СОФИЙСКИ УНИВЕРСИТЕТ "СВ. КЛИМЕНТ ОХРИДСКИ"
ФАКУЛТЕТ ПО МАТЕМАТИКА И ИНФОРМАТИКА

учебна година: 2009/2010 **семестър:** летен

наименование на дисциплината: Директорийни услуги	
хорариум: 3 + 0 + 2 Общо: 75 часа (45 + 0 + 30) ***вид на дисциплината:*** избираема	

специалност: Информатика Информационни системи Компютърни науки Софтуерно инженерство Приложна математика	***курс***: II ÷ IV	***поток:***	
лектор: гл. ас. Георги Георгиев			

1. **Кратка анотация на дисциплината**

   Курсът е избираем за студентите от II до IV курс от бакалавърските програми "Информатика", „Информационни системи", „Компютърни науки", „Софтуерно инженерство" и „Приложна математика".

   Курсът дава основни познания по Директорийните сървърни роли в Windows Server 2008. Курсът е предназначен за студенти, които искат да се запознаят с концепцията на Active Directory, и да получат начални познания за видовете Директорийни сървърни роли, за тяхната основна функционалност и конфигурирането им.

2. **Предварителни изисквания към студентите (отнася се само за избираемите дисциплини)**

   Студентите следва да имат основни познания по TCP/IP протокола, както и за компютърни мрежи и мрежови услуги (DNS).

   Изисква се студентите успешно да са преминали обучение в поне един от следните курсове: „Практикум Компютърни мрежи (CCNA)" и/или „Основи на TCP/IP (в.4 и в.6)".

3. **Форма на проверка на знанията и уменията и начин на формиране на оценката по дисциплината**

Междинни тестове по време на занятията:	33 % от крайната оценка
Финален тест:	67 % от крайната оценка

4. **Тематичен план (конспект) на дисциплината**

   Module 1: Exploring Windows Server 2008 Active Directory Roles
   Lessons
   - Overview of Active Directory Domain Services

- Overview of Active Directory Lightweight Directory Services
- Overview of Active Directory Certificate Services
- Overview of Active Directory Rights Management Services
- Overview of Active Directory Federation Services

Lab: Exploring Windows Server 2008 Active Directory Server Roles
- Planning Active Directory Server Role Implementations
- Understanding Active Directory Server Role Integration with AD DS

After completing this module, students will be able to:
- Describe the Active Directory server roles required for a variety of Active Directory deployment scenarios.
- Describe the integration of AD DS with other Active Directory server roles

Module 2: Exploring Identity and Access (IDA) Solutions
Lessons
- Overview of IDA Management
- Active Directory Server Roles in IDA Management
- Overview of ILM 2007

Lab: Exploring IDA Solutions
- Explore how Active Directory Server Roles will provide IDA Management solutions

Module 3: Introduction to Active Directory Certificate Services
Lessons
- Overview of Active Directory Certificate Services
- Understanding Active Directory Certificate Services Certificates
- Implementing Certificate Enrollment and Revocation

Lab: Exploring Active Directory Certificate Services
- Requesting Certificates Using Web Enrollment
- Managing Certificate Requests and Revocation

After completing this module, students will be able to:
- Request certificates using Web enrollment.
- Manage certificate requests.

Module 4: Configuring AD CS
Lessons
- Overview of PKI
- Deploying a CA Hierarchy
- Installing AD CS
- Managing CA

Lab: Configuring AD CS
- Installing the AD CS Server Role
- Issuing and Installing a Subordinate Certificate
- Publishing the CRL

Module 5: Deploying and Managing Certificates
Lessons
- Deploying Certificates by Using AD CS
- Deploying Certificates by Using Autoenrollment
- Revoking Certificates
- Configuring Certificate Templates
- Configuring Certificate Recovery

Lab: Deploying and Managing Certificates
- Configuring AD CS Web Enrollment
- Configuring Certificate Enrollment
- Configuring AD CS Certificate Revocation
- Configuring AD CS Certificate Templates
- Managing Key Archival and Recovery

Module 6: Introduction to Active Directory Lightweight Directory Services
Lessons
- AD LDS Overview
- Implementing and Administering AD LDS
- Implementing AD LDS Replication
- Comparing AD DS and AD LDS

Lab: Configuring AD LDS
- Configuring AD LDS Instances and Application Partitions
- Configuring AD LDS Access Control
- Configuring AD LDS Replication

After completing this module, students will be able to:
- Configure AD LDS instances and application partitions.
- Configure AD LDS access control.
- Configure AD LDS replication.

Module 7: Configuring AD LDS
Lessons
- Installing and Configuring AD LDS
- Configuring AD LDS Instances
- Configuring AD LDS Replication
- Configuring AD LDS Integration with AD DS

Lab: Configuring AD LDS
- Configuring an AD LDS instance and an application partition
- Configuring AD LDS Access Control
- Configuring AD LDS Replication
- Configuring AD DS and AD LDS synchronization

Module 8: Introduction to Active Directory Federation Services
Lessons
- AD FS Overview
- AD FS Deployment Scenarios
- Configuring AD FS Components

Lab: Exploring AD FS
- Implementing the AD FS Components (Discussion)
- Configuring the AD FS Resource Partner Organization

After completing this module, students will be able to:
- Describe how to implement the AD FS components.
- Configure the AD FS resource partner organization.

