Attachment No. 1 to Rector's ordinance No. /2016

DESCRIPTION OF THE COURSE OF STUDY

Course code	**0912-7LEK-B2.6-P**	
Name of the course in	Polish	**Patofizjologia**
	English	**Pathophysiology**

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	Medicine
1.2. Mode of study	Full-time
1.3. Level of study	Uniform Master's studies
1.4. Profile of study*	practical
1.5. Specialization*	Lack
1.6. Unit running the course of study	Faculty of Medicine and Health Sciences
1.7. Person/s preparing the course description	Dr hab n. med. Anna Polewczyk, prof. UJK
1.8. Person responsible for the course of study	Dr hab n. med. Anna Polewczyk, prof. UJK
1.9. Contact	Wnoz_inm@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	Scientific basis of medicine
2.2. Language of instruction	English
2.3. Semesters in which the course of study is offered	5^{th} – 6^{th} semester
2.4. Prerequisites*	Anatomy, Histology, Physiology

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes		LECTURE 50, CLASSES 60,
3.2. Place of classes		Courses in the teaching rooms of UJK
3.3. Form of assessment		LECTURE – E, CLASSES- Zo (credit with grade)
3.4. Teaching methods		Practical classes, conversational lecture, discussion
3.5. Bibliography	**Required reading**	McPhee S.J., Hammer G.D: "Pathophysiology of Disease. An Introduction to Clinical Medicine" Lange Medical Books/Mc-Graw-Hill, 6th edition, 2010
	Further reading	Copstead L-E., Banasik J.: Pathophysiology" Elsevier, 5th Edition, 2013 Kumar V., Abbas A.K., Fausto N., Aster J.C. – "Robbins and Cotran Pathologic Basis of Disease" 8th ed. Saunders Elsevier 2010 Carol Mattson Porth – "Pathophysiology Concepts of Altered Health States", 7th ed. Lippincott & Wilkins 2006

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

4.1. Course objectives ***(lecture, classes)***

The aim of teaching pathophysiology is to explain to medical students the functional changes of the system in disease, mechanisms of diseases development as well as systemic consequences resulted from the disease. The students should be familiarized and able to use the terminology used in pathophysiology, know the basis of ethiopathogenesis of individual systems diseases, knows patomechanism of the consequences of organs and systems dysfunction as well as using the acquired knowledge practically.

4.2. Detailed syllabus *(lecture, classes)*

Interactive lectures, presentation of the cases

Semester I 25 hours Lectures 1-6

1. Diseases of the heart and blood vessels: atherosclerosis, ischaemic heart disease, acute coronary syndromes, arrhythmia
2. Diseases of the heart and blood vessels: heart defects, hypertension, pulmonary hypertension.
3. Diseases of the heart and blood vessels: Cardiomyopathies, heart failure, oedema pulmonum, cardiogenic shock
4. Pathophysiology of inflammatory heart diseases
5. Pathophysiology of diseases of respiratory system
6. Eating disorders. Disorders of thermoregulation.

7. Pathophysiology of metabolism of carbohydrates, protein and lipids

Semester II 25 hours Lectures 8-13

8. Pathophysiology of renal diseases
9. Hormonal disorders – disorders of basal function of excretory system and hormonal disorders of hypothalamic – pituitary- adrenal axis and thyroid abnormalities
10. Reproductive pathophysiology - disorders of gender differentiation and genital development, sexual maturation disorders, psychosexual disorders in women and men, pathogenesis of impotence and sex cooling
11. Pathophysiology of selected central and peripheral nervous system diseases
12. Pathophysiology of hematopoietic system and immunopathology
13. Pathogenesis of the neoplasmatic diseases-

Classes

Semester I 30 hours Classes 1-5

1 Pathophysiology of circulatory system: ischaemic heart disease, acute coronary syndromes, arrhythmia. Pathogenesis of hypertension

2. Pathophysiology of circulatory system: defects of the heart, heart failure, acute cardiac conditions
3. The pathophysiology of respiratory diseases
4. The pathophysiology of the digestive system: gastroesophageal reflux disease, stomach and duodenal disease, intestinal diseases, malabsorption.
5. Disorders of carbohydrate, protein and lipid metabolism

Semester II 30 hours Classes 6-11

6. The pathogenesis of excretory system diseases
7. Water-electrolyte imbalance and the disorders of Acid-Base Balance
8. Disturbances in the functioning of the endocrine system
9. The pathophysiology of nervous system diseases
10. The pathophysiology of the hematopoietic system with particular emphasis on hemostasis disorders.
11. Immunopathology

