



## SYLLABUS OF THE DISCIPLINE «HISTOLOGY, CYTOLOGY AND EMBRYOLOGY»

<b>1. General information</b>																	
<b>Faculty</b>	<b>Medical faculty No.2</b>																
<b>Education Programme</b>	22 Healthcare, 222 Medicine, the 2 <sup>nd</sup> (master) level of higher education, full-time education																
<b>Academic year</b>	2021-2022																
<b>Discipline, code</b>	Histology, OK14																
<b>Department</b> <i>(name, address, phone, e-mail)</i>	Department of histology, cytology and embryology, 79010, Lviv, Pekarska Str., 52 (032) 2769373, 2368444, <a href="mailto:kaf_histology@meduniv.lviv.ua">kaf_histology@meduniv.lviv.ua</a>																
<b>Head of the Department</b>	Chelpanova I.V. MD, PhD Associate Professor <a href="mailto:chelpanova_ilona@meduniv.lviv.ua">chelpanova_ilona@meduniv.lviv.ua</a>																
<b>Academic year</b>	1 <sup>st</sup> and 2 <sup>nd</sup>																
<b>Semester</b>	II-III																
<b>Type of discipline</b>	Obligatory																
<b>Educators</b> <i>(first name, last name, academic degree, e-mail)</i>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; border-bottom: 1px solid black;">Lutsyk A.D. MD, DSci, Professor</td> <td style="width: 50%;"><a href="mailto:lutsyk_alexander@meduniv.lviv.ua">lutsyk_alexander@meduniv.lviv.ua</a> lutsykalexander@gmail.com</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Bilyy R.O. DSci, Professor</td> <td><a href="mailto:bilyy_rostyslav@meduniv.lviv.ua">bilyy_rostyslav@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Yuzych O.V. PhD, Associate Professor</td> <td><a href="mailto:nakonechna_olha@meduniv.lviv.ua">nakonechna_olha@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Smolkova O.V. MD, PhD, Associate Professor</td> <td><a href="mailto:smolkova_olena@meduniv.lviv.ua">smolkova_olena@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Chelpanova I.V. MD, PhD Associate Professor</td> <td><a href="mailto:chelpanova_ilona@meduniv.lviv.ua">chelpanova_ilona@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Dzhura O.R. MD, PhD, Associate Professor</td> <td><a href="mailto:dzhura_olga@meduniv.lviv.ua">dzhura_olga@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Dudok O.V. MD, PhD, Assistant Professor</td> <td><a href="mailto:dudok_olga@meduniv.lviv.ua">dudok_olga@meduniv.lviv.ua</a></td> </tr> <tr> <td style="border-bottom: 1px solid black;">Dumych T.I. PhD, Assistant Professor</td> <td><a href="mailto:dumych_tetiana@meduniv.lviv.ua">dumych_tetiana@meduniv.lviv.ua</a></td> </tr> </table>	Lutsyk A.D. MD, DSci, Professor	<a href="mailto:lutsyk_alexander@meduniv.lviv.ua">lutsyk_alexander@meduniv.lviv.ua</a> lutsykalexander@gmail.com	Bilyy R.O. DSci, Professor	<a href="mailto:bilyy_rostyslav@meduniv.lviv.ua">bilyy_rostyslav@meduniv.lviv.ua</a>	Yuzych O.V. PhD, Associate Professor	<a href="mailto:nakonechna_olha@meduniv.lviv.ua">nakonechna_olha@meduniv.lviv.ua</a>	Smolkova O.V. MD, PhD, Associate Professor	<a href="mailto:smolkova_olena@meduniv.lviv.ua">smolkova_olena@meduniv.lviv.ua</a>	Chelpanova I.V. MD, PhD Associate Professor	<a href="mailto:chelpanova_ilona@meduniv.lviv.ua">chelpanova_ilona@meduniv.lviv.ua</a>	Dzhura O.R. MD, PhD, Associate Professor	<a href="mailto:dzhura_olga@meduniv.lviv.ua">dzhura_olga@meduniv.lviv.ua</a>	Dudok O.V. MD, PhD, Assistant Professor	<a href="mailto:dudok_olga@meduniv.lviv.ua">dudok_olga@meduniv.lviv.ua</a>	Dumych T.I. PhD, Assistant Professor	<a href="mailto:dumych_tetiana@meduniv.lviv.ua">dumych_tetiana@meduniv.lviv.ua</a>
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<b>Erasmus</b>	+																
<b>Person, responsible for syllabus</b>	Yuzych O.V. PhD, Associate Professor, <a href="mailto:nakonechnahisto@gmail.com">nakonechnahisto@gmail.com</a>																
<b>Quantity of ECTS credits</b>	11,5																
<b>Quantity of hours</b>	Total – 345 h																

