

Subject card

Subject name and code	Information technology II, PG_00119765						
Field of study	Chemistry						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	Bachelor's studies	Subject group			Optional subject group		
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish Polish		
Semester of study	3	ECTS credits			2.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Laboratory of Molecular Modeling -> Department of Theoretical Chemistry -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Magdalena Ślusarz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		5.0		15.0	50
Subject objectives	Expanding the skills acquired by the student in the Information Technology classes taken in the first year of study. Preparing the student for efficient and independent work with modern information technology tools.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEML3_U06] Uses basic application software packages to solve problems from the field of science.		The student uses known programs, system commands and scripts to perform the tasks set out for him. Builds and optimizes the structures of chemical compounds, selects and uses appropriate text editing tools (simple or advanced word processors). Analyzes the problem and proposes a solution to this problem using appropriate computer tools.		[SU5] implementation of a problem task		
	[CHEML3_W09] Describes the practical applications of IT tools (computer programmes) for chemical calculations and data analysis.		The student is familiar with tools for text editing, data analysis, and programs for visualizing and optimizing the structures of chemical molecules. Distinguishes between basic commands for operating Unix systems. Student is familiar with chemical structure databases available on Internet resources.		[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task		
	[CHEML3_U09] Is able to learn independently.		He works independently, shows creativity in solving the tasks assigned to him.		[SU1] oral statement/conversation/discussion		
[CHEML3_K01] Identifies the level of her/his own knowledge and skills and the need for continuous learning and personal development.		Understands the need to learn, develop his skills and adapt his knowledge to the rapidly developing computer methods and tools.		[SK1] oral statement/conversation/discussion			

Subject contents	Basics of operating system (desktop environments, simple commands and scripts); simple text editors, analysis and graphical representation of experimental data; construction and visualization of chemical molecules, simple optimization of structures of chemical compounds; use and operation of databases of chemical structures.		
Prerequisites and co-requisites	Information Technology course (mandatory classes).		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	The passing grade is the arithmetic average of the partial grades received during the semester.	51.0%	100.0%
Recommended reading	Basic literature	None	
	Supplementary literature	None	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none"> • Building the protein structure and optimizing the geometry. • Editing a text file containing data acquired during simulation using scripts to facilitate editing. • Searching the PDB database for GPCR family protein structures. 		
Work placement	Not applicable		

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