GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Information Technologies , PG_00016379						
Field of study	Chemistry in Construction Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject	2023/2024			
Education level	first-cycle studies		Subject group	Obligatory subject group in the field of study			
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 Analytical Chemistry -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Bożena Zabiegała				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	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		2.0	18.0	50	
Subject objectives	- explaining modes of action of computer equipment and its applicability in chemistry, - utilizing advanced software for creating documents of scientific character,						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W01] has a basic knowledge from some branches of mathematics and physics useful for formulating and solving simple problems in the field of environmental technologies and modern analytical methods	- creating long and format advanced texts, - data evaluation, creating formulas, conducting calculations, creating plots, - editing chemical formulas, creating special molecules, - internet communication, "cloud computing"	[SK3] Assessment of ability to organize work [SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SK2] Assessment of progress of work
	Student learns knowledge in the following areas of expertise: - mathematical basis of computing (numerical systems, binary coding), - methods of measuring the computers' efficiency, - computer equipment, smart phones, tablets, notebooks, netbooks, stationary computers (short description of applications, modes of actions and actual commercial models), - operating systems: DOS, Windows, Unix , MacOs, Android, - internet and internet services, cloud computing, - utility software with special attention paid to chemical programs, - databases, - multimedia techniques, - internet tools and software: creating websites, text, graphics, animations, - application of informatics in chemistry, utilizing computers in modeling, - freeware as an alternative to commercial packets, - computer viruses and other threats, - computer networks,	[SU3] Assessment of ability to use knowledge gained from the subject [SW1] Assessment of factual knowledge [SK2] Assessment of progress of work

Subject contents

- mathematical basis of computing (numerical systems, binary coding),

- methods of measuring the computers' efficiency,
- computer equipment, smart phones, tablets, notebooks, netbooks, stationary computers (short description of applications, modes of actions and actual commercial models),
- operating systems: DOS, Windows, Unix , MacOs, Android,
- internet and internet services, cloud computing,
- utility software with special attention paid to chemical programs,
- databases,
- multimedia techniques,
- internet tools and software: creating websites, text, graphics, animations,
- application of informatics in chemistry, utilizing computers in modeling,
- freeware as an alternative to commercial packets,
- computer viruses and other threats,
- computer networks,

Prerequisites and co-requisites

- elementary course in informatics at secondary school level

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
creating mathematical formulae	60.0%	19.0%
internet communication	60.0%	5.0%
creating chemical figures	60.0%	19.0%
edition of advanced text	60.0%	19.0%
answering open questions	60.0%	19.0%
answering closed questions	60.0%	19.0%

Recommended reading	Basic literature	- self-elaborated lectures by dr. inż. B. Kudłak for Construction chemistry students course: informatic technologies, annually updated - Krzysztof Masłowski, Darmowe oprogramowanie w codziennym życiu, Helion, 2009 - Robin Williams, InDesign. Projekty z klasą Helion 2012
	Supplementary literature	- Andrew S. Tanenbaum, David J. Wetherall Sieci komputerowe Wydanie V Helion 2012 - Waldemar Węglarz, Alicja Żarowska-Mazur Access 2010 Praktyczny kurs PWN 2012 - Krzysztof Wojtuszkiewicz Urządzenia techniki komputerowej 2 Urządzenia peryferyjne i interfejsy PWN 2008
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	- Please give the graphics' formats: - Computer viruses are divided into following groups (please give at least 4): - Programs designed to disrupt computer work, register, damage or remove data are: …… . - Part of computer system or network aimed to block unathorized access and let authorized communication is: …… - Please name 4 types of software: - Please name 4 operational systems of netbooks: - Please name elementary parts of the personnal computer basic unit: - Please give division of „cloud computing" systems: - Tools used to disrupt information safety are: - Please name 4 input devices of personnal computers: - The whole set of information in form of instrucitions, implemented interfaces and integrated data purposed for computer to realize set aims is: …… - Please name 4 freedoms of freeware users: - Model of transformation based on utilizing services of external organizations is (please give both Polish and English name): …… Eng. …… - Computer programs used to create and modify graphic files are (please give both Polish and English name): …… Eng. ……	
Work placement	Not applicable	