1.	**Field of study**	**Computer Science**
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2025/2026 (winter term)
4.	Level of qualifications/degree	first-cycle studies (in engineering)
5.	Degree profile	general academic
6.	Mode of study	full-time
7.	ISCED code	0613 (Software and applications development and analysis)
8.	Number of semesters	7
9.	Degree	inżynier (Engineer - Bachelor's Degree with engineering competencies)
10.	General characteristics of the field of study and the assumed concept of education	The Computer Science major harmoniously combines acquiring knowledge in the canon of computer science, the ability to use current information technologies, and developing practical skills as part of project classes. This field of study is based on three pillars: knowledge, Technologies, and Projects. Knowledge - modern computer science is a constant development and change, but the foundations of computer science and the basic sciences on which these foundations are based do not change. Knowledge of IT principles, rules, and methods is crucial for dealing with changing technologies. This pillar of the Computer Science field teaches the student to understand the fundamental principles, regulations and procedures of computer science so that, based on such a canon of computer science knowledge, he can keep up with changes and developments in this field. The Knowledge Pillar also provides a solid basis for master's studies and scientific development in computer science. Technologies—Using current and leading information technologies is crucial for competitiveness in the labour market, allowing the student to prepare for a well-paid job in the IT industry. Certificates and micro-credentials of professional competence obtained during studies may support obtaining such a job. This pillar of the Computer Science major provides practical preparation for implementing specific IT projects, both in the academic environment and the IT business. Projects - experience is an essential element of a professional IT specialist. The means to gain experience during studies is the implementation of individual and team IT projects, allowing you to acquire both technological skills and soft skills typical of teamwork. The projects will also enable you to complete an individual professional portfolio, cooperate with the business environment, and develop the ability to commercialize your projects. Such projects, as well as internships, are an ideal way to build your own professional and scientific interests. Computer Science education is focused on developing the student's individual abilities, independent learning skills, and creativity in solving problems. Methods and forms of schooling gradually evolve as studies progress, from education directed by academic teachers to education focused on individual activity and creativity development. This is achieved through individualized education and project classes. The student can individualize their education by selecting modules completed in the final semesters of studies. In this way, they can shape their Competence Profile by selecting modules from the pool of modules to choose from. The study program provides freedom in selecting such modules and offers modules to create specially developed competency profiles. Currently, the proposal for such profiles includes artificial intelligence, game design, software engineering, and cybersecurity issues. The offer of modules to choose from and the proposals for predefined Competency Profiles will change along with changes in the IT industry. Education in Computer Science is mainly based on solving practical problems, and the best environment for their implementation is project classes, in which students can implement their ideas under the supervision of experienced teachers. Design classes provide a

		field for the development of creativity and teach the use of the canon of IT knowledge, current technologies, and leading IT tools. Education based on problem-solving and project implementation also develops interpersonal competencies, group work skills, flexibility, adaptability and interdisciplinary activity.
11.	Information on the relationship between the studies and the university's strategy as well as the socio-economic needs that determine the conduct of studies and the compliance of learning outcomes with these needs	The expected learning outcomes were defined based on many years of cooperation between the Institute of Computer Science and companies, enterprises, and institutions whose activity profiles fall within the "Computer Science" discipline. The scope of this cooperation includes industry participation in implementing student engineering internships and diploma theses. An essential role in shaping the expected learning outcomes was played by analyzing the industry in which IT graduates are expected to operate in the labour market. In the announcement published by the Ministry of National Education on January 30, 2024 (MONITOR POLSKI 2024 R. POZ. 85) on the forecast of significant demand for employees in vocational education professions on the national and provincial labour market, which includes the following professions: competences were covered by the expected learning outcomes: programmer (range: national and Silesian Voivodeship), IT specialist (range: Silesian Voivodeship), IT specialist (range: Silesian Voivodeship), typhloinformatician (range: Silesian Voivodeship). The deficit for the profession of "database designers and administrators, programmers" for provincial cities was indicated in the "Professions Barometer 2024" report prepared by the Provincial Labor Office in Krakow. On a voivodeship scale, the profession is considered sustainable. The Polish Economic Institute calculates in its 2022 report that there is a shortage of 147,000 IT specialists, so their share among all employees in Poland is the same as in the European Union. According to the hays.pl report, 93% of IT companies plan to recruit employees in 2024, and 51% expect difficulty finding suitable candidates. 21% of IT specialists plan to change their jobs, and 60% count on a raise. Poland is digitizing intensively in many sectors, such as public administration, healthcare, education, banking and trade. The IT industry is one of the most dynamically developing areas of the economy, placing new demands on IT specialists entering the labour market. The answer to this must be an education program appropriately adapted to the changing market requirements, allowing for the education of a future IT specialist in a comprehensive way that meets the needs of the industry.
12.	Specializations	n/a
13.	General description of the specialization	
14.	The semester from which the specializations starts	n/a
15.	Percentage of the ECTS credits for each of the scientific or artistic disciplines to which the learning outcomes are related to the total number of ECTS credits (along with the indication of the leading discipline)	• *[leading discipline]* computer and information sciences (natural sciences): 60% • information and communication technology (engineering and technology): 40%
16.	Number of ECTS credits required to achieve the qualification equivalent to the level of study	210

17.	Percentage of the ECTS credits for optional modules in relation to the total number of ECTS credits	40%
18.	Total number of ECTS credits that a student must obtain in the modules taught	133
19.	Number of ECTS credits that a student must obtain in modules assigned to disciplines within the humanities or social sciences (not less than 5 ECTS) - in the case of fields of study assigned to disciplines within the fields other than, respectively, humanities or social sciences	12
20.	Number of ECTS credits - higher than 50% of the total number of credits - that a student must obtain: • in general university programmes within a module connected with research carried out in the scientific or artistic disciplines to develop his/her knowledge and research skills; • in practical programmes within a module to develop practical skills	144
21.	Total number of ECTS credits that a student must obtain in internships	9
22.	Internships (hours and conditions) in the case of practical programmes and in general university programme - if such requires internship	Internships are an integral part of the study program, carried out by students in individual fields, levels, profiles and forms of study. Internships are to help in confronting the knowledge acquired during studies with the requirements of the labour market, acquiring skills useful in the profession, learning about practical issues related to working in positions for which the student is prepared during the course of studies. The internship is to familiarize the student with professional language relevant to a specific industry and work culture. The rules for the organization of internships are set out in the Rector's ordinance. Detailed rules of apprenticeship taking into account the specifics of particular fields of study are set out in the field's of study apprenticeship regulations, in particular: learning outcomes assumed to be achieved by the student during the apprenticeship, framework apprenticeship program including a description of issues, dimension of apprenticeship (number of weeks of practice); form of internship (continuous, mid-year), criteria for choosing the place of internship, obligations of the student staying in the internship, obligations of the academic tutor, conditions for completing the internship by the student and conditions for exemption from the internship obligation in whole or in part. The number of ECTS and the number of hours are specified in the course structure.
23.	Graduation requirements	The condition for admission to the diploma examination is to achieve the learning outcomes provided for in the study program and to obtain a certificate of an appropriate level of language proficiency in a foreign language. The condition for graduation is to pass the diploma examination with at least a satisfactory result. A graduate receives a higher education diploma confirming obtaining the qualifications of the appropriate degree. Detailed rules for conducting the diploma examination are specified in the diploma regulations.