

Faculty: FACULTY OF TELECOMMUNICATIONS AND MANAGEMENT

Department: INFORMATION TECHNOLOGIES

Professional Field: 5.3 COMMUNICATION AND COMPUTER TECHNOLOGY

Specialty: COMPUTER ADMINISTRATION OF SOFTWARE APPLICATIONS

Educational-qualification degree: PROFESSIONAL BACHELOR

LEARNING COURSE DESCRIPTION

1. Course title: *Web server administration*

2. Course code: *P.16.020.1*

3. Type of the course: *compulsory*

4. Level: *Professional Bachelor*

5. Year of study: *third*

6. Semester: *third*

7. Number of credits: *5*

8. Name of the lecturer: *Assoc. Prof. Dr. Eng. Pavlinka Radoyska*

9. Course learning outcomes:

The aim of the course is to give students a systematic theoretical knowledge and practical skills of the role of web servers on both the most popular platforms - Linux and Windows Server. The lectures present the main components and principle of operation of Apache HTTP Server and Internet Information Services.

Students who complete their course must have the skills to install and configure both web servers, theoretically explain the role of the web server, and perform basic administrative tasks.

Competencies: Upon successful completion of the course students should be able to:

- independently install and configure Apache HTTP Server and IIS;
- administer websites and maintain web-based applications;
- to make backup copies, restore and monitor the server systems;
- to eliminate problems that occurred during the operation of the servers.

10. Teaching methods:

Teaching methods: the training in the discipline "Web server administration" is carried out in the third semester, according to the current curriculum. The lectures are conducted in the classical way and the students get acquainted sequentially with the provided material. The statements are illustrated with examples that make the work of the students in the exercises as easy as possible. The lectures are richly illustrated with graphic material, which is presented through presentations with a multimedia projector and are supplemented with examples. The practical exercises are conducted in a laboratory equipped with the necessary computer equipment for installation, configuration and administration of web servers. Before each practical lesson, students are informed about the need for preliminary preparation on the topic.

11. Prerequisites:

Students should have prior knowledge in the disciplines: Fundamentals of programming, Fundamentals of operating systems, Databases.

Courses using the discipline are: Weblogic 1 application server, Weblogic 2 application server, Data backup systems - Backup..

12. Course contents:

The course focuses on: HTTP protocol - principle of communication and codes; HTML language - interpretation and visualization; Client-server communication; Principle of operation of a web browser; Types of content - static and dynamic content, server executable code; Types of web servers; Main characteristics; Features in the processing of applications; Main components of Apache HTTP and IIS web servers; Presentation of Apache HTTP Server and Internet Information Services - configuration, logs, document root, modularity; Apache HTTP Server - installation, structure and management; status monitoring (status monitoring), configuration, modules; Apache HTTP Server - virtual hosts; frequently used modules: mod_rewrite, mod_proxy; Internet Information Services - installation and configuration; administer websites and support web-based applications; application

security and remote access; backup records, recovery and monitoring; Server executable code - PHP; Server executable code - ASP; NET; The role of the web server in complex environments - balancing, filtering, forwarding requests.

13. Bibliography:

Basic literature:

1. D.K. Academy, Практически наръчник по системно и мрежово администриране. Windows Server 2019, ISBN :9786197356694, Асеновци, 2019
2. The Art of Service - Apache Web Server Publishing, Apache Web Server A Complete Guide - 2021 Edition, , ISBN: 9781867471653, 2020
3. Петров, М. Ръководство за web server Apache, https://dhstudio.bg/apache_guide.html, (последно посетен на 08.04.2021)
4. Internet Information Services (IIS) 7 Manager, <https://www.microsoft.com/en-us/download/details.aspx?id=2299>
5. HTML Tutorial - W3Schools, <http://www.w3schools.com/html/> (последно посетен на 08.04.2021)
6. Apache HTTP Server, <https://httpd.apache.org/> (последно посетен на 08.04.2021).

Additional literature:

1. Рашидов, А. Инсталиране и конфигуриране на web сървъри под Linux и Windows, ISBN: 978-954-490-298-8, ЕКС-ПИРЕС, 2012
2. Apache HTTP Server Documentation Version 2.2, Copyright с 2005 The Apache Software Foundation, <http://archive.apache.org/dist/httpd/docs/httpd-docs-2.2.0.en.pdf>
3. Bob Dowling and JonWarbrick, Web Server Management: Running Apache 2.2 under Linux, <http://people.ds.cam.ac.uk/jw35/courses/apache/course.pdf>
4. ASP.NET, Copyright 2014 by Tutorials Point (I) Pvt. Ltd., https://www.tutorialspoint.com/asp.net/asp.net_tutorial.pdf
5. ASP.NET Web Programming, Hans-Petter Halvorsen, 2016, http://home.hit.no/~hansha/documents/microsoft.net/tutorials/asp_net_web_programming/ASP.NET%20and%20Web%20Programming.pdf
6. Matt Doyle, Beginning PHP 5.3, Published by Wiley Publishing, Inc. 10475 Crosspoint Boulevard Indianapolis, IN 46256, Copyright © 2010 by Wiley Publishing, Inc., Indianapolis, Indiana, ISBN: 978-0-470-41396-8, <http://cs.petrus.ru/~musen/php/2013/Books/Beginning%20PHP%205.3%20by%20Matt%20Doyle.pdf>.

14. Assessment methods and criteria:

The course ends with an ongoing assessment. The final grade for the course is formed by a test consisting of ten questions. The answer to each question of the test is evaluated. Comprehensive, accurate and thorough development of one question from the test is evaluated with 10 points. Maximum number of points - 100.

15. Language of instruction: *Bulgarian*