University of Gdańsk

Subject card

Subject name and code	Animal cell cultures, PG_00147140		
Field of study	Genetics and Experimental Biology		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional 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	4	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Human Genomics and Genetics -> Department of Medical Biology and Genetics -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Anna Kloska	
	Teachers	dr Anna Kloska Aleksandra Domin dr Marta Moskot	

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

Additional information:

performing experiments under the supervision of a teacher

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	3.0	17.0	50

Subject objectives	Presenting work techniques and developing practical skills in working with animal cell lines.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GBEL3_U01] Independently perform practical tasks in the field of biological sciences and related disciplines, formulate research problems, analyze their results, and draw conclusions.	the graduate can cultivate animal cells and analyze and interpret the results of cell-based assays	[SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
[GBEL3_W05] the principles of research planning based on achievements in biological sciences and related fields, the potential application of their results in practice, the principles of operation of equipment and apparatus used in molecular genetics research, and the principle of interpreting biological phenomena and processes based on empirical data in research and practical activities, with consideration for sustainable use of biological diversity.	the graduate knows the types and conditions of in vitro animal cell culture	[SW4] test/exam - oral or written
[GBEL3_K05] Responsibility for the safety of one's own work and others.	the graduate is responsible for the safety of his own and others' work	[SK8] observation of student's independent or team work
[GBEL3_U03] Proficient in using research equipment and tools, while following the correct sequence of procedures, to conduct basic physical, biological, or chemical observations and measurements in laboratory work within the field of biological sciences.	the graduate uses basic research equipment and tools for cultivating animal cells following the correct sequence of activities and performs simple experiments using them	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[GBEL3_W06] the development and current state of knowledge, as well as the latest trends in molecular genetics and related fields; indicating their relationship with other disciplines in the natural or medical sciences and the possibilities of their practical application.	the graduate is aware of the current state of knowledge and the latest trends in the field of animal cell culture and knows the possibilities of using animal cell culture in practice	[SW4] test/exam - oral or written
[GBEL3_K08] Responsibility for entrusted equipment/materials and respect for the work of others.	The graduate is responsible for the equipment and materials entrusted to him as well as his/her work and respects the work of others	[SK8] observation of student's independent or team work

Subject contents

Organization of the laboratory and equipment used for cultivating animal cells.
Establishing cell cultures.
Using an inverted microscope to observe cells.
Passaging of adherent cell cultures and establishing subsequent subpassages.
Freezing and thawing of cells.
Conducting experiments on cell cultures.
Cell viability assessment.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	50.0%
lab report	51.0%	10.0%
practical test	51.0%	40.0%

Recommended reading

Basic literature	S. Stokłosowa, Hodowla komórek i tkanek, Wydawnictwo Naukowe PWN, Warszawa 2012.
Supplementary literature	Segeritz, C. P., & Vallier, L. (2017). Cell Culture: Growing Cells as Model Systems In Vitro. Basic Science Methods for Clinical Researchers, 151172. https://doi.org/10.1016/ B978-0-12-803077-6.00009-6. Langhans SA (2018) Three-Dimensional in Vitro Cell Culture Models in Drug Discovery and Drug Repositioning. Front. Pharmacol. 9:6. doi10.3389/fphar.2018.00006.

	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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