

Title Programming languages and paradigms 2	Code 1010331441010330636
Field Computer Science	Year / Semester 2 / 4
Specialty -	Course core
Hours Lectures: 2 Classes: - Laboratory: 1 Projects / seminars: -	Number of credits 4
	Language polish

Lecturer:

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Status of the course in the study program:

Programming languages and paradigms 2

Assumptions and objectives of the course:

Choosing adequate programming styles and languages to solve problems.
Learning of principles of declarative programming i.e. functional programming and logic programming.
Presentation of methods of partial data representation and processing.
Introduction to evolutionary programming and constraint programming.

Contents of the course (course description):

Logic as programming language, procedural aspect of SLD-resolution.
Data structures, procedures and programming techniques in Prolog.
Functional programming: data types, functions, overview of languages and environments.
Current trends in declarative programming: extended data structures and representation of partial data.
Some non-classical programming techniques: evolutionary programming, constraint-based programming.

Introductory courses and the required pre-knowledge:

Basics of logic, SLD-resolution, recursive functions and lambda calculus, formal languages, object oriented modeling and programming with threads.
Fundamentals of data bases.

Courses form and teaching methods:

Lectures illustrated with slides, laboratory exercises.

Form and terms of complete the course - requirements and assessment methods:

Examination ? paper test (with ?closed? and ?opened? queries).
Control tests ? declarative programming (the 4th and 7th unit) and exercises.

Basic Bibliography:

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Additional Bibliography:

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