Module 9: Configuring AD FS
Lessons
- Deploying AD FS
- Implementing AD FS Claims

Lab: Configuring AD FS for Federated Web SSO by Using Forest Trust Scenario

- Installing the AD FS Server Role
- Configuring Certificate Requirements
- Configuring the AD FS Web Agent
- Configuring the Web Server application on a virtual computer
- Configuring the Forest Trust and the Federated Trust Policies
- Configuring the Federation Service Within the Internal Network
- Configuring the Federation Service Within the Extranet
- Testing the AD FS Implementation

Lab: Configuring Active Directory Federation Services by Using Federated Web SSO Scenario

- Installing the AD FS Server Role
- Configuring Certificate Requirements
- Configuring the AD FS Web Agent
- Configuring the Web Server application on a virtual computer
- Configuring the Federation Trust Policies
- Configuring the Account Partner Federation Service
- Configuring the Resource Partner Federation Service
- Testing the AD FS implementation

Module 10: Introduction to Active Directory Rights Management Services

Lessons

- AD RMS Overview
- Understanding AD RMS
- Managing AD RMS

Lab: Exploring AD RMS

- Verifying AD RMS Functionality
- Customizing the AD RMS Configuration

After completing this module, students will be able to:

- Verify AD RMS functionality.
- Customize the AD RMS configuration.

Module 11: Configuring AD RMS

Lessons

- Installing and Configuring AD RMS Server Components
- Administering AD RMS
- Implementing AD RMS Trust Policies

Lab: Configuring AD RMS

- Installing the AD RMS Server Role
- Managing AD RMS rights policy templates
- Configuring Trust Policies
- Testing AD RMS functionality

Module 12: Introduction to Active Directory Domain Services

Lessons

- Overview of AD DS
- Overview of AD DS Logical Components
- Overview of AD DS Physical Components

Lab: Exploring AD DS Components and Tools

- Examining the AD DS Logical Components
- Examining the AD DS Physical Components

After completing this module, students will be able to:

- Install the AD DS management tools on a Windows Vista computer.
- Describe the AD DS logical components
- Describe the AD DS physical components

Module 13: Creating Active Directory Domain Services User and Computer Objects

Lessons
- Managing User Accounts
- Creating Computer Accounts
- Using Queries to Locate Objects in AD DS

Lab: Creating AD DS User and Computer Accounts
- Creating and Configuring User Accounts
- Creating and Configuring Computer Accounts

After completing this module, students will be able to:
- Create and configure user accounts
- Create and configure computer accounts.

Module 14: Creating Active Directory Domain Services Groups and Organizational Units

Lessons
- Introduction to AD DS Groups
- Managing Group Accounts
- Creating Organizational Units

Lab: Creating an OU Infrastructure
- Creating AD DS Groups
- Planning an OU Hierarchy (Discussion)
- Creating an OU Hierarchy

After completing this module, students will be able to:
- Create and configure group accounts.
- Create and configure organizational units
- Apply considerations when creating an OU design.

Module 15: Managing Access to Resources in Active Directory Domain Services

Lessons
- Managing Access Overview
- Assigning Permissions to Shared Resources
- Managing NTFS File and Folder Permissions
- Determining Effective Permission

Lab: Managing Access to Resources
- Planning a Shared Folder Implementation (Discussion)
- Implementing a Shared Folder Implementation
- Evaluating the Shared Folder Implementation

After completing this module, students will be able to:
- Plan a shared folder implementation.
- Implement a secure shared folder implementation.
- Evaluate the shared folder implementation.

Module 16: Implementing Group Policy

Lessons
- Creating and Configuring GPOs
- Configuring Group Policy Refresh Rates and Group Policy Settings

- Managing GPOs
- Verifying and Troubleshooting Group Policy
- Planning a Group Policy Strategy for the Enterprise

Lab: Implementing Group Policy
- Creating and Configuring GPOs
- Linking GPOs
- Verifying Group Policy Settings

Module 17: Managing the User Environment by Using Group Policy

Lessons
- Introduction to Managing Software Deployment
- Deploying Software
- Configuring Software Deployment
- Maintaining Deployed Software
- Troubleshooting Software Deployment
- Planning a Software Deployment Strategy

Lab: Managing the User Environment by Using Group Policy
- Deploying Software
- Configuring Software Deployment
- Maintaining Deployed Software
- Troubleshooting Software Deployment
- Planning a Software Deployment Strategy

Module 18: Maintaining Access Management Solutions

Lessons
- Supporting AD CS
- Maintaining AD LDS
- Maintaining AD FS
- Maintaining AD RMS

Lab: Maintaining Access Management Solutions
- Configuring CA Event Auditing
- Implementing role-based administration in AD CS
- Backing up a CA
- Reconfiguring AD RMS cluster settings
- Generating AD RMS Reports
- Configuring AD RMS logging

Module 19: Troubleshooting IDA Solutions

Lessons
- Troubleshooting AD CS
- Troubleshooting AD LDS
- Resolving AD FS Issues
- Solving AD RMS Issues

Lab: Troubleshooting IDA Solutions
- Identifying Tools and Troubleshooting Techniques of IDA Solutions

5. **Литература**

MOC #6424: Fundamentals of Windows Server 2008 Active Directory – Students book

MOC #6426: Configuring and Troubleshooting Identity and Access Solutions with Windows Server 2008 Active Directory – Students book