

PROGRAM OF STUDIES

FACULTY:	Faculty of Information and Communication Technology
MAIN FIELD OF STUDY:	Applied Computer Science
BRANCH OF SCIENCE:	Computer Engineering
DISCIPLINES:	D1 Information and Communication Technology (major discipline)
EDUCATION LEVEL:	second-level studies
FORM OF STUDIES:	full-time studies
PROFILE:	general academic
LANGUAGE OF STUDY:	English

Content:

1. Assumed learning outcomes – attachment no. 1 to the program of studies
2. Program of studies description – attachment no. 2 to the program of studies
3. Plan of Studies – attachment no. 3 to the program of studies

Resolution no. ... of the Senate of Wrocław University of Science and Technology

In effect since 2024/2025

ASSUMED LEARNING OUTCOMES

FACULTY: Faculty of Information and Communication Technology
MAIN FIELD OF STUDY: Applied Computer Science
EDUCATION LEVEL: second-level studies
PROFILE: general academic

Location of the main-field-of study:

Branch of science: Engineering and Technical Sciences (pol. Nauki inżynieryjno-techniczne)

Discipline / disciplines (for several disciplines, please indicate the major discipline)

Information and Communication Technology (pol. Informatyka techniczna i telekomunikacja)

Explanation of the markings:

P6U – universal first degree characteristics corresponding to education at the first-level studies - 6 PRK level *

P7U – universal first degree characteristics corresponding to education at the second-level studies - 7 PRK level *

P6S – second degree characteristics corresponding to education at the first-level studies - 6 PRK level *

P7S – second degree characteristics corresponding to education at the second-level studies - 7 PRK level *

W - category "knowledge"

U - category "skills"

K - category "social competences"

K (*faculty symbol*) _W1, K (*faculty symbol*) _W2, K (*faculty symbol*) _W3, ... - main-field-of study learning outcomes related to the category "knowledge"

K (*faculty symbol*) _U1, K (*faculty symbol*) _U2, K (*faculty symbol*) _U3, ... - main-field-of study learning outcomes related to the category "skills"

K (*faculty symbol*) _K1, K (*faculty symbol*) _K2, K (*faculty symbol*) _K3, ... - main-field-of study learning outcomes related to the category "social competences"

S (*faculty symbol*) _W..., S (*faculty symbol*) _W..., S (*faculty symbol*) _W..., ... - specialization learning outcomes related to the category "knowledge"

S (*faculty symbol*) _U..., S (*faculty symbol*) _U..., S (*faculty symbol*) _U..., ... - specialization learning outcomes related to the category "skills"

S (*faculty symbol*) _K..., S (*faculty symbol*) _K..., S (*faculty symbol*) _K..., ... - specialization learning outcomes related to the category "social competences"

... _inż. – learning outcomes related to the engineer competences

* delete as applicable

Main field of study learning outcomes	Description of learning outcomes for the main-field-of study Applied Computer Science After completion of studies, the graduate:	Reference to PRK characteristics		
		Universal first degree characteristics (U)	Second degree characteristics typical for qualifications obtained in higher education (S)	
			Characteristics for qualifications on 6 / 7* levels of PRK	Characteristics for qualifications on 6 and 7 levels of PRK, enabling acquiring engineering competences
KNOWLEDGE (W)				
K2IST_W01	Has an extended and deepened knowledge of mathematics and physics, useful for formulating and solving complex tasks in the field of applied informatics	P7U_W	P7S_WG	
K2IST_W02	Knows and understands the basic processes occurring during the life cycle of information objects and systems	P7U_W	P7S_WG	P7S_WG_inż
K2IST_W03	Knows the main development trends of the discipline of technical informatics and telecommunication	P7U_W	P7S_WG	
K2IST_W04	Is familiar with basic research methods and tools	P7U_W	P7S_WG	
K2IST_W05	Is familiar with various methods and techniques of representation and analysis of data	P7U_W	P7S_WG	
K2IST_W06	Has knowledge of the design of complex information systems and the management of such projects	P7U_W	P7S_WG	P7S_WG_inż
K2IST_W07	Knows ways to represent models used in computer science	P7U_W	P7S_WG	
K2IST_W08	Knows and understands the rules of setting up, conducting and developing various forms of business, taking into account economic, legal and other non-technical considerations, including rules of protection of industrial property and copyright law	P7U_W	P7S_WK	P7S_WK_inż

K2IST_W09	Knows the fundamental dilemmas of modern civilization	P7U_W	P7S_WK	
SKILLS (U)				
K2IST_U01	Is able to search for information from different sources, is able to its critical analysis, synthesis and creative interpretation and presentation using information and communication techniques	P7U_U	P7S_UW	
K2IST_U02	Can formulate and test hypotheses for simple research problems	P7U_U	P7S_UW	
K2IST_U03	Knows how to plan and conduct experiments, analyze and interpret the results obtained, and draw conclusions	P7U_U	P7S_UW	P7S_UW_inż
K2IST_U04	Is able to select and apply appropriate methods (analytical, simulation, experimental) and research tools to the problem at hand. Is able to integrate knowledge in the applied computer science domain	P7U_U	P7S_UW	P7S_UW_inż
K2IST_U05	Knows how to select and apply various methods and techniques for data representation and analysis	P7U_U	P7S_UW	P7S_UW_inż
K2IST_U06	Is able to design (according to a given specification also considering non-technical aspects) and implement an information system or its components in selected environments, taking into account quality characteristics, e.g. security, usability, performance. Is able to evaluate the usefulness and applicability of new technologies	P7U_U	P7S_UW	P7S_UW_inż
K2IST_U07	Is able to manage an IT project and estimate the implementation cost/time of the proposed solution and/or activities undertaken	P7U_U	P7S_UW	P7S_UW_inż
K2IST_U08	Knows how to develop a model according to a given specification	P7U_U	P7S_UW	
K2IST_U09	Is able to critically analyze existing technical solutions and propose improvements if necessary	P7U_U	P7S_UW	P7S_UW_inż

K2IST_U10	Is able to communicate on specialized topics with different audiences	P7U_U	P7S_UK	
K2IST_U11	Knows how to conduct a debate	P7U_U	P7S_UK	
K2IST_U12	Is able to communicate in English or another foreign language at the B2+ level of the Common European Framework of Reference for Languages, including specialized terminology; knows a second foreign language at the A1 or A2 level of the Common European Framework of Reference for Languages	P7U_U	P7S_UK	
K2IST_U13	Is able to lead a team and collaborate with others in team projects	P7U_U	P7S_UO	
K2IST_U14	Can plan and implement the process of self-education, identify possible directions for further lifelong learning, as well as guide others in this area	P7U_U	P7S_UU	
SOCIAL COMPETENCES (K)				
K2IST_K01	Is ready to critically evaluate the incoming content, and is aware of the importance of knowledge in problem solving	P7U_K	P7S_KK	
K2IST_K02	Is able to think and act creatively and entrepreneurially	P7U_K	P7S_KO	
K2IST_K03	Is ready to take action in the public interest	P7U_K	P7S_KO	
K2IST_K04	Is ready to responsibly performing professional roles. Knows and obeys the principles of professional ethics.	P7U_K	P7S_KR	

*delete as applicable