

1.	Subject	HISTOLOGY AND EMBRYOLOGY (2)		
2.	Code	OM 122		
3.	Study program	Undergraduate general medicine program		
4.	Institution (Unit, Institute, Chair, Department)	Institute of Medical Histology and Embryology UKIM – Faculty of medicine		
5.	Educational degree (first or second cycle)	Integrated cycle		
6.	Academic year / semester	First / second	7.	Number of ECTS credits
8.	Professor-Lecturer in charge	Prof. Liljana Milenkova M.D. PhD		
9.	Prerequisites	None		
10.	Teaching goals and study program (competencies):			
	<p>1. Acquiring skills of viewing histology microscopic slides and precise identification of structural components of tissues and organs</p> <p>2. Acquiring ability of comprehension of:</p> <ul style="list-style-type: none"> - specific combination of tissues in each organ; - crucial components of organs; - specific structural properties determining basic organ function; - role of additional (supporting) structural and functional components. <p>3. Acquiring ability to present comprehension of origin and organ development;</p> <p>4. Acquiring basic ability to make causal-consequential connection between potential disruption of organ development and type of resulting congenital anomaly.</p>			
11.	Brief content of study program			
	<p>Theoretical and laboratory practice classes:</p> <p>Microscopic structure, embryonic development, concept of origin of congenital malformations of organ systems</p> <ul style="list-style-type: none"> - gastro-intestinal, - urinary, - genital, - respiratory, - endocrine, - central nervous system, - skin - sensory organs. 			

12.	Learning methods			
	<ul style="list-style-type: none"> - Through visual presentation during accentuated concept lectures, studygoal oriented learning, and interactive teaching. - Through power point, video presentations and other aids during laboratory practice classes. - Through individual examination of microscopic slides. - Through student presentations and open discussions during seminars. 			
	- Through learning from recommended literature and selected files available on the web site of the Institute of histology and embryology.			
13.	Total number of hours	180		
14.	Distribution of the available time			
15.	Forms of educational activities	15.1	Theory lectures:	30
		15.2	Laboratory practice classes:	45
16.	Other forms	16.1	Project assignments	
		16.2	Individual tasks	18
		16.3	Home studing	78
Assesment of knowlwdge points				
17.1	ЦОНТИНУОУС АССЕСМЕНТ:	1. Gastrointestinal system, Written: 8,4-14 Microscopic slides 2,4 - 4 2. Urinary and male & female genital systems, Written: 13,2-22 Microscopic slides 2,4 - 4		

	Final exam	Skin, respiratory system, endocrine system, 46 C.N.S., eye, ear ; 1.Practical -Microscopic slides 4,8 - 8 2.Oral: 38		22,8-
17.2	Seminars / projects (oral or written presentation)	points min - max		
17.3	Active participation	points		
		Theoretical course	1-3	
		Practical course	4-7	
18.	Knowledge assessment criteria (points/grade)	Up to 59 points	5 (five) F	
		from 60 to 68	6 (six) E	
		from 69 to 76	7 (seven) D	
		from 77 to 84	8 (eight) C	
		from 85 to 92	9 (nine) B	
		from 93 to 100	10 (ten) A	
19.	Criteria for obtaining a signature and taking the final exam	Conditional criteria for assesment of knowledge: Criteria for signature: To take active participation in all the teaching activities including continuous assesments. Criteria for assesment on final exam: Students which have succesfully pass the continuous assesment, apply for final exam. In case the student has not achieved minimum points (60%) on each continual assesment, he/she applies to		

		<p>take the complete final exam.</p> <p>Complete final exam: The final exam is a combination of both written examinations (segments of the continuous assessments with less of 60%) and final examination.</p> <p>The grade for the entire exam is obtained according to the table of grades and based on the sum of the points gained in all the activities including the continual assessment.</p>				
20.	Language	Macedonian				
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.	Mandatory literature					
		Basic				
			Author	Title	Editor	Year
	22.1	1	The stuff of the Department of his-tology and embryo-logy	Study guide for Histology & embryology (2)	On the web site of the Medical faculty of Skopje	2017
	22.1	2	Kostovska N, Milenkova L.	Histoloska gradba i embrionalen razvitok na organskite sistemi (Histology and embryonic development of organ systems)	Medicinski fakultet, Skopje	2013
	22.1	3	The stuff of the Department of his-tology and embryo-logy	Selected files (Power Point presentations) available on the web site of the Med. Fak.	Continuously revised	
	22.2	Aditonal literature				
			Author	Title	Editor	Year

		1	Michael H. Ross, Wojciech Pawlina	Histology, A text and atlas: (original version and translation in macedonian)	original version 5th ed.	2010 translation in macedonian
		2	J.K.Junqueira, H. Carneiro	Basic histology. Text and atlas;	original version 11th ed.	2009 translation in macedonian
		3	Keith L. Moore, T.V.N. Persaud	The developing human. Clinically oriented embryology (original version and translation in macedonian)	original version 8th ed.	2010 translation in macedonian
		4		www.biolucida.com Medical education edition		