוח ממשקים מאתגרים. לצוות יכולת להעניק ייעוץ ותמיכה במקרים מורכבים בהם דרושה טכנולוגיה ספציפית, כמו גם בתהליך הקמת צוותים טכנולוגים בארגונים.

נשמח לשמוע ממכם!

לפרטים נוספים ושאלות

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