

Subject card

Subject name and code	Introduction to informatics, PG_00155524						
Field of study	Bioinformatics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's 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		6.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Institute of Theoretical Physics and Astrophysics -> Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Marcin Wieśniak				
	Teachers		mgr Dominik Falkiewicz				
			prof. dr hab. Marcin Wieśniak				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	45.0	0.0	0.0	60
	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	60		0.0		90.0	150
Subject objectives	Mastering working in the Linux terminal (bash shell)						
	Familiarization with the GIT version control system						
	Mastering the principles of object-oriented programming using the example of Python 3						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOINL3_W01] Has knowledge of computer science technologies, with particular emphasis on programming	Student knows: The role of the operating system. Bash shell commands. Elements of the AWK scripting language. The role of version control systems. Python 3 syntax. Basic Python 3 data types and structures	[SW2] presentation/project/paper/report
	[BIOINL3_K01] Graduate knows the limitations of his own knowledge and skills; he demonstrates a willingness to constantly improve, update his knowledge and enhance his qualifications in bioinformatics	Is able to independently search documentation and independently improve his programming competences	[SK1] oral statement/conversation/discussion
	[BIOINL3_K04] Is aware of the importance of the principles of safety and ergonomics at work; applies the principles of safety at work; is responsible for the safety of himself and others; is able to act in situations of danger	Student is able to organize the workstation ergonomically	[SK1] oral statement/conversation/discussion
	[BIOINL3_U01] Graduate is able to program using modern programming tools, including tools dedicated to bioinformatics	Student knows how to navigate the tree of files and directories and manipulate them using Bash commands. Student able to use pipelines and redirection of input and output operations to perform complex file operations and use AWK elements to filter data. Is able to write a Python program containing conditional statements and loops Is able to divide the program into useful functions and classes Is able to work in a group using the GIT version control system	[SU2] presentation/project/paper/report
Subject contents	Ergonomics of the workstation and occupational health and safety rules when working with a computer The organization of the Linux system Bash shell commands, command pipelines and input/output operations GIT repository Python 3 syntax the basic data types in Python3 (e.g. int, float, complex, str) Data structures (e.g. list, dict, tuple, etc.) Objects		
Prerequisites and co-requisites	brak		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	70.0%
		51.0%	30.0%
Recommended reading	Basic literature	not applicable	
	Supplementary literature	not applicable	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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