

1	Subject	PATHOPHYSIOLOGY			
2	Code	DPF207			
3	Study Program	Study Program of Integrated studies in dental medicine			
4	Organizing Institution (Unit, Institute, Chair, Department)	Ss Cyril and Methodius University, Medical Faculty, Department of Pathophysiology, Instiute of Pathophysiology and Nuclear medicine			
5	Educational degree (first or second cycle)	Integrated study			
6	Study year/semester	2/4	7	Number of credits	6
8	Teacher	Prof. Daniela Pop Gjorcheva, PhD, MD			
9	Preconditions	/			
10	Teaching goals: <ul style="list-style-type: none"> Object and methods of pathophysiology (exploration of the ethiology and the pathogenesis of diseases on experimental models and by clinical methods) General mechanisms of compensation and decompensation in disturbancies caused by the pathological influence of external factors Factors of the general reactivity and the immunity, their disturbances and their relationship with external medium Mechanisms of initiation and manifestation of pathological situations with general functional disturbances Mechanisms of metabolic disorders Pathophysiological mechanisms of initiation, course and outcome of of the hematopoetic system's diseases, heart and vascular, lung, kidney, digestive, liver and bile and endocrine disturbances 				
11	Brief content				
	Theoretical course				Class
	<ul style="list-style-type: none"> health, disease, death; ethiology and pathogenesis, compensation, decompensation, sufficiency, insufficiency pathogenic influence of the enviromental (external) factors (physical, chemical, biological and psychical factors) general reactivity and immunity, inheritance and environment disturbances of innate immunity (complement, phagocytosis, interferon) disturbances of adaptive immunity, hypersensitivity, immunodeficiency, autoimmunity, transplant reaction disturbances in pathological situations with general functional disorders (hypoxia, fever, fatigue, peripheral circulatory disorders), pathophysiology of the oldness disturbances of the energetic metabolism and of the protein, carbohydrate, lipid, water, electrolyte and vitamin metabolism disturbances of hematopoetic system disturbances of cardiovascular system disturbances of respiratory system disturbances of renal system disturbances of digestive system disturbances of hepatobiliar system disturbances of endocrine system 				
	Total				45
	Practical lessons:				Class
	<ul style="list-style-type: none"> experimental practices on experimental animals, demonstrations on students, presentation of in vitro and in vivo methods 				
	Total				15
	Seminars				Class
	Elaboration of topics from the relevant material, presentation of the topics by the students and active involvement of the students until discussion of the given topic.				15

12	Methods of studying: class room oriented lectures, interactive lectures, group work, practical training, seminar paper		
13	Total available time	180 classes	
14	Organization of the course	45 classes - theoretical course, 15 classes- practical course, 15 classes – seminars, 105 classes - home individual learning and other activities	
15	Forms of teaching activities	15.1.	Theoretical course 45 classes
		15.2.	Practical course, seminars Practical course- 15 classes, seminars – 15 classes
16	Other forms of activities	16.1.	Project tasks
		16.2.	Individual tasks 15 classes
		16.3.	Individual (home) learning 90 classes
18	Method of assessment	17.1.	Tests Continual assessment – 2 tests (written form) : <ul style="list-style-type: none"> • General pathophysiology 18-30 points • Pathophysiology of disturbances of organs and systems 18-30 points
		17.2.	Active participation, seminar paper/project (oral/written presentation) <u>Theoretical course (% of presence)</u> <ul style="list-style-type: none"> • min.30% 1 point • 31-70% 2 points • 71-100% 3- points <u>Practical</u> 10 - 12 points <u>Seminar paper presentation</u> 3-5 points
		17.3.	Final exam: final test + oral examination <ul style="list-style-type: none"> • Final test: analysis of experimental models or tests for disorders detection 5-10 points • Oral exam: theoretical discussion for the application of experimental models or tests 5-10 points
18	Grading criteria (points / grade)	Up to 59 points 5 (five) (F)	
		from 60 to 67 points 6 (six) (E)	
		from 68 to 75 points 7 (seven) (D)	
		from 76 to 84 points 8 (eight) (C)	
		from 85 to 93 points 9 (nine) (B)	
		from 94 to 100 points 10 (ten) (A)	
19	Requirement for signature and taking the final exam	The student is required to actively follow all of the planned activities. Conditional criteria for assessment of knowledge: In order to get a signature, the student should obtain minimum points in both theoretical and practical courses, and to present seminar paper; In order to take the final exam, the student should obtain the minimum points from activity and test; If the student has not obtained the minimum points in the continual assessments, he/she in next exam session will have paper part of the exam (70 points) and final exam (30 points)	
20	Language of the course	English	

21	Method for evaluation of the quality of education	Anonymous student's evaluation of the subject, teachers and collaborators involved in the educational activities				
22	Literature					
	22.1.	Mandatory textbooks				
		No.	Author	Title	Publisher	Year
		1	Vaskova O, Miceva Ristevska S, Pop Gjorceva D, Miladinova D, Loparska S:	Pathophysiology(theoretical and practical course)	Boro Grafika, Skopje	2010
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Gamulin S et all:	Pathophysiology	Jumena Zagreb	2014
2.		Tadzer I et all.:	General pathological physiology	Medicinska knjiga, Beograd	1984	
3.		McPhee SJ, Ganong WF:	Pathophysiology of disease. An introduction to clinical medicine	Langee medical Books/McGraw-Hill, New York	2003	