University of Gdańsk

Subject card

Subject name and code	Evolution of seed plants, PG_00196820						
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		6.0		39.0	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_U07] The graduate is able to independently search for and use available sources of biological information, including electronic sources	student is able to independently search and use electronic databases in the field of plant systematics and regional and world floras	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
[BIOLL3_U01] The graduate is able to use basic apparatus and research tools and follow the correct sequence of operations in laboratory and field work	student is able to use the microscope during the observation of morphological structures	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[BIOLL3_W06] The graduate will know at an advanced level the characteristics, systematics and understand the evolution of selected groups of organisms including molecular basis and basic concepts and mechanisms of evolution	student knows and understands the characteristics, systematics and evolution of selected groups of seed plants including the basics of their phylogeny	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[BIOLL3_W10] The graduate is familiar with the development and current state of knowledge and the latest trends in biology, as well as their relationship with other natural disciplines	student knows and understands the relationship between the position of selected groups of seed plants in the classification system and the development of biological sciences	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[BIOLL3_K02] The graduate is prepared to critically self-assess his/her own competences and to update and improve his/her knowledge and skills	student knows and understands the impact of the development of biological sciences, especially molecular methods, on changes in the classification systems of seed plants	[SK4] test/exam - oral or written [SK8] observation of student's independent or team work
[BIOLL3_K01] The graduate is prepared to evaluate his/her own knowledge, understand the need for continuous learning and development, and is open to new ideas	student is aware of the great diversity and morphological variability of seed plants and changes in their classification	[SK5] implementation of a problem task [SK8] observation of student's independent or team work

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
Entry and/or general tests	51.0%	50.0%
Practical test	51.0%	50.0%

Recommended reading

Basic literature	Szweykowska A., Szweykowski 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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