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

Code of the learning outcome of the programme	**Learning outcomes** The graduate:	Codes of the second-order PRK characteristics to which the learning outcome of the programme is related
KNOWLEDGE		
K_W01	has an expanded and in-depth knowledge of mathematics to the extent necessary for formulating and solving complex tasks in the field of computer science	2018_P7S_WG
K_W02	is familiar with advanced IT methods, techniques and tools used to solve complex IT problems	2018_P7S_WG
K_W03	has an extended knowledge of the operation, maintenance and management of modern computer systems, including the context of the operation of computer networks	2018_P7S_WG
K_W04	has knowledge of programming, implementation of algorithms, paradigms and programming styles, methods of verifying the correctness of programmes, formal languages and various programming environments	2018_P7S_WG
K_W05	has a structured theoretical knowledge of the design and implementation methods of complex IT systems used in various fields, including teamwork methods	2018_P7S_WG
K_W06	has an orderly and theoretically built-up knowledge of the basics of protocols and services on computer networks and specialized communication protocols	2018_P7S_WG
K_W07	has knowledge necessary to understand the social, economic, legal and ethical conditions of engineering activities	2018_P7S_WK
K_W08	has an enhanced knowledge of intellectual property protection and patent law; has a basic knowledge of quality management and business conduct	2018_P7S_WK
K_W09	has an enhanced knowledge of data processing and analysis	2018_P7S_WG
W_OOD	has an in-depth knowledge of the selected scientific methods and is familiar with issues specific for the discipline of science not related to the programme	2018_P7S_WG, 2018_P7S_WK
SKILLS		
K_U01	can obtain information from literature, databases and other properly selected sources, can integrate the information obtained, interpret it, draw conclusions and formulate and justify opinions	2018_P7S_UW
K_U02	can work individually and collectively, can lead a small team, can develop and implement a work schedule to meet deadlines	2018_P7S_UO
K_U03	can develop detailed documentation on the implementation of a project task and prepare the elaboration of the results of the implementation of this task	2018_P7S_UW
K_U04	can prepare and present an oral presentation on the implementation of the project task and lead a discussion on the presentation	2018_P7S_UK
K_U05	can critically assess existing IT systems and propose their improvement	2018_P7S_UW
K_U06	can define and implement the process of self-education e.g. to improve professional competences	2018_P7S_UU

K_U07	communicates in a foreign language using advanced language communication competences, has the ability to comprehensively read complex scientific texts and has an in-depth ability to prepare various written works (including research ones) and oral presentations on detailed issues in a given programme in a foreign language	2018_P7S_UK
K_U08	can use learned mathematical methods and models, as well as computer simulations to solve project tasks	2018_P7S_UW
K_U09	can use advanced IT methods, techniques and tools to solve complex IT problems and plan and perform experiments in this field	2018_P7S_UW
K_U10	can design an IT system by defining the basic structural and object models of the designed system	2018_P7S_UW
U_OOD	has advanced skills to set scientific questions and analyse problems or to solve problems practically on the basis of the course content, experience and skills gained in a particular field of science unrelated to the leading discipline of the study programme	2018_P7S_UW
SOCIAL COMPETENCES		
K_K01	understands the need and the necessity to continuously learn and improve one's professional and personal competences	2018_P7S_KK
K_K02	is aware of the importance and understands the non-technical aspects and effects of professional activities of the IT specialist and the related responsibility for decisions made	2018_P7S_KO
K_K03	acts ethically, understands the importance of intellectual honesty of themselves and others	2018_P7S_KR
K_K04	is aware of the limitations of the individual research method and sees the need for a comprehensive scientific analysis of computer science problems	2018_P7S_KK
K_K05	is aware of the social role of a university graduate and, in particular, understands the need to formulate and communicate to the public information and opinions on the achievements of computer science and other aspects of the activities of an IT engineer e.g. through the media; tries to provide this information in a commonly understood manner	2018_P7S_KO
K_OOD	understands the need for multidisciplinary approach to problem solving, integrating knowledge or using skills from various disciplines, and practicing self-study for deepening the acquired knowledge	2018_P7S_KK