	Lectures – 38 h Practical classes – 122 h Individual work – 185 h
<b>Language</b>	English
<b>Consultations</b>	According to the schedule
<b>2. Brief review of the subject</b>	
<p>The subject of the discipline is the microscopic and ultramicroscopic structure of cells, tissues and organs of the human body. According to this, there are the following sections of the subject: <b>cytology</b> (the study of cells), <b>general histology</b>, or actually histology (the study of tissues) and <b>special histology</b> (the study of the structure of organs and their systems). Embryology that studies the embryo development is closely related to histology whereas the structures of the body are studied in the process of their origin and development. Embryology, like cytology, is now separate from histology and is an independent science. However, in the medical course of higher education they are combined into one subject with histology.</p>	
<b>3. Aim and goals of the subject</b>	
<ol style="list-style-type: none"> <li>1. The aim of the study is to obtain the knowledge of the microscopic and ultramicroscopic structures of the human body, its development and changes in the different conditions of life.</li> <li>2. The ultimate goals of the discipline: <ul style="list-style-type: none"> <li>• Study of the molecular and structural bases of functioning and regeneration of cells and their derivatives</li> <li>• Study of the basics of adaptation, reactivity and maintenance of homeostasis</li> <li>• Determination of adaptive and regenerative capabilities of organs taking into account their tissue composition, features of regulation and age changes.</li> <li>• Interpretation of the regularities of human embryonic development, regulation of morphogenesis</li> <li>• Determination of critical periods of embryogenesis, defects and anomalies of human development</li> </ul> </li> <li>3. Competencies and studying process results (general and special (professional)).</li> </ol> <p><b>General competencies (3K)</b></p> <ol style="list-style-type: none"> <li>1. Ability to abstract thinking, analysis and synthesis.</li> <li>2. Ability to learn and become proficient in modern knowledge.</li> <li>3. Ability to apply knowledge in practical situations.</li> <li>4. Knowledge and understanding of the subject area and understanding of professional activity.</li> <li>5. Ability to adapt and act in a new situation.</li> <li>6. Ability to make informed decisions</li> <li>7. Ability to work in a group.</li> <li>8. Interpersonal skills.</li> <li>9. Definiteness and perseverance in terms of assigned tasks and responsibilities.</li> </ol> <p>According to the requirements of the standard, the discipline provides students with the acquisition of <i>competencies</i>:</p> <ul style="list-style-type: none"> <li>– <i>integral</i>: Ability to solve typical and complicated specialized tasks and practical problems in the learning process, which involves research and / or innovation. It is characterized by complexity and uncertainty of conditions and requirements.</li> <li>– <i>general</i>: <ul style="list-style-type: none"> <li>– Ability to apply knowledge of histology, cytology and embryology in practical situations</li> <li>– Knowledge and understanding of the subject area of histology, cytology and embryology</li> <li>– Ability to select a communication strategy; ability to work in a team; interpersonal skills</li> <li>– Ability to communicate in the native language in both oral and written form;</li> </ul> </li> </ul>	

- ability to communicate in a foreign language
- Ability to use of information and communications technologies
- Ability to abstract thinking, analysis and synthesis, ability to learn and be modernly trained.
- Ability to evaluate and ensure the quality of performed work

### Special competencies

ΦK1. Ability to collect medical information about the patient and analyze clinical data.

