**Basics of computer science (ECTS credits: 6)**

Language: the course is offered in Serbian and Hungarian.

**Course description:**

The course covers the fundamental concept of informatics, data processing systems, hardware components of computers, and fundamentals of operating systems and computer networks. Emphasis is placed on the logical and mathematical background of computer science: conversions and operations in various number systems, especially in the binary and hexadecimal systems, logical operators, code systems, and algorithms.

Algorithms and programming fundamentals are also supported by laboratory exercises where students learn programming in Python.

**Aims:**

* to help students to develop algorithmic thinking
* to gain knowledge of computers as one of the basic tools for engineers
* to develop programming skills

**Learning outcomes:**

After completing the course the student should be able to:

* handle various number systems of various bases
* understand the purpose and usage of coding systems
* design conditional and cycle structures of algorithms
* create simple programs in Python