Course Syllabus

Code - Course Title	**AYG219 - Network Technologies and Device Management**
Course Type	III. SEMESTER
Laboratory + Practice	2+1
ECTS	**3.0**
Language of Instruction	Türkçe
Course Type	Area Elective Courses
Course Instructor(s)	ÖĞR. GÖR. AHMET MÜCAHİD ARVASİ

Mode of Delivery	Face to face
Prerequisites	There are no prerequisites or corequisites for this course.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Network Technologies, Computer Layer Structures (OSI Architecture), and TCP/IP Protocol Suite	
Week - 2		Local Area Networks (LAN) Design Fundamentals and Cabling Standards	
Week - 3		Cisco Switch Configuration: VLAN (Virtual LAN), STP (Spanning Tree Protocol), and Port Security	
Week - 4		Cisco Router Configuration: Static and Dynamic Routing Methods	
Week - 5		Introduction to Server Systems and Domain (Active Directory) Installations on Windows Server	
Week - 6		Basic Network Services: DNS (Domain Name System) and DHCP Configuration	
Week - 7		File and Sharing Protocols: DFS (Distributed File System), FSRM, and Quota Management	
Week - 8		Midterm Exam	
Week - 9		Network Policies and Access Management: NPS (Network Policy Server) and RDP (Remote Desktop Protocol)	
Week - 10		High Availability and System Updates: NLB (Network Load Balancing) and WSUS (Windows Server Update Services)	
Week - 11		Integration with the Internet: HTTP, HTTPS, and FTP Server Installation Methods	
Week - 12		Wide Area Networks (WAN) Technologies and Secure Communication: VPN (Virtual Private Network) Infrastructures	
Week - 13		Network Virtualization Systems and Network Monitoring/Logging Mechanisms	
Week - 14		End-to-End Network Design with Cisco Documents and Applied End-of-Term Project Presentations	

Learning Outcomes

#	Learning Outcome
1	Upon successful completion of this course, students will gain the competence to appropriately design local and wide area networks (LAN/WAN) by understanding the OSI and TCP/IP layer structures of computer networks; apply basic configuration and static/dynamic routing protocols on Cisco routers and switches; install and manage critical network services such as Domain (Active Directory), DNS, and DHCP in a Windows Server environment; and independently project secure, scalable end-to-end network infrastructures hosting virtualization, logging systems, VPN access, and web/FTP server integrations by configuring advanced server roles such as DFS, FSRM, NPS, WSUS, and NLB.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.