



APPROVED

RECTOR:

(prof. DSc eng. Ivan Kralov)

Date:

Educational degree:

Bachelor of science (BSc)

Professional qualification:

Bachelor in engineering

Period of study:

4 years

Type of study:

regular

**QUALIFICATION CHARACTERISTICS
of a bachelor in engineering in the specialty**

“COMPUTER SYSTEMS AND TECHNOLOGIES”

Professional direction: **5.3. Communication and computer engineering**



1. Educational purposes

We are witnessing the mass and widespread penetration of information technology in our lives. This raises the question of creating highly qualified specialists in this field. These professionals must be familiar with modern computer systems, computer networks, modern programming languages, environments and databases in order to meet today's challenges. The bachelor's course in Computer Systems and Technologies is oriented to the specifics of computer engineering, including a variety of modern software and hardware disciplines.

2. Knowledge and skills required for successful professional activity

The bachelor's course includes lectures, seminars and laboratory exercises, course assignments and projects, practicum and ends with a diploma project. At the beginning of the course there are fundamental engineering disciplines and basic disciplines for communication and computer technology. In the last two years, specialized modern disciplines in the field of computer engineering have been studied. The last three semesters are profiled in two directions - "Software Systems" and "Computer Engineering". The course is focused on creating and developing students' knowledge in general engineering disciplines and specific areas of professional realization in the field of ICT. The realization of practical tasks prepares students for their future realization and stimulates them to make independent decisions and work in a team.

3. General theoretical training

The course aims to introduce students to the basic knowledge of the qualification "engineer" and to expand students' theoretical knowledge in modern areas of communication and computer technology such as: programming languages, algorithms and data structures, computer networks, logic circuits and systems, operating systems, databases.

4. Specific training

To develop the specific capabilities of students, specialized subjects are studied such as: Computer Peripherals, Computer Graphics, Computer Architectures, Software Environments, Microprocessor Systems, Embedded Systems, Object-Oriented Programming, Parallel Programming, System Programming, Training and Self-Learning in Programming.

To develop practical skills, disciplines are studied, such as: Modern JAVA technologies, Web programming, Creating application software with C #, XML programming, Android programming, Applied network programming, 3D design and printing.

5. Professional competencies and realization

The Diploma in Computer Engineering allows graduates to work in a wide range of fields such as highly educated professionals and team leaders, projects leaders and many others. The development of practical knowledge and opportunities for internships in real companies allows to master techniques for developing applications in the field of information systems, computer communications, software and computer engineering, design of systems with programmable logic, embedded systems and automation, parallel computing and distributed systems. Computer engineers are extremely successful in the design, integration, configuration and maintenance of networks and communication systems.