4.3. Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of **KNOWLEDGE:**		
W1	knows the consequences of inadequate nutrition, including long-term starvation, taking too large meals and the use of unbalanced diet;	B.W19.
W2.	knows the consequences of vitamins or minerals deficiency and their excess in the body;	B.W20.
W3.	knows the mechanism of hormones' functioning and the consequences of disorders of hormonal regulation;	B.W26.
W4.	knows the mechanisms of aging;	B.W28.
W5.	knows the relationship between the factors that disrupt the equilibrium of biological processes and physiological and pathophysiological changes;	B.W30.
within the scope of **ABILITIES:**		
U1.	recognizes the most common human parasites on the basis of their construction, life cycles and symptoms of the disease;	C.U7.
U2.	prepares a microscopic formulation and recognizes pathogens under a microscope	C.U9.
U6	applies psychological interventions and motivational support in certain situations;	D.U10.

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes *(code)*	Method of assessment (+/-)																				
	Written exam-test*			Test*			Project*			Effort in class-Discussion*			Practical test*			Group work*			Attendance*		
	Form of classes			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*		
	L	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...
W01	+	+									+	+							+	+	
W02	+	+									+	+							+	+	
W03	+	+									+	+							+	+	
W04	+	+									+	+							+	+	
W05	+	+									+	+							+	+	
U01	+													+	+				+	+	
U02	+													+	+				+	+	
U06	+													+	+				+	+	

delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	**3**	61%-68% Learning programme content on the basic level, replies chaotic, leading questions necessary.
	3,5	69%-76% Learning programme content on the basic level, answers systematized, requires assistance from the teacher.
	4	77%-84%Learning programme content on the basic level, answers systematized, independent. Solving of problems in typical situations.
	4,5	85%-92%The scope of presented knowledge exceeds the basic level based on the supplementary literature provided. Solving of problems in new complex situations
	5	93%-100% The scope of presented knowledge exceeds the basic level based on independently acquired scientific sources of information.
classes (C)*	**3**	61%-68%Learning programme content on the basic level, replies chaotic, leading questions necessary
	3,5	69%-76%Learning programme content on the basic level, answers systematized, requires assistance from the teacher.
	4	77%-84%Learning programme content on the basic level, answers systematized, independent. Solving of problems in typical situations.
	4,5	85%-92%The scope of presented knowledge exceeds the basic level based on the supplementary literature provided. Solving of problems in new complex situations
	5	93%-100%The scope of presented knowledge exceeds the basic level based on independently acquired scientific sources of information.

Conditions for obtaining credit:

1. Condition for admission to the examination is the completion of all classes (including written tests) as well as presence in all lectures.
2. Practical and theoretical knowledge required, not only the current subject, but also aspects previously disscussed and related to the course subject.
3. All students will be assessed during each class.
4. The grade, including insufficient can be improved only once within 14 days, during subsequent classes. Test correction will be performed within two weeks.
5. Study Regulations do not allow an unexcused absence. An unexcused absence can be fulfilled during next class.
6. The assistant conducting classes with the group of students is responsible for the above mentioned organizational matters.
7. A final written exam.

Criteria for evaluation of oral answer

1. Provision of a comprehensive answer to the problem (task)
2. Skill of integration of knowledge from allied domains (disciplines)
3. Independence and/or creativity in the presentation of the scope of problems, proposals of solutions
4. Presentation of the current knowledge related with the discipline (domain)
5. Recognition of problems resulting from the task

Criteria for evaluation of written answer

1. Compliance with the essence of the subject matter of work (task) /
2. Provision of a comprehensive answer to the problem (task) /
3. Skill of integration of knowledge from allied domains (disciplines) /
4. Independence and/or creativity in the presentation of the scope of problems
5. Presentation of the current knowledge related with the discipline (domain), pertinent selection of literature.

5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

Category	Student's workload
	Full-time studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/	**110**
*Participation in lectures**	**50**
*Participation in classes, seminars, laboratories**	**60**
*Preparation in the exam/ final test**	
*Others**	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	**130**
*Preparation for the lecture**	**50**
*Preparation for the classes, seminars, laboratories**	**85**
*Preparation for the exam/test**	
*Gathering materials for the project/Internet query**	
Preparation of multimedia presentation	
*Others**	
TOTAL NUMBER OF HOURS	**245**
ECTS credits for the course of study	**10**

Accepted for execution *(date and signatures of the teachers running the course in the given academic year)*

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