

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of INFORMATION TECHNOLOGY,
2025-2026 Spring
Course Information for IT 420 SERVER MANAGEMENT

Course Name:		SERVER MANAGEMENT				
Code	Regular Semester	Theoretical	Practical	Credits	ECTS	
IT 420	8	2	2	3	5	
Name of Lecturer(s):	Asst. Dr. ZINA BALANI					
Teaching Assistant:	Bassam					
Course Language:	-					
Course Type:	Main					
Office Hours	Thursday, 9 to 1 pm					
Contact Email:	zina.yaaqub@tiu.edu.iq					
	Tel:					
Teacher's academic profile:	Master's degree in software engineering					
Course Objectives:	Course Objectives: Install and configure Windows Server 2025 in both GUI and Core environments using virtualization. Configure and manage essential server roles and features including Active Directory and network services. Implement server security measures and best practices for securing Windows Server environments. Develop practical skills in server administration through hands-on labs and real-world scenarios. Master both graphical and command-line server management tools for effective server maintenance.					
Course Description (Course overview):	This course provides a foundational understanding of Windows and Linux Server management in an enterprise environment. It covers topics such as Windows and Linux Server installation, configuring users, hardening the server operating system, and built-in security features.					

COURSE CONTENT

Week	Hour	Date	Topic
1	2	31/01/2026-05/02/2026	Week 1: Introduction to Server Management & Virtualization
2	2	07/02/2026-12/02/2026	Windows Server 2025 Installation First assignment: Installation video
3	2	14/02/2026-19/02/2026	Week 3: Server Roles and Features Server Manager Role installation and configuration Basic networking setup
4	2	21/02/2026-26/02/2026	Week 4: Active Directory Basics Domain controller setup User and group management OU structure
5	2	28/02/2026-05/03/2026	Week 5: File and Storage Services File server role Share permissions Storage management
6	2	07/03/2026-12/03/2026	Week 6 : Network Services DHCP server role DNS server configuration Network troubleshooting
7	2	28/03/2026-02/04/2026	Week 7: Server Security Fundamentals Security baselines Windows Firewall Access control
8	2	04/04/2026-09/04/2026	Week 8: Server Administration Tools Windows Admin Center PowerShell basics Remote management
9	2	11/04/2026-16/04/2026	Week 9: Creating Group Policy Objects

10	2	18/04/2026-23/04/2026	Week 10: Server Maintenance Windows Updates Backup and recovery Performance monitoring
11	2	25/04/2026-30/04/2026	Midterm Exam
12	2	02/05/2026-07/05/2026	Week 12: Server Troubleshooting Common server issues Log analysis Performance issues
13	2	09/05/2026-14/05/2026	Week 13: Hybrid Cloud Integration Azure integration Hybrid capabilities Cloud services
14	2	16/05/2026-21/05/2026	Week 14: Advanced Security Security best practices Threat protection Hardening techniques
15	2	23/05/2026-28/05/2026	Week 15: Disaster Recovery Backup strategies Recovery planning Business continuity
16	2	30/05/2026-04/06/2026	Week 16: Server Project Work Implementation project Documentation Best practices
17	2	06/06/2026-11/06/2026	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

- 1 Students will be able to install and use Windows Server 2025 in virtual environment.
- 2 Students will configure essential server roles and features.
- 3 Students will implement basic server security.
- 4 Students will use both GUI and command-line tools.
- 5 Students will perform basic server maintenance and troubleshooting.

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)

Program Learning Outcomes

Cont.

- | Program Learning Outcomes | Cont. |
|--|-------|
| 1 Analyze a problem, and identify the computing requirements appropriate to its solution | P |
| 2 Design, implement, and evaluate computer-based systems, process, component, or program to meet desired needs | P |
| 3 Function effectively in teams to accomplish a common goal | I |
| 4 Identify professional, ethical, legal, security, social, and economic issues and responsibilities | P |
| 5 Analyze the local and global impact of computing on individuals, organizations, and society | I |
| 6 Use current techniques, skills, and tools necessary for computing practice | A |
| 7 Apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, web systems and technologies | P |
| 8 Identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems | P |
| 9 Effectively integrate it-based solutions into the user environment | P |
| 10 Apply problem solving skills, core it concepts, best practices and standards to information technologies | P |
| 11 Identify and evaluate organizational requirements and current and emerging technologies | I |
| 12 Design and integrate it-based solutions into the organizational environment | P |

Prerequisites (Course Reading List and References):

Microsoft Windows Server 2025 Documentation, Installing and Configuring Windows Server 2025 (Microsoft Press), Windows Server Administration Fundamentals. Additional resources: docs.microsoft.com, Microsoft Learn platform, VirtualBox documentation.

