University of Gdańsk

Subject card

Subject name and code	The rudiments of plant embryology, PG_00048677						
Field of study	Podstawy embriologii roślin (Wykład)						
Date of commencement of studies	October 2022		Academic year of realisation of subject	2024/2025			
Education level	Bachelor's studies		Subject group				
Mode of study	full-time studies		Mode of delivery	at the university			
Year of study	3		Language of instruction	Polish			
Semester of study	5		ECTS credits	1.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Laboratory of Plant Cytology and Embryology -> Department of Experimental Biology and Plant Biotechnology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr Joanna Rojek					
	Teachers	dr Joanna Rojek					
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		0.0	0.0	15	
Subject objectives	Understanding of current issues regarding sexual reproduction of angiosperm plants.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLL3_W14] the graduate knows the theoretical basis of experimental methods and the most important techniques of biological sciences	the graduate is able to indicate the methods used in contemporary research in the field of plant embryology (B_W14)	[SW4] test/egzamin - ustny lub pisemny
[BIOLL3_W10] the graduate knows and understands to an advanced degree the development and current state of knowledge and the latest trends in biology, as well as their relationship with other natural disciplines	The graduate is familiar with the development and current state of knowledge on plant embryology and indicates the relationship of this field with other natural sciences (B_W10)	[SW4] test/egzamin - ustny lub pisemny
[BIOLL3_W04] the graduate knows and understands to an advanced degree the course of physiological processes and their relationship to the adaptation of the organism to changing environmental conditions	- the graduate is able to indicate and explain the relationship between embryological processes in plants and their adaptation to the environment (B_W04)	[SW4] test/egzamin - ustny lub pisemny
[BIOLL3_U12] the graduate is able to use Polish and foreign language, specialized for biology, in a way that is understandable and accessible to both specialists and non-specialists	the graduate uses with understanding, both in speech and writing, the terminology used in specialized scientific language in the field of plant embryology (B_U12)	[SU4] test/egzamin - ustny lub pisemny
[BIOLL3_K01] the graduate is ready to evaluate his own knowledge and understands the need for continuous learning and development and is open to new ideas	the graduate knows the limitations of his/her own knowledge in the field of plant embryology and understands the need for continuous learning and development and is open to new ideas (B_K01)	[SK4] test/egzamin - ustny lub pisemny

Subject contents

1. structure and development of organs of sexual reproduction of angiosperm plants:- formation and structure of the ovary; formation and structure of the anther,- The course of male and female sporogenesis,- formation and maturation of gametophytes; pollination; fertilization,- embryo and endosperm development - seed formation.2. Basics of molecular mechanisms of sexual reproduction of plants.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	100.0%

Recommended reading

Basic literature

- the latest scientific review publications in the field of plant embryology- English-language online materials for teachers (available, for example, on the pages of the journals Plant Cell, Nature)- Lersten NR. 2008. Flowering Plant Embryology: With Emphasis on Economic Species.Wyd. Blackwell Publ., Oxford .- Bednarska E. 1984. Zarys embriologii roślin okrytonasiennych. Wyd. UMK, Toruń- Rodkiewicz B., Śnieżko R., Fryk B., Niewęglowska B., Tchórzewska D., 1996. Embriologia Angiospermae rozwojowa i eksperymentalna. Wyd.UMCS, Lublin- Bhojwani S.S., Soh W.Y. 2001. Current trends in the embryology of angiosperms. Wyd. Kluwer Acad. Publ., Dordrecht

	Supplementary literature	Rojek J, Kuta E. 2002. Bielmo tkanka odżywiająca zarodek I. Bielmo u roślin okrytonasiennych (Angiospermae) jako wynik podwójnegozapłodnienia. Kosmos 69-84.Kuta E, Rojek J. 2002. Bielmo tkanka odżywiająca zarodek II. Autonomiczny rozwój bielma u roślin okrytonasiennych (Angiospermae). Kosmos 85-98Raghavan V. 1997. Molecular embryology of flowering plants. Wyd. Cambridge Univ. Press, Cambridge;.Bhojwani S.S., Soh W.Y. 2001. Current trends in the embryology of angiosperms. Wyd. Kluwer Acad. Publ., Dordrecht;Lersten N.R. 2008. Flowering plant embryology. Wyd. Blackwell Publ., Oxford
	eResources addresses	
Example issues/ example questions/ tasks being completed	Written credit includes the material from the lecture in the form of closed questions.The pass is graded according to the percentage ("UG Academic Regulations").	
Work placement	Not applicable	

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