ΦK2. Ability to interpret the results of laboratory and instrumental research.

### 4. Preliminary requirements

1. Medical biology
2. Human anatomy

### 5. Program results of the course

Learning outcomes: Be able to evaluate information on the diagnosis based on the histological tests of biological material of the patient in the health care institution or its unit; use knowledge about the person, his organs and systems based on the results of laboratory tests.

### Results

Code of the learning outcomes	The content of the learning outcomes	Matrix of competencies
<i>3H – knowledges YM – skills AB – independence and responsibility K – competencies</i>		
<b>3H-1</b>	To know and understand the structure and functions of cells and tissues acquired in the learning process.	ΠΠ-1 ΠΠ-2
<b>3H-2</b>	To have in-depth knowledge of histology taking into account the structure of the professional activity.	ΠΠ-1 ΠΠ-2
<b>3H-3</b>	To know the tactics and strategies for working with microslides.	ΠΠ-1 ΠΠ-2
<b>3H-4</b>	To have a deep knowledge of the relationship between morphology and cell function.	ΠΠ-1 ΠΠ-2
<b>3H-5</b>	To have a deep knowledge in the field of information and communication technologies used in professional activities and in histological research.	ΠΠ-1 ΠΠ-2
<b>3H-6</b>	To know the methods of analysis, synthesis and further modern learning.	ΠΠ-1 ΠΠ-2
<b>3H-7</b>	To know the responsibilities and ways to perform the tasks.	ΠΠ-1 ΠΠ-2
<b>3H-8</b>	To have specialized knowledge about the person, his organs and systems, to know standard protocols of the laboratory and histological tests.	ΠΠ-1 ΠΠ-2

<b>YM-1</b>	Be able to establish a logical relationship between the structure of the histological object and its functions.	PIP-1 PIP-2
<b>YM-2</b>	Be able to carry out professional activities that require updating and integration of knowledge.	PIP-1 PIP-2
<b>YM-3</b>	Be able to choose methods and strategies for assessing of morphological structures.	PIP-1 PIP-2
<b>YM-4</b>	Be able to set aim and goals; be persistent and conscientious in the performance of duties.	PIP-1 PIP-2
<b>YM-5</b>	Be able to analyze the results of laboratory tests and histological specimens and based on these results to evaluate information on the probable diagnosis of the patient.	PIP-1 PIP-2
<b>K-1</b>	The ability to apply knowledge of histology, cytology and embryology in practical situations.	PIP1 PIP2
<b>K-2</b>	Knowledge and comprehension of the subject area of histology, cytology and embryology	PIP-2
<b>K-3</b>	The ability to choose a communication strategy; ability to work in a group; interpersonal skills	PIP-2
<b>K-4</b>	The ability to use tools of information and communication technology in the study of microscopic structures, cells and tissues, organs and organ systems.	PIP-1
<b>K-5</b>	The ability to evaluate the results of laboratory and histological tests.	PIP-1
<b>AB-1</b>	Be responsible for decision-making in controversial cases.	PIP-1
<b>AB-2</b>	Be responsible for professional development, the ability to further training with a high level of autonomy.	PIP-2
<b>AB-3</b>	Be responsible for the selection and tactics of analysis of histological specimens.	PIP-2
<b>AB-4</b>	Be responsible for the timely acquisition of modern knowledge.	PIP-1
<b>AB-5</b>	Be responsible for the quality of the tasks.	PIP-1