Student's obligation (Special Requirements):

Laptop/PC with minimum specifications: 8GB RAM minimum 50GB free disk space 64-bit processor with virtualization support Administrator access to install software Required software installations: Oracle VirtualBox (latest version) Windows Server 2025 evaluation copy Remote administration tools Course participation requirements: Attend weekly lab sessions Complete hands-on exercises Submit video documentation of installations

	Participate in practical assessments Complete assigned server configurations Document all lab work and configurations Technical preparation: Basic understanding of networking concepts Familiarity with Windows operating systems Basic command-line knowledge Enable virtualization in BIOS/UEFI if needed			
Weekly Laboratory/Practice Plan:	Week	Hour	Date	Topics
	1	2	31/01/2026-05/02/2026	Intro to the course and tools
	2	2	07/02/2026-12/02/2026	Week 1: VirtualBox Installation & Configuration Installing VirtualBox Configuring VM settings Testing system requirements
	3	2	14/02/2026-19/02/2026	Week 2: Windows Server Installation Lab Creating first VM Installing Windows Server 2025 Basic post-installation tasks
	4	2	21/02/2026-26/02/2026	Week 3: Server Roles Lab Using Server Manager Installing basic roles Role configuration practice
	5	2	28/02/2026-05/03/2026	Week 4: Active Directory Lab Setting up Domain Controller Creating users and groups Basic AD management
	6	2	07/03/2026-12/03/2026	Week 5: File Server Lab Configuring file shares Setting permissions Managing storage
	7	2	28/03/2026-02/04/2026	Week 6: Network Services Lab DHCP server setup DNS configuration Network troubleshooting
	8	2	04/04/2026-09/04/2026	Week 7: Security Lab Implementing security policies Firewall configuration Access control setup
	9	2	11/04/2026-16/04/2026	Week 8: Creating Group Policy Objects
	10	2	18/04/2026-23/04/2026	Week 9: Admin Tools Lab Windows Admin Center practice Basic PowerShell commands Remote management tasks
	11	2	25/04/2026-30/04/2026	Midterm Exam
	12	2	02/05/2026-07/05/2026	Week 10: Group Policy Lab Creating GPOs Policy implementation Testing policies
	13	2	09/05/2026-14/05/2026	Week 11: Troubleshooting Lab Common problem scenarios Log analysis practice Performance optimization
	14	2	16/05/2026-21/05/2026	Week 12: Cloud Integration Lab Azure connection setup Hybrid features configuration Cloud management tools
	15	2	23/05/2026-28/05/2026	Week 13: Advanced Security Lab Security hardening Threat protection setup Vulnerability assessment
	16	2	30/05/2026-04/06/2026	Week 14: Disaster Recovery Lab Backup implementation Recovery practice Failover testing
17	2	06/06/2026-11/06/2026	Final Exam	
Course Book/Textbook:	Main Textbook: "Windows Server 2025 Inside Out" (or latest edition available) "Mastering			

	Windows Server 2025" - comprehensive guide for server administration "Windows Server 2025 Administration Fundamentals" - for core concepts and practices Microsoft Official Curriculum (MOC) materials for Windows Server 2025		
Other Course Materials/References:	Online Resources: Microsoft Documentation (docs.microsoft.com) Microsoft Learn Platform (learn.microsoft.com) Windows Server Blog (techcommunity.microsoft.com/windows-server) VirtualBox Documentation (www.virtualbox.org/wiki/Documentation) Practical Resources: Lab guides and worksheets (provided by instructor) Video tutorials for specific server tasks PowerShell scripting guide Server configuration templates Supplementary Materials: Windows Server 2025 evaluation copy Practice test materials Case studies and real-world scenarios Technical documentation templates Digital Tools: VirtualBox latest version Remote Server Administration Tools (RSAT) Windows Admin Center		
Teaching Methods (Forms of Teaching):	Lectures, Practical sessions, Presentation, Project, Assignments, , ,		
COURSE EVALUATION CRITERIA			
Method	Quantity	Percentage (%)	
Quiz	1	5	
Homework	2	5	
Project	1	10	
Midterm Exam	1	20	
Laboratory	3	5	
Final Exam	1	40	
	Total	100	
Examinations: Essay Questions, True-False, Fill in the Blanks, Multiple Choices, Short Answers, Matching, , ,			
Extra Notes:			
ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD			
Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	17	2	34
Practical Hours	17	2	17
Final Exam	1	10	10
Quiz	1	5	5
Homework	2	5	10
Project	1	10	10
Midterm Exam	1	6	6
Laboratory	3	5	15
Total Workload			107
ECTS Credit (Total workload/25)			4

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean