	UNIVERSITY OF EAST SARAJEVO Faculty of Medicine	
	Study program:medicine	
	Integrated academic studies	I study year

Full subject title	HISTOLOGY AND EMBRYOLOGY
Department	Department for preclinical subjects, Faculty of Medicine in Foča

Subject code	**Subject status**	**Semester**	**ECTS**
ME-01-1-002-1; ME-01-1-002-2	compulsory	I,II	13

Professor/ -s	associate. professor. Milica Labudovic, PhD
Associate/ -s	senior assistant. Jelena Vladicic-Masic, MD; assistant. Snezana Zecevic, MD,assistant Ljiljana Kozić,MD

Number of lectures/ teaching workload (per week)			**Individual student workload (in hours per semester)**			**Coefficient of student workload S_o[1]**
L	**E**	**SP**	**L**	**E**	**SP**	**S_o**
3	3	0	3*15*1	3*15*1	0*15*1	1
3	4	0	3*15*1	4*15*1	0*15*1	1

total teaching workload (in hours, per semester) 3*15+3*15+0*15 =90 3*15+4*15+0*15=105	total student workload (in hours, per semester) 3*15*1+3*15*1+0*15*1 = 90 3*15*1+4*15*1+0*15*1=105
Total subject workload (teaching + student): 195 + 195 = 390 hours	

Learning outcomes	1. knowledge of the normal structure of cells, tissues and organs in the light microscopy and at the level of electronic microscopy; 2. understanding of the correlation between the morphology and function of cells of tissues and organs; 3. The introduction of an embryological basic mechanisms of cellular differentiation, tissue development, organ and understanding of the mechanisms for the formation of the morphogenetic developmental anomalies; 4. mastering the technique of microscopy of histological preparations in order to study the normal tissue and organ structure; 5. obtaining information on the significance of particular histological structures for clinical practice
Preconditions	No preconditions
Teaching methods	Lectures, exercises, seminars, colloquium, consultations....
Subject content per week	**Lectures:** 1.Introductory class 2. Modification of the cell membrane 3. Nucleus 4. Epithelial tissue 5. Connective tissue 6. Classification of connective tissue 7. Cartilage 8. Blood 9. Muscular tissue 10. Nervous tissue 11. Nervous system. 12. Cardiovascular and lymphatic vascular system. 13. Immune system and lymphatic organs. 14. Endocrine system. 15. Respiratory system. 16. Digestive system 17 Gastrointestinal tract: general structure of the digestive tube 18. Liver 19. Urinary system. 20. The eye. Eye ball 21. The ear. External ear

22. The skin. Epidermis
23. Male reproductive system.
24. Female reproductive system.
25. General Embryology.
26. Embryonic stage of development
27. Special Embryology
28. Head and neck development and pharyngeal system.
29. Development of the urogenital system
30. Seminars: 1. Contraception and contraceptive methods; 2. Stem cells and cloning of mammals. Test: male and female reproductive system and embryology.

Exercises:
1. Microscopy: parts of the microscope, working on microscope.
2. Shapes of the nuclei
3. Ultrastructure of the cell.
4. Epithelial tissue
5. Pseudostratified two or three-row epithelium, urothelium
6. Stratified squamous keratinized epithelium, Stratified squamous non-keratinized epithelium, exocrine and endocrine gland (pancreas).
7. Connective tissue
8. The elastic connective tissue, fibrotic (regular and irregular) connective tissues, adipose (white and brown) tissue.
9. Hyaline cartilage, elastic cartilage, bone, intramembranous and endochondral ossification.
10. Blood: peripheral blood smear
11. Hematopoiesis: Bone marrow smear.
12. Muscle tissue: skeletal (in the longitudinal and transverse section), cardiac and smooth muscle tissue..
13. Nervous system: cerebrum, cerebellum, spinal cord.
14. Spinal ganglion, vegetative ganglion, peripheral nerve, Vater-Pacini corpuscles.
15. Кардиоваскуларни систем
16. Имунски систем
17. Ендокрини систем
18. Parathyroid, adrenal gland, endocrine pancreas, DNES.
19. Respiratory system: epiglottis, trachea, lungs
20. Digestive system: tooth, serous, mucous and seromucous gland.
21. Tongue, soft palate, esophagus, stomach.
22. Duodenum, jejunum, ileum, apendix, colon
23. Liver, gallbladder, pancreas.
24. Urinary system: kidney, urinary bladder
25. The eye: the cornea, the angle of the eye. Ear: inner ear. Skin and breast (during rest and lactation).
26. Male reproductive system: testis, fetal testis, epididymis, d. deferens, prostate.
27. Female reproductive system: a girl ovary, cat ovary, a yellow and white body.
28. Fallopian tube, uterus in proliferative and secretion phase, cervix, vagina
29. Embryology: placenta, umbilical cord.
30. Embryo preparation

Compulsory literature			
Author/s	**Publication title, Publisher**	**Year**	**Pages (from-to)**
Anthony L. Mescher.	Junqueiras Basic Histology - Text and Atlas.McGrawHill, New York,	2016.	
Sadler T.W. Langmans	Medical Embryology.Lippincott - Williams and Wilkins, Baltimore,	2006.	

Additional literature			
Author/s	**Publication title, Publisher**	**Year**	**Pages (from-to)**

	Grading policy	Points	Percentage
Student responsibilities, types of student assessment and grading	Pre-exam activities		
	lecture/exercise attendance	14	14%
	seminar paper	6	6%
	colloquium	30	30%
	Final exam		
	practical test	10	10%
	written exam	40	40%
	TOTAL	100	100 %
Certification date	December 13 th 2018		