09.04.01 Informatics and Computer Engineering

High-Performance Computer Systems

Partner university: Almaty University of Power Engineering and Telecommunications (Kazakhstan)

Program objective

The program examines the main features and needs of high-performance computer systems. A number of subjects that are unique to partner universities allow us to give our students the widest range of knowledge and skills in this area, and various laboratory works and practical exercises reinforce theoretical knowledge in practice. In addition to studying such systems, students get acquainted with the differences in computing systems, study their life cycle, operational requirements and receive the necessary competencies for their productive and correct maintenance.

Curriculum features

- Operating systems and programming languages

- Information security

- Mathematical foundations of computer systems

- Fundamentals of interfaces and computer devices design

- Computer graphics and image processing

- Microprocessor devices, algorithms and systems

- Fundamentals of databases and data storage systems

- Fundamentals of robotics

- Modern challenges of informatics and computer engineering

Key research areas

- development of computer systems and networks;

- design of complex computer systems;

- development of system and application software;

- comprehensive analysis of information security.