



Subject card

Subject name and code	Information Technologies, PG_00003105						
Field of study	Automation, Robotics and Control Systems						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Intelligent and Decision Support Systems -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Robert Smyk					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		4.0		16.0	50
Subject objectives	The course is to provide participants with an opportunity to learn the fundamental aspects of using computers for storage, transmission and processing of data and information in engineering applications. Provided illustrations reflect up-to-date scientific and technical challenges.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W06] knows the structure of computers and microprocessors and the tasks of operating systems, has basic knowledge of the basics of computer software, drivers, microprocessor technology, design of simple algorithms and the operation of information networks	Has basic knowledge in the field of computer science and is able to apply its fundamental principles to solve elementary engineering problems.			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U04] has the ability to self-educate, among other things, in order to improve professional qualifications	Carries out a semester project based on the acquired knowledge.			[SU1] Assessment of task fulfilment		

Subject contents	<p>Course content – lecture Oczywiście oto poprawiona, uproszczona wersja po angielsku (ok. 1300 znaków), bez programowania obiektowego i testów automatycznych, zachowana w stylu akademickim:</p> <p>The Information Technology course introduces key topics related to data storage, transmission, and processing. It covers the basic structure and operation of a computer, including its hardware and software components, as well as methods of representing and organizing information. The course presents fundamental principles of databases and the basics of secure data storage and sharing.</p> <p>Students learn the basics of programming using C and Python, understand the concept of algorithms, and study elementary methods for describing and analyzing computational problems. The course also introduces the rules of computer and web application operation, basic principles of encryption, and essential aspects of data security.</p> <p>Additionally, students become familiar with modern software development methods, such as the light Agile approach and version control systems (for example, Git). The course concludes with an overview of current trends and challenges in information technology, preparing students to apply their knowledge in engineering practice and further education.</p>								
Prerequisites and co-requisites	Not applicable.								
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="454 734 788 763">Subject passing criteria</th> <th data-bbox="799 734 1139 763">Passing threshold</th> <th data-bbox="1144 734 1482 763">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="454 770 788 882">Final score [Test (K - max. 60 pts.; time: 90 min.; form: on-line) + Group assignments (G - max. 3 x 10 pts.; form: home work) + Bonus points (B)]/ max{K + G}</td> <td data-bbox="799 770 1139 882">50.0%</td> <td data-bbox="1144 770 1482 882">100.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	Final score [Test (K - max. 60 pts.; time: 90 min.; form: on-line) + Group assignments (G - max. 3 x 10 pts.; form: home work) + Bonus points (B)]/ max{K + G}	50.0%	100.0%		
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Recommended reading	Basic literature	<ol style="list-style-type: none"> DuBois P.: MySQL, MIKOM, Warszawa 2000. Kierzkowski A.: PHP 4. Tworzenie stron WWW. Ćwiczenia praktyczne, HELION Wydawnictwo S.A. Gliwice 2002. Krzymowski B.: Access 2000 PL, Help, Warszawa 1999. Elmasri R. Shamkant B.: Wprowadzenie do systemów baz danych, HELION Wydawnictwo S.A. Gliwice 2002. 							
	Supplementary literature	http://moodle.ely.pg.gda.pl							
	eResources addresses	Supplementary http://www.w3schools.com - Base information for developers							
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> What is a computer? What is a programming language? What is the computer representation of a web page? What is computer programming about? What are the basic computer components and how do they influence its overall performance? What are the basic CPU components and what are their functions? 								
Practical activities within the subject	Not applicable								

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