

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

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|--|---|--------------------|------------------|----------------|-------------|--|
| 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 : Server Security Fundamentals Security baselines Windows Firewall Access control |
| 7 | 2 | 28/03/2026-02/04/2026 | Week 7: Network Services DHCP server role DNS server configuration Network troubleshooting |
| 8 | 2 | 04/04/2026-09/04/2026 | Week 8: Creating Group Policy Objects |
| 9 | 2 | 11/04/2026-16/04/2026 | Week 9: Creating Group Policy Objects cont. |

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| 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: Operational Master Roles |
| 13 | 2 | 09/05/2026-14/05/2026 | Week 13: Server Administration Tools Windows Admin Center PowerShell basics Remote management (Configuring Servers For Remote Management) |
| 14 | 2 | 16/05/2026-21/05/2026 | Week 14: Map Network Drive (Group Policy) and Disk Quota |
| 15 | 2 | 23/05/2026-28/05/2026 | Week 15: Installing and configuring Windows Deployment Service (WDS) |
| 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.

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|----|--|---|
| 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

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| | 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: VMware Installation & Configuration Installing VMware 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: Security Lab Implementing security policies Firewall configuration Access control setup |
| | 8 | 2 | 04/04/2026-09/04/2026 | Week 7: Network Services Lab DHCP server setup DNS configuration Network troubleshooting |
| | 9 | 2 | 11/04/2026-16/04/2026 | Week 8: Lab Evaluation |
| | 10 | 2 | 18/04/2026-23/04/2026 | Week 8: Creating Group Policy Objects |
| | 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: Server Maintenance Windows Updates Backup and recovery |
| | 14 | 2 | 16/05/2026-21/05/2026 | Admin Tools Lab Windows Admin Center practice Basic PowerShell commands Remote management tasks (Configuring Servers For Remote Management) |
| | 15 | 2 | 23/05/2026-28/05/2026 | Week 13: Map Network Drive (Group Policy) and Disk Quota |
| | 16 | 2 | 30/05/2026-04/06/2026 | Week 14: Installing and configuring Windows Deployment Service (WDS) |
| | 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 | | | |

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| | 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, Exercises, Project, Assignments, , , | | |
| COURSE EVALUATION CRITERIA | | | |
| Method | Quantity | Percentage (%) | |
| Quiz | 1 | 10 | |
| Homework | 1 | 5 | |
| Midterm Exam | 1 | 20 | |
| Laboratory | 2 | 5 | |
| Practical Exam | 1 | 15 | |
| Final Exam | 1 | 40 | |
| Total | | 100 | |
| Examinations: Essay Questions, True-False, 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 | 1 | 5 | 5 |
| Midterm Exam | 1 | 10 | 10 |
| Laboratory | 2 | 6 | 12 |
| Practical Exam | 1 | 5 | 5 |
| Total Workload | | | 98 |
| ECTS Credit (Total workload/25) | | | 4 |

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean