



# Pomeranian Medical University in Szczecin

## SYLLABUS of the MODULE (SUBJECT)

valid from the academic year 2017/2018

### General Information

Module title	<i>Pathophysiology</i>
Module type	Obligatory
Faculty	Faculty of Medicine
Field of study	Medicine
Major	<i>Not applicable</i>
Level of study	level II, long-cycle (S2J)
Mode of study	intramural
Year of studies, semester	Year 3, semester V + VI
ECTS credits (incl. semester breakdown)	9
Type/s of training	Lectures (8h) / seminars (14h) / practical (45h)
Form of assessment	- graded assessment: * <input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral  <input type="checkbox"/> non-graded assessment *  - final examination: * <input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of the Department/ Clinic, Unit	Prof. dr hab. n. med. Bogusław Machaliński
Tutor responsible for the module	Dr n. med. Elżbieta Dąbkowska - adiunkt dydaktyczny zpatog@pum.edu.pl
Department's/ Clinic's/ Unit's website	www.pum.edu.pl – Wydział Lekarski z Oddziałem Nauczania w Języku Angielskim / Katedra Fizjopatologii / Zakład Patologii Ogólnej
Language	English

\*replace ☐ with X where applicable

## Detailed information

<b>Module objectives</b>		The main purpose of teaching the subject is to develop knowledge and the skills for proper understanding of the basic mechanisms leading to the formation of the most common diseases.	
Prerequisite /essential requirements	Knowledge	Basic concepts of human Physiology and Biochemistry	
	Skills	Analytical thinking	
	Competences	Self – education, integration of the knowledge obtained on other preclinical and clinical courses, co-operation with team members (classmates).	
<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 definition and pathophysiology of shock with special regard to differentiation of its causes and multi-organ failure	K_C.W28	K/ET
W02	Describes the consequences of the development of pathological changes for adjacent organs	K_C.W31	K/ET
W03	Lists external and internal pathogens, both modifiable and non-modifiable	K_C.W32	K/ET
W04	Lists clinical forms of most frequent diseases of selected organs and systems, metabolic diseases and disturbances of water-electrolyte and acid-base equilibriums	K_C.W33	K/ET
U01	Associates images of damage to tissues and organs with clinical symptoms, history interviews and results of laboratory determination	K_C.U11	K/ET
U02	Analyzes reaction, defense and adaptation phenomena and regulatory disturbances caused by etiological factors	K_C.U12	K/ET
K01	Demonstrates the awareness for self-education, understands the need for continuing professional	K_K03	O

	education, can inspire and organize learning processes in others		
K02	takes a health and physical activity oriented attitude	K_K07	O

**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...
W01	K_C.W28	x	x					
W02	K_C.W31	x	x					
W03	K_C.W32	x	x					
W04	K_C.W33	x	x					
U01	K_C.U11			x				
U02	K_C.U12			x				
K01	K_K03		x	x				
K02	K_K07		x	x				

Module (subject) contents no.	Description of teaching programme	No. of hours	References to learning outcomes
	<b>Semester 5</b>		
	<b>Lectures:</b>		
TK01	Cell cycle	1	W01, W02, W03, W04
TK02	Apoptosis	1	W01, W02, W03, W04
TK03	Cell therapies – selected topics	2	W01, W02, W03, W04
TK04	Low-protein diet	1	W01, W02, W03, W04
TK05	Endothelium. Fundamentals of its cellular and humoral activities.	2	W01, W02, W03, W04
TK06	Pathophysiology of the Primary Hypertension.	1	W01, W02, W03, W04
	<b>Seminars:</b>		
TK01	Pathophysiology of the disorders of the proteins and purines metabolism.	3	W01, W02, W03, W04, U01, U02, K01, K02
TK02	Pathophysiology of the disorders of the carbohydrates metabolism.	4	W01, W02, W03, W04, U01, U02, K01, K02
	<b>Practical classes:</b>		
TK01	Pathophysiology of the disorders of the carbohydrates metabolism.	6	W01, W02, W03, W04, U01, U02, K01, K02
TK02	Pathophysiology of the disorders of the lipids metabolism.	6	W01, W02, W03, W04, U01, U02, K01, K02

TK03	Pathophysiology of the circulatory system.	8	W01, W02, W03, W04, U01, U02, K01, K02
TK04	Pathophysiology of the Secondary Hypertension.	6	W01, W02, W03, W04, U01, U02, K01, K02
TK05	Inflammation.	8	W01, W02, W03, W04, U01, U02, K01, K02
	<b>Semester 6</b>		
	<b>Seminars:</b>		
TK01	Pathophysiology of the hematopoietic system.	7	W01, W02, W03, W04, U01, U02, K01, K02
	<b>Practical classes:</b>		
TK01	Pathophysiology of the urinary system. Pathophysiology of the disorders of water-electrolyte and acid-base balance.	6	W01, W02, W03, W04, U01, U02, K01, K02
TK02	Pathophysiology of the digestive system.	8	W01, W02, W03, W04, U01, U02, K01, K02
TK03	Pathophysiology of the respiratory system.	6	W01, W02, W03, W04, U01, U02, K01, K02
TK04	Fundamentals of immunopathology.	6	W01, W02, W03, W04, U01, U02, K01, K02
TK05	Pathophysiology of the endocrine system.	8	W01, W02, W03, W04, U01, U02, K01, K02

**Booklist**

Obligatory literature:

1. Robbins Basic Pathology, 9th ed., red. Vinay Kumar, Abul Abbas, Jon Aster, Saunders, 2012
2. Robbins & Cotran Pathologic Basis of Disease - 9th Edition; red. Vinay Kumar, Abul Abbas, Jon Aster, Elsevier, 2014

Supplementary literature:

1. Harrison's Principles of Internal Medicine 18th edition (2013)
2. Recent scientific articles related to Human Pathophysiology

**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	90		
Time spent on preparation to seminars/ practical classes	30		
Time spent on reading recommended literature	30		
Time spent on writing report/making project	-		
Time spent on preparing to colloquium/ entry test	35		
Time spent on preparing to exam	40		
Other .....	-		

Student's workload in total	225		
ECTS credits for the subject (in total)	9		
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 – multimedia presentation  
 other...