Level: bachelor	
Course title: Teaching methods in programming (I371)	
Status: obligatory	
ECTS: 7	
Requirements: None	

Learning objectives

Enabling students to understand the basic teaching principles in programming and different programming techniques.

Learning outcomes

Minimal: Students should demonstrate understanding of the basic concepts of (computer) programming, ability to analyze and define problems, and create implementation of solutions and present them using the appropriate teaching methods.

Desirable: Students should demonstrate understanding of the basic concepts of (computer) programming, ability to analyze and define real problems based on logic, and to create efficient and elegant solutions on a very high level using the appropriate teaching methods.

Syllabus

Theoretical instruction

Forms of thinking in the programming process. Basic features in popular programming languages. Basic concepts present in almost all of the programming languages. Programming styles and programming languages that support them. Procedural programming. Choice of the first programming language, criteria, advantages and disadvantages. Overview of procedural programming languages that are used in schools and their comparison. Topics to be studied in schools. Suitable tasks to illustrate the concepts introduced (simple data types, control structures, structured data types). Analysis of the presented tasks and comparison of their different solutions.

Practical instruction

Presentation of the basic concepts of programming languages, creating different software solutions and their comparative analysis.

Weekly teaching load				Other:
Lectures: 2	Exercises: 4	Other forms of teaching:	Student research:	