

Subject card

Subject name and code	Evolution of seed plants, PG_00207398						
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		credit		
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	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		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] 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_W03] knows and understands at an advanced level 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		
	[BIOLL3_U03] 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_U01] is able to use basic research techniques and tools appropriate for the biological sciences and perform physical, chemical and biological observations and measurements in the laboratory and in the field, individually and in a team, while organizing her/his work appropriately and in a maintained way		
	[BIOLL3_K01] 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		
Subject contents	To learn the techniques and research methods used in the systematics of seed plants (molecular taxonomy). Review of selected representatives of various systematic groups of seed plants (characteristics and systematic position). Basic concepts of plant morphology. Ability to identify plants in higher systematic units (orders, families, genera).		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical test	51.0%	50.0%
	Entry and/or general tests	51.0%	50.0%
Recommended reading	Basic literature	Szwejkowska A., Szwejkowski J. 2009. Botanika. Tom 1 i 2. PWN, Warszawa.	
	Supplementary literature	Angiosperm Phylogeny Website http://www.mobot.org/MOBOT/Research/APWeb/welcome.html	
		Simpson, M. G. 2019. Plant systematics. Academic press.	
		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.	
		Soltis D.E., Soltis P.S. 2004. The origin and Diversification of Angiosperms. Am.J.Bot. 91: 1614-1625.	
		Spalik K, Piwczyński M. 2006. Rekonstrukcja filogenezy i wnioskowanie filogenetyczne w badaniach ewolucyjnych. Kosmos 58(3-4): 485-498.	
	eResources addresses		

Example issues/ example questions/ tasks being completed	Entry and/or general tests: the grade is determined by the degree of mastery of theoretical material. Practical test: ability to identify morphological structures and systematic groups after the exercise.
Work placement	Not applicable

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