

Subject card

Subject name and code	Evolution of seed plants, PG_00196821						
Field of study	Biology						
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	2	ECTS credits			3.0		
Learning profile	academic	Assessment form			exam		
Conducting unit	Laboratory of Plant Taxonomy -> Department of Plant Taxonomy and Nature Conservation -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Sławomir Nowak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	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		4.0		41.0	75
Subject objectives	1. To introduce the basic and most important aspects of evolution and systematics of seed plants. 2. To learn the concepts of botanical terminology (plant morphology). 3. To learn and understand the research methods used in seed plant systematics. 4. To review selected systematic groups of seed plants and understand the basis of their diversity. 5. To understand the fundamentals of living organisms and their phylogenetic relationships.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLL3_W07] The graduate knows the development of biology as a science, its connections with other disciplines and the principles of using biological knowledge in the economy and social life, including ways that are entrepreneurial		
	[BIOLL3_U03] The graduate is able to search for, select and critically analyze information from various sources, including scientific literature and electronic databases, as well as read and understand scientific texts in Polish and English		
	[BIOLL3_K01] The graduate is ready to critically evaluate her/his biological knowledge and continuously update and develop it, taking into account scientific advances and the needs of practice		
	[BIOLL3_W03] The graduate knows and understands the principles of life functioning at the level of populations, biocenoses and ecosystems, the determinants of biological diversity as well as the mechanisms and molecular basis of the evolution of organisms		
Subject contents	Research and analytical methods in the taxonomy of living organisms, especially seed plants. Basic systematic categories. Basic concepts of seed plant morphology. Overview of selected systematic groups of Gymnoperms and Angiosperms. Phylogeny of seed plants. Reasons for the diversity of seed plants.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	oral exam	51.0%	100.0%
Recommended reading	Basic literature	Szweykowska A., Szweykowski J. 2009. Botanika. Tom 1 i 2. PWN, Warszawa.	
	Supplementary literature	<p>Angiosperm Phylogeny Website http://www.mobot.org/MOBOT/Research/APWeb/welcome.html</p> <p>Simpson M. G. 2019. Plant systematics. Academic press.</p> <p>Friis E.M., Pedersen K.R., Crane P.R. 2010. Diversity in obscurity-fossil flowers and early history of Angiosperms. Phil.Trans.R.Soc.B 365: 396-382.</p> <p>Soltis D.E., Soltis P.S. 2004. The origin and Diversification of Angiosperms. Am.J.Bot. 91: 1614-1625.</p> <p>Spalik K, Piwczyński M. 2006. Rekonstrukcja filogenezy i wnioskowanie filogenetyczne w badaniach ewolucyjnych. Kosmos 58(3-4): 485-498.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	During the exam, the level of comprehension of the topic in oral statements from the selected subjects is evaluated. Topics include the characteristics of the plant groups discussed in the lecture. The ability to interpret the morphological structure of plants in the context of their adaptation for pollination and dispersal. Ability to demonstrate the relationship between the phylogeny and similarity of plant groups and their position in the classification system.		
Work placement	Not applicable		

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