

Faculty: FACULTY OF TELECOMMUNICATIONS AND MANAGEMENT
Department: INFORMATION TECHNOLOGIES
Professional Field: 5.3 COMMUNICATION AND COMPUTER TECHNOLOGY
Specialty: CYBERSECURITY OF COMMUNICATION TECHNOLOGIES
Educational-qualification degree: BACHELOR

LEARNING COURSE DESCRIPTION

1. Course title: *COMPUTER ARCHITECTURES*

2. Course code: *B.43.020.1*

3. Type of the course: *compulsory*

4. Level: *Bachelor*

5. Year of study: *second*

6. Semester: *third*

7. Number of credits: *4.5*

8. Name of the lecturer: *Prof. drs Dimitar Radev*

9. Course learning outcomes:

The purpose of the course is to give students, in a systematized form, basic knowledge about the individual devices included in modern computer architectures and the organization of the computing process in them. The discipline is practically oriented and introduces students to modern technologies for configuring a computer system, performing operations in central devices, input-output data exchange, operation of input-output devices, physical components and devices for connecting computers to a network.

10. Teaching methods:

Lectures + laboratory exercises

11. Prerequisites:

No

12. Course contents:

Concept of computer architecture and development of generations of computers, Organization of the computational process, Execution of operations in an Arithmetic - logical device, Processor registers - purpose, structure, types, Addressing methods, subroutine processing and interrupt processing, Memory organization and configuration - segmentation and paging, cache, etc.

13. Bibliography:

Basic literature:

1. D.K. Academy, Практически наръчник по системно и мрежово администриране. Morris, M., Computer System Architecture, PDFDRIVE, 2014.
2. Stallings, W., Computer Organisation and Architecture, PDFDRIVE, 2012.
3. Englander, Irv, The Architecture of Computer Hardware, System Software and Networking, John Wiley & Sons, 2010.
4. Боровска, П. Компютърни системи, Сиела, София, 2009.
5. Танева, Л. Компютърни архитектури, ЮЗУ „Неофит Рилски“, 2013.

14. Assessment methods and criteria:

A point system is used to evaluate students. Knowledge, skills and competence are currently assessed through pre-announced written control tests to check the theoretical and practical assimilation of the learning material, the protection of the protocols from the practical exercises, as well as their ability to independently solve the tasks set in lectures. The discipline ends with a written exam.

15. Language of instruction: *Bulgarian, English*