<b>AB-6</b>	Be responsible for the prescription and evaluation of the results of laboratory tests.	PIP-1		
<b>AB-7</b>	Be responsible for the decision on the evaluation of the results of laboratory examination.	PIP-1 PIP-2		
<b>6. Course format</b>				
Course format	<b>Full-time</b>			
Type of classes	Number of hours	Number of groups		
Lectures	<b>38</b>			
Practical	<b>122</b>			
Seminars	-			
Individual	<b>185</b>			
<b>7. Topics and content of the course</b>				
<p style="text-align: center;"><b>The organization of the educational process is carried out according to the credit-transfer system.</b></p> <p>The program of the discipline is structured for two semesters that include blocks of sections.</p> <p><b><u>Block 1. Cytology, general histology and embryology</u></b>  Section 1. Cytology.  Section 2. Embryology.  Section 3. General histology.</p> <p><b><u>Block 2. Special histology and embryology</u></b>  Section 4. Histology and embryology of the regulatory and sensory systems.  Section 5. Histology and embryology of the internal organs.  Section 6. Histology and embryology of the reproductive system. Medical embryology.</p>				
Code type of classes	Topic	Content	Code of the learning outcomes	Educator
ЛІ-1	Introduction to Histology, Cytology and Embryology. Eukaryotic cell, functions, reproduction, development, adaptation and recovery of multicellular organisms.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
ЛІ-2	Early human embryogenesis. Periods of embryogenesis. Characteristics of gametes. Gametogenesis. Fertilization. Cleavage. Implantation. Gastrulation.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
ЛІ-3	Introduction to the theory of	To present the	3H-1, 3H-	Prof. Lutsyk

	tissues. Tissue, as a system of histological elements. Cells and their derivatives. Epithelial tissues. Cell therapy as one of the areas of regenerative medicine.	lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	5, 3H-7, YM-1, YM2, YM-3, YM-4, YM-5, YM-8, AB-2	A.D. , Prof. Bilyy R.O.
Л-4	Blood and Lymph. Cells (neutrophils, eosinophils, basophils, macrophages), chemical mediators (chemokines, cytokines, bactericidal proteins and complement system) and inflammation processes in the system of nonspecific protection. Hematopoiesis.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, K-1	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-5	Connective tissues. General characteristics, classification. Cells of loose connective tissue. Resident cells and wandering cells. Classification of tissues with special properties.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-6	Muscular tissues. Properties, classification, structure. Structural bases of growth of muscle fibers. Adaptation of skeletal muscle to the changing of physical activity. Regeneration of skeletal muscular tissue	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-7	Nervous tissue. General characteristics. Sources of development, structure, functional properties and meaning. The concept of neurotransmitters.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-8	Central and peripheral nervous system. General morphofunctional characteristics. Regularities of development. Classification (anatomical and functional).	To present the lecture using multimedia support. To determine the problematic issues. To provide	3H-1, 3H-5, 3H-7, YM-1, YM-2, YM-3, YM-4, YM-5,	Prof. Lutsyk A.D. , Prof. Bilyy R.O.

		answers to the questions.	УМ-8, AB-2	
Л-9	Sensory systems: types, links, functional meaning. General characteristics of sensory organs. Classification of sensory organs. Structure of the Eye.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, К-1	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-10	Cardiovascular System. Structure and Classification of Vessels. Structure of the Heart.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-2, ЗН-3, ЗН-4, ЗН-8, УМ-1, УМ-3, УМ-4, УМ-5, УМ-6, УМ-7, УМ-8, К-2	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-11	Endocrine System. Histophysiological principles of neurohumoral regulation.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-7	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-12	Digestive system – general characteristics. Oral cavity, Teeth.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-7, ЗН-8, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-8, AB-1, AB-3	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-13	Pharynx, Esophagus, Stomach. Histophysiology of digestion.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-7, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-8, AB-2	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-14	Small and Large Intestine. Peculiarities of mucosa structure of different parts of intestine.	To present the lecture using multimedia support. To determine the	ЗН-1, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4,	Prof. Lutsyk A.D. , Prof. Bilyy R.O.

