- Selected problems of social and professional computer science, in particular issues of copyright and intellectual property.
- Formulating problems specifications, different ways of recording algorithms, the basic structures of imperative programming languages.
- Abstract data types, modularization and generic programming.
- The complexity and effectiveness of the algorithms for the example of sorting algorithms, and dynamic programming.
- Methods of describing the syntax of programming languages. Backus-Naur Form and EBNF.
- Von Neumann computer model, the basic principles of construction and operation of the processor, memory and input / output devices.
- Memory management during the program.
- Computer representation of information, machine language. Interpret, compile and run programs. Random-access machine (using a simulator machine RAM).

- Fundamentals of logic circuits (combinational circuits, simple sequential circuits).

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