1.	**Field of study**	**Computer Science**
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2022/2023 (summer term), 2023/2024 (summer term), 2024/2025 (summer term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

Module: Modern programming languages

Module code: W4-IN-S2-20-1-NJP

1. Number of the ECTS credits: 4

2. Learning outcomes of the module

code	description	learning outcomes of the programme	level of competence (scale 1-5)
M_001	Student can choose and implement the appropriate structure in the programming language.	K_K01 K_U01 K_U04 K_W04	1 2 1 2
M_002	Student can describe algorithms using selected programming language structures.	K_K01 K_U04 K_W01 K_W02	1 1 3 3
M_003	Student has the knowledge of the programming language.	K_U04 K_U06 K_W02 K_W04	1 1 2 2

3. Module description

Description	The following topics will be presented. Kotlin for Server Side, Android, JavaScript, Native, Data Science programming. Basic syntax, idioms and coding conventions. Basic types, packages and imports. Classes and objects. Functions, lambdas and inline functions. Collections. Coroutines. Multiplatform programming. Core libraries. Kotlin for Java and JavaScript. Native programming.
Prerequisites	

4. Assessment of the learning outcomes of the module			
code	**type**	**description**	**learning outcomes of the module**
W_001	Written exam	Knowledge verification based on the content presented in the lecture. The exam is carried out in the form of a test.	M_001, M_002, M_003
W_002	Passing exercises	Submission of projects (applications) within a specified period as a verification of skills acquired during problem solving.	M_001, M_002, M_003

5. Forms of teaching						
code	**form of teaching**			**required hours of student's own work**		**assessment of the learning outcomes of the module**
	type	**description (including teaching methods)**	**number of hours**	**description**	**number of hours**	
Z_001	lecture	Lectures are carried out by using audiovisual means.	30	Studying lecture topics basing on books and materials from the Internet.	15	W_001
Z_002	laboratory classes	Compulsory classes in the computer lab conducted according to the schedule.	30	Solving practical tasks. Development and practical implementation of the project.	45	W_002