		problematic issues. To provide answers to the questions.	УМ-5, К-1	
Л-15	Glands, associated with Digestive Tract. Salivary glands. Liver and Pancreas.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-2, ЗН-3, ЗН-4, ЗН-8, УМ-1, УМ-3, УМ-4, УМ-5, УМ-6, УМ-7, УМ-8, К-2	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-16	General morphofunctional characteristics of respiratory organs.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-7	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-17	Kidneys and Urinary tract. Histophysiology of urine formation.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-7, ЗН-8, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-8, АБ-1, АБ-3	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-18	Male Reproductive system. General characteristics. Sources and course of development.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-5, ЗН-7, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, УМ-8, АБ-2	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
Л-19	Female Reproductive system. Functions. Principles of regulation. Ovarian-menstrual cycle: phases, regulation.	To present the lecture using multimedia support. To determine the problematic issues. To provide answers to the questions.	ЗН-1, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, К-1	Prof. Lutsyk A.D. , Prof. Bilyy R.O.
П-1	Microscope. Histological techniques.	1. Checking the learning of questions from	ЗН-1, ЗН-2, ЗН-3, ЗН-4, ЗН-	Prof. Lutsyk A.D., Prof. Bilyy R.O.,



		the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-2	Cytology. Noncellular structures. General Structure of the Cell. Superficial complex. Cytoplasm. Organelles, Inclusions.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-3	Cytology. Nucleus of the Cell. Cell Reproduction. Cell Aging and Cell Death.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -5, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R.,

		morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-4	Early Human Embryogenesis. Periods of Embryogenesis. Characteristics of Gametes. Gametogenesis. Fertilization.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-5	Human embryonic development. Cleavage. Implantation. Gastrulation	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of	3H-1, 3H-5, 3H11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

		problematic issues summarizing the lesson.		
II-6	Summary lesson №1. Cytology and Embryology (P. 1).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-7	Summary lesson №1. Cytology and Embryology (P. II).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-2, YM-1, YM-3, YM-4, YM-5, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-8	Conception about Tissues. Classification of Tissues. Epithelial tissues. Morphology and classification of glands.	1. Checking the learning of questions from the lesson plan. 2.	3H -1, 3H - 5, 3H - 11, YM -1, YM -2,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof.

		Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB - 2	Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-9	Blood and Lymph. Hematopoiesis. White Blood Cells Count.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -5, 3 <sub>H</sub> -10, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-10	Connective tissues. Classification. Cells of loose connective tissue. Noncellular structures.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof.

		histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Dudok O.V., Assist. Prof. Dumych T.I.
II-11	Summary lesson №2. Epithelium, blood and connective tissues (P. I).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Students work with light microscopes. 6. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, YM-1, YM2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-12	Summary lesson №2. Epithelium, blood and connective tissues (P. II).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, K-1	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-13	Skeletal connective tissues. Cartilage.	1. Checking the learning of	3H-1, 3H-2, 3H-3,	Prof. Lutsyk A.D., Prof.

		<p>questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.</p>	<p>3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2</p>	<p>Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.</p>
II-14	Skeletal connective tissues. Bone.	<p>1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.</p>	<p>3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7</p>	<p>Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.</p>
II-15	Muscle tissues.	<p>1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5.</p>	<p>3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3</p>	<p>Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof.</p>

		Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-16	Nervous tissue.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-17	Summary lesson № 3. Musculoskeletal and specialized tissues (P. I).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7.	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, K1	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

		Clarification of problematic issues summarizing the lesson.		
П-18	Summary lesson № 3. Musculoskeletal and specialized tissues (P.II).	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Students work with light microscopes. 6. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-19	Central nervous system.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-20	Peripheral nervous system.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof.



		Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	AB-1, AB-3	Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-21	The Eye.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-22	The Ear.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work	3H-1, 3H-5, 3H11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

		with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		
II-23	Summary lesson № 4. Nervous and sensory systems.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Students work with light microscopes. 6. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-2, 3H3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-24	Credit lesson.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases.	3H-1, 3H-5, 3H6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-25	Skin and its Derivatives. Morphological bases of cutaneous, deep and visceral sensitivity.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based	3H-1, 3H-2, 3H-3, 3H-4, 3H-5, YM-1, YM-3, YM-4, YM-5, YM-6, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof.

		on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Dumych T.I.
II-26	Cardiovascular System.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, YM-1, YM2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-27	Endocrine System.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the	3H-1, 3H-5, 3H-11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

		lesson.		
II-28	Immune Organs.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-29	Summary Lesson №1. Special Histology and Embryology of regulatory systems.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Students work with light microscopes. 6. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-30	General Structure of Digestive tube. Organs of Oral Cavity. Structure of the Lip. Tongue. Tonsils.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of	3H-1, 3H-2, 3H-3, 3H-4, 3H-5, 3H-7, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof.

		histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.		Dudok O.V., Assist. Prof. Dumych T.I.
II-31	Teeth. Structure and Development of Teeth. Large Salivary Glands.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-32	Pharynx, Esophagus, Stomach. Gastric glands. Histophysiology of digestion.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic	3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

		issues summarizing the lesson.		
II-33	General structure of Intestine. Morphological differences of the wall' structure of Small and Large Intestine.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-34	Liver and Pancreas.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	3H-1, 3H-5, 3H-7, YM-1, YM2-, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
II-35	Summary Lesson №2. Digestive system.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V.,

		<p>questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Students work with light microscopes. 6. Clarification of problematic issues summarizing the lesson.</p>	<p>Y<sub>M</sub>-5, K-1</p>	<p>Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.</p>
<p>II-36</p>	<p>General morphofunctional characteristics of respiratory organs. Conducting portion and respiratory portion.</p>	<p>1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.</p>	<p>3<sub>H</sub>-1, 3<sub>H</sub>-2, 3<sub>H</sub>-3, 3<sub>H</sub>-4, 3<sub>H</sub>-8, Y<sub>M</sub>-1, Y<sub>M</sub>-3, Y<sub>M</sub>-4, Y<sub>M</sub>-5, Y<sub>M</sub>-6, Y<sub>M</sub>-7, Y<sub>M</sub>-8, K-2</p>	<p>Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.</p>
<p>II-37</p>	<p>Kidneys and Urinary tract. Histophysiology of urine formation.</p>	<p>1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7.</p>	<p>3<sub>H</sub>-1, 3<sub>H</sub>-5, 3<sub>H</sub>-6, Y<sub>M</sub>-1, Y<sub>M</sub>-2, Y<sub>M</sub>-3, Y<sub>M</sub>-4, Y<sub>M</sub>-5, Y<sub>M</sub>-7</p>	<p>Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.</p>

		Clarification of problematic issues summarizing the lesson.		
П-38	Male Reproductive system. General characteristics. Sources and course of development. Functions. Principles of regulation.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	ЗН-1, ЗН-6, УМ-1, УМ-2, УМ-3, УМ-4, УМ-5, К-1	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-39	Female Reproductive system. General characteristics. Sources of development. Functions. Principles of regulation. Ovarian-menstrual cycle: phases, regulation. Cyclic changes in female organism.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	ЗН-1, ЗН-2, ЗН-3, ЗН-4, ЗН-8, УМ-1, УМ-3, УМ-4, УМ-5, УМ-6, УМ-7, УМ-8, К-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-40	Medial embryology. Nutrition of the embryo. Placenta: parts, structure, functional meaning.	1. Checking the learning of questions from	ЗН-1, ЗН-5, ЗН-6, УМ-1,	Prof. Lutsyk A.D., Prof. Bilyy R.O.,



