University of Gdańsk

Subject card

Subject name and code	Information technology II, PG_00119765		
Field of study	Chemistry		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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
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

<table>
<tr><td>Subject contents</td><td>Basics of operating system (desktop envirnments, 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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Information Technology course (mandatory classes).</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>The passing grade is the arithmetic average of the partial grades received during the semester.</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>None</td></tr>
<tr><td>Supplementary literature</td><td>None</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>• 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.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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