

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: *WebSphere Application Server*

2. Course code: *P.16.043.1*

3. Type of the course: *compulsory*

4. Level: *Professional Bachelor*

5. Year of study: *third*

6. Semester: *sixth*

7. Number of credits: *4*

8. Name of the lecturer: *Spas Filipov, Assoc. Prof. Dr. Krasimira Ivanova*

9. Course learning outcomes:

The aim of the course is to give students a systematic theoretical and practical knowledge of logical and physical architecture, installation, configuration and administration of WebSphere or SharePoint Server 2013.

Students who have completed their training in the discipline must acquire:

Basic knowledge for: information architecture design in WebSphere or SharePoint Server 2013; installing and configuring WebSphere or SharePoint Server 2013; taxonomy management, enterprise search engine configuration.

Practical skills to: configure a pre-installed server; explain theoretically the role of the various components of the server; perform basic administrative tasks.

Competencies: After successful completion of the course students should be able to: install and configure servers based on WebSphere or SharePoint Server 2013; create messaging interfaces; work as administrators and analyze web application errors using WebSphere or SharePoint Server 2013; know the basics of programming applications running WebSphere or SharePoint Server 2013.

10. Teaching methods:

Teaching methods: the course " *WebSphere Application Server*" is conducted in the sixth semester, according to the current curriculum through lectures grouped by two lessons one lesson per week for 10 weeks and practical exercises grouped by two lessons weekly for 10 weeks.

Project-based learning: From the lectures the students get acquainted sequentially with the provided material. The study material is illustrated with examples and applications that facilitate the work of students in the exercises. The practical exercises are conducted in a computer room. 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: Networks and Protocols 1, Computer Architectures, Web Server Administration, Networks and Protocols 2, Application Server Weblogic 1, Systems of archiving data - Backup, Network load balancing, Firewalls.

Courses using the discipline are: graduating discipline.

12. Course contents:

The course focuses on: Introduction to WebSphere / SharePoint Server 2013. Information and logic architecture design in WebSphere / SharePoint Server 2013. Methods for classifying and storing information. Planning and construction of logical components. WebSphere / SharePoint Server 2013 physical architecture design. Hardware requirements and topologies. Installation and configuration of WebSphere / SharePoint Server 2013. Creating Web applications and Site collections. Terminology and authentication areas. Planning and configuring service applications. Types and architecture of service applications. Rights and user management in WebSphere / SharePoint Server 2013. Configuring authentication for WebSphere / SharePoint 2013. Administering users and groups. Security of deploying WebSphere / SharePoint 2013. Taxonomy

management. Configuring user profiles. Configure the Enterprise Search Engine. Monitoring and support of WebSphere / SharePoint 2013 environments. Windows Azure and Office365.

13. Bibliography:

Basic literature:

1. Installing IBM WebSphere MQ, US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp, Copyright IBM Corporation 2016. <https://www.ibm.com/docs/en/ibm-mq/9.1?topic=windows-installing-mq-server> (accessed: 18.04.2021).
2. Designing an enterprise application to use JMS <https://www.ibm.com/docs/en/was/8.5.5?topic=pjmd-designing-enterprise-application-use-jms> (accessed: 18.04.2021).
3. IBM MQSeries: архитектура системы очередей сообщений <http://citforum.ru/programming/digest/ibmmqs.shtml> (accessed: 18.04.2021).
4. WebSphere MQ for Windows. Quick Beginnings. Version 5.3 <https://www.ibm.com/support/pages/WebSphere-mq-windows-v53-ga-1-readme> (accessed: 18.04.2021).

Additional literature:

1. IBM MQ messages <https://www.ibm.com/docs/en/was-nd/9.0.5?topic=provider-mq-messages> (accessed: 18.04.2021).
2. WebSphere MQ for AIX <https://www.webagesolutions.com/install/amqaac06.pdf> (accessed: 18.04.2021).
3. Queue manager clusters <https://www.ibm.com/docs/en/ibm-mq/7.5?topic=explorer-queue-manager-clusters> (accessed: 18.04.2021).
4. IBM WebSphere MQ V5.3 Application Programming <https://www.scribd.com/document/421480465/WebSphere-MQ-Application-Programming> (accessed: 18.04.2021).

14. Assessment methods and criteria:

The course ends with an ongoing assessment.

The final assessment of the course is formed on the basis of ongoing assessment of successful solving of tasks from two tests and activity during lectures and practical exercises.

15. Language of instruction: *Bulgarian*