

Study program: Integrated academic studies in Medicine			
Course title: General and Special Medical Cytology			
Teacher: Dušan M. Lalošević, Matilda A. Đolai, Ivan Đ. Čapo, Bojana M. Andrejić Višnjić, Jelena R. Ilić Sabo, Jelena P. Amidžić, Milana D. Panjković, Silvana D. Andrić, Tanja S. Kostić			
Course status: elective			
ECTS Credits: 2			
Condition: Biology and Human Genetics			
Course aim: Acquiring knowledge and skills necessary for a thorough understanding of cell biology and interpretation of clinical cytological analyses.			
Expected outcome of the course:			
Knowledge: The student should know the basic common cytological features as well as the characteristics of epithelial and connective tissue cells with special reference to their microscopic identification.			
Skills: The student should be able to recognize the normal structure of blood cells at the level of light microscopy, to identify normal Pap smear, as well as the cellular composition of different types of cytological specimens.			
Course description			
<i>Theoretical education</i>			
<ol style="list-style-type: none"> 1. General cytology, history of cellular theory 2. Eukaryotic cell, principles of their structure, cell membrane 3. Membrane and non-membrane organelles, inclusions 4. Cellular signaling 5. Mitosis and meiosis, ultrastructure of nucleus and cell cycle, nuclear-cytoplasmic ratio 6. Cell movement and migration, cytoskeleton, flagella 7. Cell cultures and tissues 8. Epithelial cells, microscopic structure 9. Papanicolaou test and Practical Clinical Cytology 10. Connective tissue cells, cytology of blood and hematopoiesis 11. Cytopathology 12. Recapitulation and preparation for the exam 			
<i>Practical education</i>			
Microscopic exercises, cell culture, swabs and smears, interpretation of stained slides.			
Literature			
<i>Compulsory</i>			
<ol style="list-style-type: none"> 1. Anđelković Z, Somer Lj, Matavulj M, Lačković V, Lalošević D, Nikolić I, Milosavljević Z, Danilović V. Čelija i tkiva. Niš: Bonafides; 2002. 2. Grozdanović-Radovanović J. Citologija. Beograd: Zavod za udžbenike; 2000. 397 p. 3. Andrić S, Kostić T. Mehanizmi ćelijske komunikacije. Skripta za studente. Novi Sad: WUS Austria; 2007. 			
<i>Additional</i>			
<ol style="list-style-type: none"> 1. Krstić VR. Ultrastructure of the mammalian cell: an atlas. London: Springer; 1979. 376 p. 2. Papanicolaou G. Atlas of exfoliative cytology. Cambridge: Harvard University Press; 1963. 			
Number of active classes		Theoretical classes: 30	Практична настава: 15
Teaching methods:			
Lectures and Practice			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	10	Written	70
Practices		Oral	
Colloquium	20		
Essay			