



SYLLABUS of the MODULE (SUBJECT) General information

Module title: PATHOPHYSIOLOGY	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Medical and Dentistry
Specialty	Not relevant
Level of study	long-cycle first-cycle <input type="checkbox"/> second-cycle <input type="checkbox"/>
Mode of study	full-time, part-time
Year of studies, semester	Year 2 , semester IV
ECTS credits (incl. semester breakdown)	4
Type/s of training (Number of hours)	Lectures (4h)/ lectures e-l (3 h/ seminars (15 h)/practical classes (30 h)
Form of assessment	<p>- graded assessment:</p> <p><input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral</p> <p><input type="checkbox"/> non-graded assessment</p> <p>- final examination: descriptive <input checked="" type="checkbox"/> test practical oral</p>
Head of the Department /Clinic, Unit	Prof. dr hab. n. med. Bogusław Machaliński machalin@pum.edu.pl
Tutor responsible for the module	Dr n. med. Ewa Pius-Sadowska ewapius@pum.edu.pl
Department's/ Clinic's/ Unit's website	https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/zaklad-patologii-ogolnej
Language	Polish

*where applicable, replace into X

Detailed information

Module objectives		<p>Didactic objectives</p> <ol style="list-style-type: none"> 1. Transfer of knowledge about the functioning of organs, body systems in the state of disease, 2. Defining the state of disease, description of its determinants, regulatory mechanisms and compensating its disorders. 3. Providing knowledge enabling the understanding of etiology, pathogenesis and symptoms of disease in individual organs and systems 4. Using the acquired knowledge to discuss specific disease cases in terms of etiology, pathogenesis and observed symptoms, critical analysis
Prerequisite /essential requirements	Knowledge	Knowledge of physiological aspects of the human body, knowledge of biochemical aspects of the human body, knowledge of basic physiological and biochemical concepts
	Skills	Knows how to interpret numerical data on basic physiological and biochemical variables, uses internet databases,
	Competences	Has the habit and ability to self-education, the ability to work in a team, acceptance of current ethical standards

Description of the learning outcomes for the subject/module			
No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	knows and understands human vital functions	B.W19.	K, ET
W02	knows and understands numerical values of basic physiological variables and changes in numerical values	B.W23.	K, ET
W03	knows and understands concepts of health and disease, mechanisms of developing disease on molecular, cellular, tissular and systemic level, clinical symptoms of disease, prognosis and its complications	C.W13.	K, ET
W04	knows and understands mechanisms of inflammatory reaction and wound healing	C.W14.	K, ET
W05	knows and understands basic disturbances of: regulation of hormonal secretion, water and electrolyte balance, acid-base equilibrium, kidneys and lungs function, mechanism of developing and consequences of disturbances in cardiovascular system, including shock	C.W15.	K, ET
W06	knows and understands mechanisms leading to organ and body pathologies, including infectious, invasive, autoimmune, immunodeficiency, metabolic and genetic diseases	C.W30.	K, ET

W07	knows and understands the influence of physical, chemical and biological factors, as well as avitaminosis and stress on the patient's body	C.W31.	K, ET
U01	is able to predict and explain complex pathomechanisms of disturbances leading to development of diseases	C.U4.	K, ET
U02	is able to analyze clinical course of diseases in pathological processes	C.U5.	K, ET
K01	is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs	K.5.	O
K02	is ready to draw conclusions from own measurements or observations	K.8.	O
K03	is ready to implement the principles of professional fellowship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment	K.9.	O

Table presenting LEARNING OUTCOMES in relation to the form of classes

No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical classes	Clinical classes	Simulations	E-learning	Self-education
W01	B.W19.	X					X	
W02	B.W23.	X					X	
W03	C.W13.	X					X	
W04	C.W14.	X					X	
W05	C.W15.	X					X	
W06	C.W30.	X					X	
W07	C.W31.	X					X	
U01	C.U4.		X	X				
U02	C.U5.		X	X				
K01	K.5.		X	X				
K02	K.8.		X	X				
K03	K.9.		X	X				

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	Number of hours	References to learning outcomes
Summer semester			
	Lectures		
TK01	Haematopoiesis - anaemias	2	W01, W02, W03, W04, W05, W06, W07
TK02	Haematopoiesis - haemorrhagic diathesis	2	W01, W02, W03, W04, W05, W06, W07
TK03	Avitaminosis	2	W01, W02, W03, W04, W05, W06, W07
TK04	Apoptosis	1	W01, W02, W03, W04, W05, W06, W07
	E-learning lectures:		
TK05	Stem cells	3	W01, W02, W03, W04, W05, W06, W07
	Seminars:p		
TK06	Health and disease. Disease as a disturbance of system homeostasis - introduction to pathophysiology.	3	U01, U02, K01, K02, K03
TK07	Thermoregulation disorders	3	U01, U02, K01, K02, K03
TK08	Pathophysiology of pain	3	U01, U02, K01, K02, K03
TK09	Lipid metabolism disorders.	3	U01, U02, K01, K02, K03
TK010	Disorders of protein and purine metabolism.	3	U01, U02, K01, K02, K03
	Practical classes		
TK11	Carbohydrate metabolism disorders..	3	U01, U02, K01, K02, K03
TK12	Diagnosis of diabetes mellitus. Principles of performing oral glucose tolerance test (OGTT). Interpretation of results and case analysis.	3	U01, U02, K01, K02, K03
TK13	Pathophysiology of the gastrointestinal system part 1 - gastric and duodenal ulcers, acute pancreatitis	3	U01, U02, K01, K02, K03
TK14	Pathophysiology of the gastrointestinal system part 2 - acute and chronic liver failure, cholelithiasis	3	U01, U02, K01, K02, K03
TK15	Selected issues in the pathophysiology of urinary tract disorders. Acute and chronic kidney disease.	3	U01, U02, K01, K02, K03
TK16	Pathophysiology of the cardiovascular system - primary hypertension, atherosclerosis, acute coronary artery disease - infarction.	4	U01, U02, K01, K02, K03
TK17	Chronic and acute circulatory failure - types and pathogenesis of shock.	3	U01, U02, K01, K02, K03
TK18	Pathophysiology of the endocrine system - thyroid disorders, dysfunction of the hypothalamic-pituitary-gonadal axis part1.	4	U01, U02, K01, K02, K03
TK19	Pathophysiology of the endocrine system - thyroid diseases, dysfunction of the hypothalamic-pituitary-gonadal axis part 2.	4	U01, U02, K01, K02, K03

Booklist:	
Obligatory literature:	
1. Podręcznik chorób wewnętrznych - „Interna Szczeklika 2016” pod redakcją Andrzeja Szczeklika, PZWL, 2016	
2. „Patofizjologia” T1 i T2 pod redakcją S. Maślińskiego i J. Ryżewskiego, PZWL, 2012	
Supplementary 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	
Student's workload	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	55
Time spent on preparation to seminars/ practical classes	15
Time spent on reading recommended literature	15
Time spent on writing report/making project	-
Time spent on preparing to colloquium/ entry test	15
Time spent on preparing to exam	20
Other	-
Student's workload in total	120
ECTS credits for the module/subject	4

Notes

* 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...