



# Pomeranian Medical University in Szczecin

## SYLLABUS of the MODULE (SUBJECT)

valid from the academic year 2017/2018

### General Information

Module title	<i>Immunology in practice</i>
Module type	<i>elective</i>
Faculty	<i>Faculty of Medicine</i>
Field of study	<i>Medicine</i>
Major	<i>Not applicable</i>
Level of study	long-cycle (S2J)
Mode of study	intramural
Year of studies, semester	<i>Year III, semester V</i>
ECTS credits (incl. semester breakdown)	<i>1</i>
Type/s of training	<i>lectures (15h)</i>
Form of assessment	<p>- <i>graded assessment</i>: *</p> <p><input type="checkbox"/> <i>descriptive</i></p> <p><input type="checkbox"/> <i>test</i></p> <p><input type="checkbox"/> <i>practical</i></p> <p><input type="checkbox"/> <i>oral</i></p> <p><i>X non-graded assessment</i> *</p> <p>- <i>final examination</i>: *</p> <p><input type="checkbox"/> <i>descriptive</i></p> <p><input type="checkbox"/> <i>test</i></p> <p><input type="checkbox"/> <i>practical</i></p> <p><input type="checkbox"/> <i>oral</i></p>
Head of the Department/ Clinic, Unit	Prof. dr hab. n. med. Ewa Stachowska
Tutor responsible for the module	Dr n. med. Maciej Hałasa / <a href="mailto:maciupam@op.pl">maciupam@op.pl</a>
Department's/ Clinic's/ Unit's website	<a href="http://www.pum.edu.pl">www.pum.edu.pl</a>
Language	English

\*replace ☐ with X where applicable

### Detailed information

<b>Module objectives</b>		<ol style="list-style-type: none"><li>1. To explain how the particular elements and processes related to immunity influence on general parameters of human homeostasis.</li><li>2. To provide in-depth analysis of how the content, structures and functions of the immune system influence its effectiveness.</li><li>3. To make familiar with the function and the importance of the immune system in certain clinical situations.</li><li>4. Presentation of the increasing recognition of the intestines as the Chief organ responsible for regulation of active immunity and tolerance.</li></ol>	
Prerequisite /essential requirements	Knowledge	Basic knowledge on the structure and function of the immune system and human physiology.	
	Skills	Ability to interpret numerical data regarding physiology and biochemistry of human organism as well as ability to use the internet databases.	
	Competences	Possessing self-education expertise and team-work skills.	
<b>Description of the learning outcomes for the subject /module</b>			
<b>No. of learning outcome</b>	<b>Student, who has passed the (subject) knows /is able to /can:</b>	<b>SYMBOL (referring the standards) ZEK</b>	<b>Method of verification of learning outcomes *</b>
W01	knows principles for development and mechanisms of functions of immune system including specific and non-specific mechanisms of humoral and cellular immunity	K_C.W20	O, R, K
W02	knows the ways of cell-to-cell and cell-extracellular matrix communication, intracellular transductions signal pathways and examples of these processes responsible for carcinogenesis and other pathologies	K_B.W21	
W03	describes major histocompatibility complex	K_C.W21	
W04	knows types of hypersensitivity reactions, types of immune deficiencies and principles for immunomodulation	K_C.W22	
W05	knows issues regarding neoplasm immunity	K_C.W23	
W06	defines genetic principles for donor-recipient matching and basics of transplantation immunology	K_C.W24	

W07	knows the basic mechanisms of cells and tissue injury	K_C.W26
W08	defines clinical course of specific and non-specific inflammation and describes the processes of regeneration of tissues and organs	K_C.W27
W09	knows basic quantitative parameters of efficiency of particular systems and organs, incl. scope, standard and demographic factors affecting values of such parameters	K_B.W29
W10	knows genetic mechanism for contracting drug-resistance by micro-organisms and malignant cells	K_C.W11
W11	possesses knowledge of female reproduction role and related disturbances, diagnostics and therapeutic procedures regarding, in particular: a) menstrual cycle and disturbances thereof b) pregnancy c) physiological and pathologic delivery and puerperium d) inflammations and neoplasms related to sexual organs e) birth control f) menopause g) basic diagnostics methods and gynecological procedures	K_F.W9
U01	uses antigen – antibody reactions in current modifications and techniques for the diagnosis of contagious, allergic, autoimmunization, hematological and neoplastic diseases	K_C.U8
U02	associates images of damage to tissues and organs with clinical symptoms, history interviews and results of laboratory determination	K_C.U11
U03	analyzes reaction, defense and adaptation phenomena and regulatory disturbances caused by etiological factors	K_C.U12
U04	interprets laboratory investigations and identifies reasons for deviations	K_E.U24

**Table presenting learning outcomes of the subject/module in relation to the form of classes**

No.	SYMBOL (referring the standards) ZEK	Type/s of training							
		Lecture	Seminar	Practical classes	Clinical classes	...	...	...	Other...
1.	K_C.W20	X							
2.	K_B.W21	X							
3.	K_C.W21	X							
4.	K_C.W22	X							
5.	K_C.W23	X							
6.	K_C.W24	X							
7.	K_C.W26	X							
8.	K_C.W27	X							
9.	K_B.W29	X							
10.	K_C.W11	X							
11.	K_F.W9	X							
12.	K_C.U8	X							
13.	K_C.U11	X							
14.	K_C.U12	X							
15.	K_E.U24	X							

Module (subject) contents no.	Description of teaching programme	No. of hours	References to learning outcomes
	Lectures		
TK1	The duality of immune response - innate vs. specific pros and cons	3	W 01, 04, 07, 08, 09 U 01, 02, 03, 04
TK2	The duality MHC class I vs. MHC class II responses - practical consequences	3	W 01, 02, 03, 06 U 01, 02, 04
TK3	Immunology of pregnancy - is this the tolerance that matters the most?	3	W 01, 03, 06, 09, 11 U 01, 03, 04
TK4	The gut - the most important immunization center	3	W 01, 04, 07, 08, 09 U 01, 02, 03, 04
TK5	Neoplasms and immunity Is immunity important in anti-cancer protection?	3	W 01, 02, 04, 05, 10 U 01, 02, 03, 04

**Booklist**

Obligatory literature:

1. Printouts of presentations provided by the teacher

Supplementary literature:

1. Any textbooks on immunology approved for the basic immunology course provided by the Microbiology and Immunology Department of Pomeranian Medical University

**Student's workload (balance sheet of ECTS credits)**

Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]		
	Tutor	Student	Average
Contact hours with the tutor	15		
Time spent on preparation to seminars/ practical classes			
Time spent on reading recommended literature	25		
Time spent on writing report/making project	10		
Time spent on preparing to colloquium/ entry test	20		

Time spent on preparing to exam			
Other .....			
Student's workload in total	70		
ECTS credits for the subject (in total)	1		
Remarks			

\* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloquium

R – report

S – practical skills assessment

RZC – practical classes report, incl. discussion on results

O – student's active participation and attitude assessment

SL – lab report

SP – case study

PS - assessment of student's ability to work independently

W – entry test

PM – multimedial presentation

other...