

Discussed and confirmed
on the methodical council of the department
January 11, 2024.

HISTOLOGY INDEPENDENT WORK
on discipline “Histology, Cytology and Embryology”
for students of Faculty of General Medicine, 1st year,
Spring semester. Academic year 2023-2024.

№	Topic	Amount of hours
1	Histology in Ukraine. Research methods in histology. Histological techniques.	4
2	Structural bases of transport through cell membrane. Mechanisms of reception. Structural bases of cytoprotection.	6
3	Mitosis and Meiosis. Cell reaction to external stimuli.	4
4	Cleavage. Duration, localization, dark and light blastomeres. Blastocyst. Embryoblast. Embryonic stem cells.	4
5	The biological processes, which underlie the development of the embryo: induction, determination, division, cell migration, growth, differentiation, cell interaction, destruction.	4
6	Preparation for final control of the Summary lesson 1.	6
7	General principles of tissue organization. Epithelium as the leading component of histo-hematogenous barriers. Epithelial stem cells.	4
8	Thrombus formation. Stages and mechanisms.	4
9	Leukocytes. Mechanisms of adhesion, migration and killing of microorganisms. Interaction of blood cells and connective tissue during inflammation.	4
10	Reparation of loose connective tissue. Regulation of volume and composition of matrix of connective tissue.	4
11	Role of connective tissues with special properties in the development of autoimmune inflammatory processes.	4
12	Preparation for final control of the Summary lesson 2.	6
13	Articular cartilage.	4
14	Bones' rebuilding. Regeneration of bone tissue.	4
15	Muscle as organ. Muscles' regeneration. Histophysiology of locomotor apparatus.	4
16	Nerve endings. Nervous-muscle spindles.	4
17	Preparation for final control of the Summary lesson 3.	6
18	Development of cardiovascular system. Morphological bases of neurohumoral regulation of blood vessels activity.	4
19	Development of endocrine glands. Diffuse endocrine system. Дифузна ендокринна система. Trans- and parapituitary regulation.	4
20	Embryogenesis of hematopoietic organs. Cellular bases of nonspecific immunity. Cellular bases of the reactions of cell-mediated and humoral immunity	4
21	Preparation for summary lesson #4.	6
22	Development of nervous system.	4
23	Regeneration of nerves.	4
24.	Preparation for credit lesson.	5

In total 105 hours.

Chief of the Department of Histology and Embryology,
Assoc.Prof.
Deputy for Academic work,
Assoc. Prof.

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