GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Selected aspects of immunology, PG_00024942		
Field of study	Medical and Mechanical Engineering, Medical and Mechanical Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2022/2023
Education level	first-cycle 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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	Maria Skrzypkowska	
	Teachers	Maria Skrzypkowska	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	0.0	15.0	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	3.0	7.0	25

Subject objectives

The purpose of the subject is to gain basic knowledge about structure and functioning of human immune system.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_W12	Student has a basic knowledge concerning structure of human immune system. Student has a knowledge of cell of the immune system. Student knows and understands basic mechanisms of immune response.	[SW1] Assessment of factual knowledge
K6_U10	Student understands consequences of inflammatory response and infections. Student is capable of interpreting results of basic immunological tests.	[SU2] Assessment of ability to analyse information
K6_K02	Student presents his position in relation to non-technical aspects of engineer's work. Student is aware of consequences and importance of the decisions that result from engineer's work.	[SK4] Assessment of communication skills, including language correctness

Subject contents

Basic anatomy of immune system. Non-specific immune response. Inflammation. Specific immune response – T cells and involvement of MHC's in antigen recognition. Specific immune response – B cells. Immune response to bacterial and viral infections. Anti-tumor response. Impact of prosthesis and implants on functioning of immune system.

Prerequisites and co-requisites

none

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
final on-line test	60.0%	95.0%
active participation in seminars	0.0%	5.0%

Recommended reading

Basic literature	"Immunologia" - Jakub Gołąb, Marek Jakóbisiak, Witold Lasek; 2. "Basic Immunology" - Abul K. Abbas, Andrew H. H. Lichtman, Shiv Pillai; 3. "Immunologia" pod redakcją I.M. Roitt;

	Supplementary literature	Journal of Immunology", "Immunity", "Current Opinion in Immunology", "Nature Reviews Immunology" - selected review articles;
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Generative lymphoid organs include: a) spleen b)liver c)thymus d) tonsils e) lymph nodes 2. PAMPs are a) acute phase proteins b) specific TCR c) also known as TLR d) complement proteins e) structures on microorganisms 3. Cytokines: a) have only autocrine action b) have only paracrine action c) always activate humoral responses d) always activate cellular responses e) lack of correct answer 4. Complete the sentence: Endogenous antigens are presented on …… to …..…….. lymphocytes. 5. What structure is presented on a picture below? Indicate variable parts of presented complex [figure presents MHC I complex].	
Work placement	Not applicable	