

Subject card

Subject name and code	Biodiversity and Fundamentals of Taxonomy, PG_00193507						
Field of study	Bioinformatics						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
Education level	Bachelor's studies	Subject group			Obligatory subject group in the field of study Subject group related to scientific research 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			5.0		
Learning profile	academic	Assessment form			exam		
Conducting unit	Laboratory of Molecular Evolution and Bioinformatics -> Department of Evolutionary Genetics and Biosystematics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Marek Ziętara				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	20.0	0.0	30.0	0.0	0.0	50
	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	50		0.0		75.0	125
Subject objectives	The aim of the course is to familiarize students with the diversity of life forms and the principles of their taxonomic classification. As part of the course, students learn about representatives of the most important groups of organisms, with particular emphasis on model species (KW_02). Students will acquire the ability to recognize typical representatives of the discussed groups of organisms and the ability to assign them a taxonomic position (KW_04, KU_05). Students will also acquire the ability to interpret the diversity of organisms in the context of their phylogenetic relationships.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOINL3_W04] Has advanced knowledge of research techniques and tools used in bioinformatics	The student knows: 1. The student distinguishes the principles of taxonomy from the phylogenetic relationship of organisms.	[SW4] test/exam - oral or written
	[BIOINL3_U05] Graduate has the ability to use scientific literature, including English-language sources on bioinformatics; has the ability to use appropriate databases	The student is able to: 1. Recognize representatives of groups of organisms discussed during classes. 2. Determine the taxonomic position of any representative of the groups of organisms discussed in class. 3. Map the key diagnostic features of the organisms discussed on phylogenetic trees. 4. Can use scientific publications and electronic resources, including databases in English, to determine the taxonomic position of organisms.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU3] text preparation/written work
	[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	The student is aware of the importance of safety and ergonomics of work; applies the principles of occupational safety; is responsible for their own safety and the safety of others; can act in emergency situations.	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[BIOINL3_W02] Has advanced scientific knowledge necessary to understand the basic processes in living organisms.	The student knows: 1. Various forms of life and the principles of their taxonomic classification. 2. The most important model organisms belonging to the groups of organisms discussed in the classes.	[SW4] test/exam - oral or written
Subject contents	<p>Lecture 20 hours</p> <p>A review of selected representatives and rules of taxonomic classification (2 hours): viruses (2 hours), archaea (1 hour), bacteria (1 hour), plants (4 hours), invertebrates (4 hours), vertebrates (including humans) (4 hours) and fungi (2 hours). Explanation of the concept of a model organism and an overview of the most important model organisms belonging to the above-mentioned groups of organisms.</p> <p>Laboratory exercises 30 hours</p> <p>Getting to know selected representatives of groups of organisms discussed in the lecture on their own - practical knowledge of the principles of their taxonomic classification. Acquiring the ability to determine the taxonomic position of any organism belonging to the group of organisms discussed during the course. Construction of phylogenetic trees illustrating the relatedness of the discussed organisms, taking into account the mapping of key diagnostic features on the phylogenetic tree.</p>		

Prerequisites and co-requisites	<p>1. Attendance at classes is obligatory, and in the event of absence, it must be justified in accordance with paragraph 12 of the UG Study Regulations.</p> <p>2. The condition for passing the lecture is attendance at least 80% of classes, while the condition for passing the classes is participation in at least 85% of classes.</p> <p>3. The condition for admission to the exam is passing the exercises. In the case of test questions, the student will choose one of the possible answers and briefly justify their choice or synthetically answer open questions. The questions can be illustrated with an appropriate chart, diagram, etc. The exam will test both the student's knowledge and skills.</p> <p>4. A negative grade in the written exam must be corrected during the resit exam held on the basis of the same rules as the exam on the first date.</p> <p>5. The skills acquired during the exercises will be verified on an ongoing basis by the lecturers. During the exercises, the facilitator will also check the students' knowledge directly related to the acquired skills (questions, discussion). The teacher will assess the skills and knowledge of each student so that at the end of the exercises each student will have a minimum of 4 grades.</p>											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="448 763 794 797">Subject passing criteria</th> <th data-bbox="794 763 1141 797">Passing threshold</th> <th data-bbox="1141 763 1477 797">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 797 794 831">Written exam</td> <td data-bbox="794 797 1141 831">51.0%</td> <td data-bbox="1141 797 1477 831">60.0%</td> </tr> <tr> <td data-bbox="448 831 794 891">Laboratory - average of partial marks</td> <td data-bbox="794 831 1141 891">51.0%</td> <td data-bbox="1141 831 1477 891">40.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Written exam	51.0%	60.0%	Laboratory - average of partial marks	51.0%	40.0%
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Example issues/ example questions/ tasks being completed	Not applicable											
Work placement	Not applicable											

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