University of Gdańsk

Subject card

Subject name and code	Pharmaceutical botany, PG_00072873		
Field of study	Botanika farmaceutyczna (Ćw. laboratoryjne)		
Date of commencement of studies	October 2023	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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Martin Kukwa	
	Teachers	prof. dr hab. Martin Kukwa dr Magdalena Dudek dr Magdalena Oset dr hab. Hanna Margońska dr Emilia Ossowska	

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	0.0	0.0	30

Subject objectives	
	1. to equip the student with knowledge of the structure and function of the plant cell, tissues and organs and the structure of fungi2. to develop the ability to identify and describe plant tissues, organs by microscopic methods3. equipping the student with knowledge of biologically active substances produced by fungi and plants4 To develop the ability to recognize species of medicinal and poisonous plants on the basis of fresh and herbarium specimens5. review of selected representatives of individual systematic groups of plants (including algae) and fungi, taking into account pharmacopoeial species

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GBEL3_W04] A graduate has an advanced knowledge and understanding of: knowledge applied to microbial and plant biotechnology	student has basic botanical knowledge as applied to the biotechnology of microorganisms and plants and fungi (GM1_W04)	[SW4] test/egzamin - ustny lub pisemny
[GBEL3_K07] The graduate is prepared to: lifelong learning and updating of knowledge in molecular genetics and other fields	student understands the need for lifelong learning and updating knowledge in molecular genetics and other fields (GM1_K07)	[SK8] obserwacja samodzielnej lub zespołowej pracy studenta
[GBEL3_K05] The graduate is prepared to: responsibility for their own and others' safety at work	student is responsible for the safety of his own work and that of others (GM1_K05)	[SK8] obserwacja samodzielnej lub zespołowej pracy studenta
[GBEL3_U03] The graduate is able to: use research apparatus and tools and, following the correct sequence of operations, carry out simple physical, biological or chemical observations and measurements in laboratory work in the biological sciences	student uses basic apparatus and research tools and, maintaining the correct sequence of operations, performs simple physical, biological or chemical observations and measurements in laboratory work in the biological sciences (GM1_U03)	[SU6] demonstracja umiejętności praktycznych
[GBEL3_U01] The graduate is able to: independently perform practical tasks in the biological and related sciences, formulate research problems, analyse their results and draw conclusions.	student can independently perform simple practical tasks in biological and related sciences (GM1_U01)	[SU6] demonstracja umiejętności praktycznych
[GBEL3_W08] A graduate has an advanced knowledge and understanding of: information technology applied to genetics and experimental biology	student has general knowledge of science and technology (GM1_W08)	[SW4] test/egzamin - ustny lub pisemny

Subject contents

1. Basics of botanical systematics (type, cluster, class, order, family, genus, species) and binominal nomenclature.2. Biologically active substances, methods of studying their properties and their role in medicine.3. Structure of basic types of plant tissues: creative tissues; crumb tissues, strengthening tissues, covering conducting tissues.4. Morphology of vascular plants (roots, shoots, stems, leaves, flowers, inflorescences, fruits).5. Taxonomic overview of plants (including algae) and fungi including species of pharmacopoeial importance - includes knowledge of the most important features of the groups mentioned and recognition of selected species of medicinal plants and lichens.6. Poisonous and medicinal plants and fungi in the Polish flora.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	100.0%	0.0%
	51.0%	50.0%
	51.0%	50.0%

Recommended reading

Basic literature

Szweykowska A., Szweykowski J. 2009. Botanika. Tom 1 i 2. PWN, Warszawa.

Broda B. 2002. Zarys Botaniki Farmaceutycznej. Wyd. Lekarskie PZWL, Warszawa.

Broda B., Mowszowicz J., 2000. Przewodnik do oznaczania roślin leczniczych, trujących i użytkowych, Wyd. Lekarskie PZWL, Warszawa.

	Supplementary literature	Müller E., Loeffler W. 1987. Zarys Mykologii. PWRiL, Warszawa. Bystrek J. 1997. Podstawy lichenologii. Wydaw. Uniwersytetu Marii Curie-Skłodowskiej Kubiak D., Kukwa M. 2011. Chromatografia cienkowarstwowa (TLC) w lichenologii. W: Dynowska M., Ejdys E. (red.). Mikologia laboratoryjna. Przygotowanie materiału badawczego i diagnostyka. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego w Olsztynie, s. 176190. Guzow-Krzemińska B., Kukwa M. 2013. Metody badawcze we współczesnej taksonomii porostów. Kosmos 62(1): 95103. Felczykowska A., Pastuszak-Skrzypczak A., Pawlik A., Bogucka K., Herman-Antosiewicz A., Guzow-Krzemińska B. (2017) Antibacterial and anticancer activities of acetone extracts from in vitro cultured lichen-forming fungi. BMC Complementary and Alternative Medicine 17:300. DOI: 10.1186/s12906-017-1819-8
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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