GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Cancer cell biology, PG_00053381		
Field of study	Biomedical Engineering, Biomedical Engineering, Biomedical Engineering		
Date of commencement of studies	February 2023	Academic year of realisation of subject	2023/2024
Education level	second-cycle studies	Subject group	Optional subject group 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	general academic profile	Assessment form	exam
Conducting unit	Department of Pharmaceutical Technology and Biochemistry -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Ewa Augustin	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	15.0	0.0	15.0	45

E-learning hours included: 0.0

Additional information:
stationary; lecture, seminars and laboratories

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	45	3.0	27.0	75

Subject objectives

The aim of the course is to familiarize students with the molecular mechanisms of the carcinogenesis process.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K01] is ready to create and develop models of proper behaviour in the work and life environment; undertake initiatives; critically evaluate actions of their own, teams and organisations they are part of; lead a group and take responsibility for its actions; responsibly perform professional roles taking into account changing social needs, including:n - developing the achievements of the profession,n- observing and developing rules of professional ethics and acting to comply to these rulesn	The student is able to take appropriate initiatives in life and work, cooperate in a group and follow the rules of ethics at work.	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice [SK3] Assessment of ability to organize work
[K7_U05] can plan and conduct experiments related to the field of study, including computer simulations and measurements; interpret obtained results and draw conclusions	The student knows the basic methods of studying the biology of the cancer cell.	[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment
[K7_W53] Knows and understands, to an increased extent, selected aspects of biomedical diagnostics.	The student knows and understands the basic mechanisms of carcinogenesis and has knowledge of current anticancer therapies.	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation

Subject contents

Tumor development stages. Cancer epidemiology in Poland and in the world. Oncogenes and suppressor genes. Metastasis formation and angiogenesis. Cell death, cellular senescence, cancer stem cells, tumor markers.

Prerequisites and co-requisites	knowledge of biochemistry, molecular biology, basics of biology and genetics	
Assessment methods and criteria		

Subject passing criteria	Passing threshold	Percentage of the final grade
laboratory	60.0%	25.0%
lecture	60.0%	50.0%
seminar	60.0%	25.0%

Recommended reading	Basic literature	R.A. Weinberg. The biology of cancer. 2014. L. Peccorino. Molecular biology of cancer. Mechanisms, targets and therapeutics. 2016.
	Supplementary literature	G. Drewa. Medical genetics. A textbook for students, 2011. J. Bal. Molecular biology in medicine. Elements of clinical genetics. PWN 2011.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	The role of oncogenes and tumor suppressor genes in neoplastic transformation. Mechanisms of angiogenesis. Telomerase as a target of cancer therapy.	
Work placement	Not applicable	