

1.	Subject	MEDICAL MYCOLOGY AND PARASITOLOGY			
2.	Code	MLD – 315			
3.	Study program:	Three-year professional studies of medical laboratory diagnostics			
4.	Conducted by	UKIM – Medical faculty Department of Microbiology with Parasitology			
5.	Degree of education (first or second cycle)	FIRST			
6.	Academic year/semester	III/V	7.	Credits	4
8.	Professor	Head of the Department of Microbiology with Parasitology – prof. d-r Elena Trajkovska Dokikj The lessons are held by all the members of the Department of Microbiology with Parasitology			
9.	Prerequisite				
10.	Goals	<p>The main aim of the subject program (after the lessons and the exam) is for the students to gain basic knowledge of the fungi and parasites as special types of microorganisms that a person encounters in his life, with special attention to fungi and parasites which cause infections.</p> <p>After finishing the program, the students will gain knowledge about:</p> <ul style="list-style-type: none"> • Morphology and physiology of different types of fungi • Different ways of fungal multiplication • Classification of the causers of fungal diseases • Morphology and structure of different types of parasites • Biological cycles of parasites • Classification of the causers of parasitic infections • General antimycotic and anthelmintic 			
11.	Content summary:	<p>Practical lessons (mycology):</p> <ul style="list-style-type: none"> • Recognizing mycotic disorders • Analyzing the way of taking sample for mycotic diagnosis • Fungi cultivation, bases and cultivation conditions • Differentiating between different fungi types – analysis of colonies • Determining sensitivity to antimycotics • Automatic detection of yeast, analysis of antimycotic sensitivity with automatic methods <p>Practical lessons (parasitology)</p> <ul style="list-style-type: none"> • Methods of detecting cysts and trophozoite in protozoa in feces • Identification of blood tissue protozoa and protozoa of body cavity • Methods of detecting parasitic eggs • Microscopy of slides of parasitic eggs • Taking a swab • Microscopy of a swab • Serological techniques of identifying parasites • Molecular techniques of identifying parasites 			
12.	Teaching methods:	<ul style="list-style-type: none"> • Interactive theoretical lessons • Self-supporting practice • Practical lessons/seminars 			

	<ul style="list-style-type: none"> • Problem-solving • Independent analysis of microscopic structures and yeast and fungal cultures • Analysis of serological reactions for identifying yeast and fungus • Analysis of molecular reactions for identifying yeast and fungus • Independent analysis of parasitic eggs in a native structure and recognizing adult parasites • Analysis of serological results for identifying parasites • Analysis of molecular reactions for identifying parasites • Analysis of yeast results with automatic diagnostic, analysis of the results of antimycotic sensitivity of isolates 		
13.	Total classes:	60	
14.	Organization		
15.	Types of teaching activities	15.1	Lessons: theoretical classes 15
		15.2	Practical lessons 45
16.	Other types of activities	16.1	Projects
		16.2	Self-supporting practice
		16.3	Learning at home 60
17.	Knowledge assessment		Points
	17.1	Tests: 2	Min. – Max. Written test – part of the theoretical lessons 18 - 30 Written test – part of the practical lessons 30 - 50
	17.2	Active participation	Min. - Max. Theoretical lessons 2 - 5 Practical lessons 10 - 15 The student can miss two of the practical lessons.
	Grading criterion (points/grades)	Up to 59 points	5 (F)
		From 60 to 68 points	6 (E)
		From 69 to 76 points	7 (D)
		From 77 to 84 points	8 (C)
		From 85 to 92 points	9 (B)
		From 93 to 100 points	10 (A)
19.	Requirements for obtaining a signature and attending the final examination	<p>To obtain a signature, the student must gain at least 60% of the points of the theoretical and practical lessons.</p> <p>The final grade for the subject is formed according to the table for grading, and is based on the sum of the points from all the activities.</p>	
20.	Language	Macedonian	
21.	Method of evaluating the quality of the lessons	Students' anonymous evaluation of the subject, the professors and the collaborators who participate in the lessons.	
22.	Literature		
	22.1	Mandatory literature	
		1.	Grinvud D. et al., Translation by: prof. d-r Nikola Panovski, prof. d-r Milena Petrovska, prof. d-r Elena

			Trajkovska Dokikj, prof. d-r Kakja Popovska, Medical Microbiology, 17 th ed. 2006, translated 2011 as part of the government project translation of professional and scientific books, 2010
		2.	prof. d-r Nikola Panovski, prof. d-r Milena Petrovska, prof. d-r Elena Trajkovska Dokikj, prof. d-r Kakja Popovska, Microbiology with Parasitology Textbook and practicum for the students of professional studies, Department of Microbiology and Parasitology, 2008
		3.	Prof. dr. Milena Petrovska et al. Practicum of medical microbiology and parasitology, Department of microbiology and parasitology 5 th edition, 2010
		4.	Prof. d-r Nikola Panovski et al., Medical Microbiology – general part, Department of Microbiology and Parasitology, 2011
		5.	Prof. d-r Nikola Panovski et al., Medical Microbiology – specialized part, Department of Microbiology and Parasitology, 2011
	22.2	Additional literature	
		1.	Jawetz E, Melnik II, Adelberg EA., Medical microbiology, Savremena Administracija, Belgrade, 21 st edition, 2004