1.	**Field of study**	**Computer Science**
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2021/2022 (summer term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

Module: Introduction to reverse engineering

Module code: W4-INA-S2-20-F-WDIW

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	The student knows and can explain the operation of advanced mechanisms used in high- and low-level languages.	K_W02 K_W04	5 5
M_002	The student can prepare a presentation devoted to advanced programming issues.	K_U04	5
M_003	The student is able to analyse a computer program using tools such as a debugger and disassembler.	K_U09	5

3. Module description

Description	The course aims at introducing the students to reverse engineering. Students will use popular and free disassemblers, such as IDAPro, to the analysis of different program types, for example computer viruses, and malware. The program of the course includes: - use of reverse engineering tools, - reverse engineering of binary files, - introduction to code analysis, - analysis and reimplementation of simple programs, - analysis of viruses and malware.
Prerequisites	

4. Assessment of the learning outcomes of the module			
code	**type**	**description**	**learning outcomes of the module**
W_001	Written test.	The test comprises theoretical questions concerning the issues discussed in the lecture.	M_001
W_002	Presentation of the assigned topic	The students prepare presentations related to the subject of reverse engineering.	M_002
W_003	Oral test	It is a discussion on how a given computer programme works.	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	The content of the lecture will be available in the multimedia form with some sample project tasks.	15	The students study the topics presented in the lectures and prepare for the exam individually.	30	W_001, W_002, W_003
Z_002	laboratory classes	During the classes, the students prepare design tools and complete tasks specified by the teacher.	30	The students implement projects at home or on computers at the Institute.	45	W_001, W_002, W_003