

1.	Subject	<b>PATHOPHYSIOLOGY</b>			
2.	Code	MLD – 221			
3.	Study program:	Three-year professional studies of medical laboratory diagnostics			
4.	Conducted by	Department of Pathological Physiology UKIM – Medical faculty, Skopje			
5.	Degree of education (first or second cycle)	First cycle			
6.	Academic year/semester	First/IV	7.	Credits	4
8.	Professor	Responsible professor: prof. Daniela Pop Gjorcheva, chair of the department The classes are held by all the members of the department			
9.	Prerequisite	Fulfilled condition for enrolment in second year			
10.	Goals	<p>Introduction to the pathophysiological mechanisms that are behind the basic pathological processes and condition in human pathology (fever, hypoxia, inflammation, disorders of the energy and metabolism of nutritional elements), introduction to the mechanisms behind the basic and most common diseases of the organs and systems, introduction to the functional disorders and the clinical and laboratory manifestations that they show.</p> <p>Expected results: Gaining knowledge and skills to understand, explain and discuss the pathophysiological mechanisms of the pathological processes, conditions and diseases, the functional disorders during the most common diseases in human pathology and their clinical/laboratory evaluation and assessment.</p>			
11.	Content summary:	<p>Theoretical lessons: Fever. Hypoxia. Inflammation. Most common disorders of the energy metabolism, nutrient metabolism, fluid-electrolyte balance and acid-base balance. Inflammation. Pathophysiology of the most common disorders of the hemostasis, cardiovascular system, gastrointestinal system, hepatobiliary system, nephron-urinary system and endocrine system.</p> <p>Practical lessons: Dehydrations and hyperhydration, electrolyte disorders Hyperglycemic and hypoglycemic syndrome Dysproteinemia, paraproteinemia Dyslipidemia – primary and secondary Haemostatic disorders – disorders of the vascular and thrombocyte factor Haemostatic disorders – disorders of the coagulation and anticoagulation factor Anemia, polycytemia Quantitative disorders of the leukocyte Disorders of the renal clearance function Icterus Pancreatic exocrine insufficiency Thyroid function disorders Parathyroid function disorders</p>			
12.	Teaching methods:	Theoretical classes, practical lessons, learning at home			
13.	Total classes:	30 hours or 90 lessons (3 ECTS x 30 hours)			
14.	Organization	<p>Theoretical lessons: <b>30</b> Preparation of theoretical lessons: 30 Total: 60 classes</p>			

		Learning at home: 30		
15.	Types of teaching activities	15.1	Lessons: theoretical classes	30
		15.2	Practical lessons	30
16.	Other types of activities	16.1	Practice	/
		16.2	Self-supporting practice	Incorporated into the practical lessons
		16.3	Learning at home	30
17.	Knowledge assesment		Points	
	17.1	Attending and participating in the theoretical lesson	Min.-max. 3*-10 *attending at least 5 of the 15 theoretical classes	
	17.2	Attending and participating in the practical lessons	Min.-max. 12-15 The student can miss 3 of the 15 practical lessons	
	17.3	Mid-term exams		
	17.4	Final exam: Pathophysiology test (includes material from both the theoretical and practical lessons	Min. – Max. 45 - 75	
18.	Grading criterion (points/grades)	Up to 59 points	5 (five) F	
		From 60 to 68 points	6 (six) E	
		From 69 to 76 points	7 (seven) D	
		From 77 to 84 points	8 (eight) C	
		From 85 to 92 points	9 (nine) B	
		From 93 to 100 points	10 (ten) A	
19.	Requirements for obtaining a signature and attending the final examination	Listed at field 17. Minimum points from the theoretical lessons and attending 12 of the 15 practical lessons		
20.	Language	Macedonian		
21.	Method of evaluating the quality of the lessons	Anonymous student evaluation of the subject, the professors and the collaborators who hold the lessons.		
22.	Literature			
	22.1	Mandatory literature		
		1.	Authorized lectures from the professors of the Department	
		2.	O. Vaskova, S. Miceva Ristevska, D. Pop Gjorcheva, D. Miladinova, S. Loparska: Practicum of basic and specialized pathological physiology for medical students, Boro Grafika, 2012	
	22.2	Additional literature		

	1.	O. Vaskova, S. Miceva Ristevska, D. Pop Gjorcheva, D. Miladinova, S. Loparska, V. Majstorov: Basic pathological physiology for medical students, Boro Grafika, 2013
	2.	O. Vaskova, S. Miceva Ristevska, D. Pop Gjorcheva, D. Miladinova, S. Loparska: Specialized pathological physiology for medical students, Boro Grafika, 2013
	3.	MacFi, Genong: Disease pathophysiology – introduction to clinical medicine, Tabernakul, 2010