

# BAI0181 Programming languages I.

## Course information

**Requirement:** practical certificate

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## Thematics

Development of high-level programming languages. Classification of programming languages: imperative, declarative, special and alternative languages.

Syntax descriptive formal tools. Character set. Lexical elements (symbolic names, label, comment, literals). Bound and free-form languages. Variable, named constant.

Data types (built-in and programming, simple and complex). Declarations.

Expressions, precedence, expression evaluation.

Executable instructions. Valuable, conditional instructions. Multidirectional branching.

Cycle organization options, pre-test, back-test, conditional cycles with a prescribed number of steps

Simple algorithms

Search and sorting algorithms

Program units, procedures, functions

Parameter evaluation, parameter transfer. Scope and lifetime.

Exception handling

Management of files, operations with text and binary files

Indicators

Dynamic data structures

## Requirements

Writing two assessments.

5-5 programming tasks are to be prepared, for which 1 point can be given per task.

Point limits: 0-3: insufficient, 4-5: sufficient, 6: medium, 7-8: good, 9-10: excellent

An unsuccessful grade can be corrected once during the exam period, at the time announced in Neptun.

## Bibliography

- Brian W. Kernighan, Dennis M. Ritchie. C Programming Language, Second Edition
- JavaTpoint: C programming Language Tutorial  
<https://www.javatpoint.com/c-programming-language-tutorial>