

Subject name Immunology		ECTS Code																		
Name of unit teaching the subject THE ZBIGNIEW RELIGA FACULTY OF MEDICAL SCIENCES IN ZABRZE, THE UNIVERSITY OF TECHNOLOGY IN KATOWICE																				
Studies																				
Field of study		degree	mode	major	specialization															
medical		Uniform Master's	Stationary/non-stationary																	
Surname of instructor (instructors) Professor Zdzisława Kondera-Anasz MD, Ph.D.																				
Type of class, method of implementation and specified number of hours			Amount of ECTS points: Lecture – 3ECTS Exercise Classes – 4ECTS																	
A.Type of class <ul style="list-style-type: none"> • <u>lecture</u>, • <u>exercise classes</u>, • <u>seminars</u>, • design classes • laboratories, • lectureship, • diploma seminar, • professional internship.* * mark where applicable			Description of awarding ECTS points: <table border="1"> <thead> <tr> <th>Activity</th> <th>Student workload</th> </tr> </thead> <tbody> <tr> <td>Participation in lectures</td> <td>30 hours</td> </tr> <tr> <td>Participation in practical classes</td> <td>45 hours</td> </tr> <tr> <td>Preparation for practical classes and colloquiums</td> <td>45 hours</td> </tr> <tr> <td>Examination preparation</td> <td>40 hours</td> </tr> <tr> <td>Consultations</td> <td>20 hours</td> </tr> <tr> <td>Total number of hours</td> <td>180 hours / 30</td> </tr> <tr> <td>Amount of ECTS points per module</td> <td>7 ECTS</td> </tr> </tbody> </table>		Activity	Student workload	Participation in lectures	30 hours	Participation in practical classes	45 hours	Preparation for practical classes and colloquiums	45 hours	Examination preparation	40 hours	Consultations	20 hours	Total number of hours	180 hours / 30	Amount of ECTS points per module	7 ECTS
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B.Method of implementation <ul style="list-style-type: none"> • classes in a didactic room • on-line classes/<i>blended learning</i> • classes outside the didactic room (in this case must specify, where they are conducted) 																				
C.Amount of hours in accordance with the approved curriculum 30h lectures 45h exercise classes																				
Didactic cycle Third year, sixth semester																				
Subject status • mandatory / facultative			Language of instruction Polish																	
Didactic methods Lecture Multimedia presentation Working with textbook Lab exercises			Forms and methods of passing and general grading criteria or examination requirements <hr/> A. Method of passing <ul style="list-style-type: none"> • attendance and participation in all classes • passing all exercises • passing the exam <hr/> B. Forms of passing: <ul style="list-style-type: none"> • written examination: test / with open questions (exercises)/longer written statement • oral examination • oral test/colloquium • completion of a semester assignment: preparation of a design or presentation/conducting research and presenting its results(written/oral)/completion of a specified practical work • <u>agreeing on a passing grade based on partial grades received during the course of the semester*</u> 																	

* mark where applicable

C. Basic grading criteria

Grades and examination requirements should correspond to the educational effects

Definition of preparatory subjects and initial requirements

A. Formal requirements

Anatomy
Pathomorphology
Pathophysiology

B. Initial requirements

1. Knows and understands the structure of the human body
2. Knows the basic cell structures and their functional specializations
3. Possesses knowledge in immunology acquired during pathomorphology and pathophysiology classes

Subject aim

Familiarizing the student with current knowledge in immunology on the molecular and cellular level.
Explaining the pathomechanism of syndromes, in which the knowledge of the role of the immune system is key for understanding the disease processes
Familiarizing the student with techniques helpful in monitoring functions of the immune system in diagnosis and treatment of selected complex of diseases

Curriculum

A. Lecture content

1. The role of the immune system
2. Structure of the immune system
3. Nonspecific immunity
4. Complement
5. Phagocytosis
6. Major histocompatibility complex
7. The cell of the immune system
8. Humoral immune response
9. Cellular immune response
10. Cytokines
11. Inflammation
12. Hypersensitivity reactions
13. Primary and secondary immunodeficiencies
14. Autoimmunity
15. Transplants
16. Cancer immunology
17. Immunomodulation

B. Content of exercise classes/tutorials/laboratories

1. Introduction to immunological testing
2. Organization of workshop for immunodiagnosis
3. Collecting and preparing biological material for immunological testing
4. Methods helpful in qualitative evaluation
5. Methods helpful in quantitative evaluation of antigens and antibodies
6. Isolation of cells of the immune system
7. Identification of cells of the immune system
8. Diagnosis of autoimmune diseases
9. Diagnosis of allergic diseases

10. Transplantation immunology

Literature

A. Literature required to receive a final credit for classes (pass an exam):

A.1. used in class

1. Gołab J., Jakóbsiak M., Lasek W., Stokłosa T.: Immunologia. PWN Warszawa 2017
2. Brynarski K. (ed.): Immunologia. Edra Urban & Partner, Wrocław 2017
3. Żeromski J (ed.): Immunologia dla studentów Wydziału Lekarskiego. Uniwersytet Medyczny w Poznaniu, Poznań 2008

A.2. studied independently by the student

1. Abbas A.K., Lichtman A.H., Pillai S. (ed. Polish edition Żeromski J.): Immunologia – funkcje i zaburzenia układu immunologicznego. Edra Urban & Partner, Wrocław 2015
2. Lasek W.: Immunologia: podstawowe zagadnienia i aktualności. PWN, Warszawa 2014.

B. Supplementary literature

1. Zembala M., Górski A (ed.): Zarys immunologii klinicznej. PZWL, Warszawa 2001.

Educational effects:

Effect no	Description of an educational effect	Reference to field of study related effects
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Knowledge:

W21	Knows the basics of the development and the mechanisms of functioning of the immune system, including specific and nonspecific immunities and humoral and cellular immune responses	C.W21
W22	Knows the major histocompatibility complex	C.W22
W23	Knows types of hypersensitivity reactions, types of immunodeficiencies, and basics of immunomodulation	C.W23
W24	Is familiar with aspects of cancer immunology	C.W24
W25	Knows the genetic basics for the selection of donors and recipients as well as the basics of transplantation immunology	C.W25

Abilities:

U1	Is able to use the antigen-antibody reaction in current modifications and techniques for diagnosis of infectious, allergic, autoimmune diseases, as well as cancers and blood disorders	C.U8
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Social competencies:

K2	Puts the well-being of the patient above everything else	
K3	Protects patient confidentiality and patient rights	
K4	Is aware of his own limitations and the need for continuous learning	

Methods used in the verification of educational effects

Educational effect	Type of grade				
	colloquiums	Solving problems during exercise classes	Solving problems in groups	Oral examination	Written examination
W21	X				X

W22	X				X
W23	X				X
W24	X				X
W25	X				X
U1	X				
K2					
K3					
K4					

Criteria of evaluating educational effects			
Educational effect	For a grade of 3	For a grade of 4	For a grade of 5
W21	60% correct answers	75% correct answers	90% correct answers
W22	60% correct answers	75% correct answers	90% correct answers
W23	60% correct answers	75% correct answers	90% correct answers
W24	60% correct answers	75% correct answers	90% correct answers
W25	60% correct answers	75% correct answers	90% correct answers
U1	60% correct answers	75% correct answers	90% correct answers
K2	60% correct answers	75% correct answers	90% correct answers
K3	60% correct answers	75% correct answers	90% correct answers
K4	60% correct answers	75% correct answers	90% correct answers