	Structure and Function of Umbilical Cord.	the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Explanation of morphology of histological structures based on the specimens. 6. Students work with light microscopes. 7. Clarification of problematic issues summarizing the lesson.	Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
П-41	Summary Lesson №3. Special Histology and Embryology of Respiratory, Urinary and Reproductive Systems. Medical Embryology. The Credit Lesson.	1. Checking the learning of questions from the lesson plan. 2. Discussion of the questions for self-control. 3. Carry out the test. 4. Solving the clinical cases. 5. Clarification of problematic issues summarizing the lesson.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-1	International standards of modern histological investigations. Research methods in histology. Histological techniques.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> 3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-2	Structural bases of transport through cell membrane. Mechanisms of reception. Structural bases of	Preparation of answers to the list of questions. Preparation of	3 <sub>H</sub> -1, 3 <sub>H</sub> -6, Y <sub>M</sub> 1, Y <sub>M</sub> -2, Y <sub>M</sub> -3,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof.

	cytoprotection.	answers to questions for self-control. Preparation of creative tasks for the topic.	Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-3	Mitosis and Meiosis. Cell reaction to external stimuli.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -6, Y <sub>M</sub> 1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-4	Cleavage. Duration, localization, dark and light blastomeres. Blastocyst. Embryoblast. Embryonic stem cells.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -6, Y <sub>M</sub> 1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-5	The biological processes, which underlie the development of the embryo: induction, determination, division, cell migration, growth, differentiation, cell interaction, destruction.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -4, Y <sub>M</sub> 1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -6, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V.,

				Assist. Prof. Dumych T.I.
CPC-6	Preparation for the Summary lesson №1.	Preparation of answers to questions for self-control.	3H-1, 3H-6, YM1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-7	General principles of tissue organization. Epithelium as the leading component of histohematogenous barriers. Epithelial stem cells.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, YM-7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-8	Thrombus formation. Stages and mechanisms.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-9	Leukocytes. Mechanisms of adhesion, migration and killing of microorganisms. Interaction of blood cells and connective tissue during inflammation.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V.,

		Preparation of creative tasks for the topic.	Y <sub>M</sub> -8, AB-1, AB-3	Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-10	Reparation of loose connective tissue. Regulation of volume and composition of matrix of connective tissue.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -7, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-11	Role of connective tissues with special properties in the development of autoimmune inflammatory processes.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -7, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-12	Preparation for the Summary lesson №2.	Preparation of answers to questions for self-control.	3 <sub>H</sub> -1, 3 <sub>H</sub> -6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

CPC-13	Articular cartilage.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-11, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-14	Bones rebuilding. Regeneration of bone tissue.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-11, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-15	Muscle as organ. Muscles regeneration. Histophysiology of locomotor apparatus.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-16	Nerve endings. Nervous-muscle spindles.	Preparation of answers to the list of questions. Preparation of answers to questions for self-	3H -1, 3H -5, 3H - 11, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof.

		control. Preparation of creative tasks for the topic.	Y <sub>M</sub> -5, Y <sub>M</sub> -8, , AB - 2	Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-17	Preparation for the Summary lesson №3.	Preparation of answers to questions for self-control.	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -5, 3 <sub>H</sub> -10, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-18	Development of cardiovascular system. Morphological bases of neurohumoral regulation of blood vessels activity.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-19	Development of endocrine glands. Diffuse endocrine system. Trans- and parahypophyseal regulation.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.

CPC-20	Embryogenesis of hematopoietic organs. Cellular bases of nonspecific immunity. Cellular bases of the reactions of cell-mediated	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, YM-1, YM2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-21	Preparation for the Summary lesson №4.	Preparation of answers to questions for self-control.	3H-1, 3H-6, YM-1, YM-2, YM-3, YM-4, YM-5, K-1	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-22	Development of the nervous system.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-23	Regeneration of nerves.	Preparation of answers to the list of questions. Preparation of answers to questions for self-	3H-1, 3H-2, YM-1, YM-3, YM-4, YM-5, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof.

		control. Preparation of creative tasks for the topic.		Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-24	Preparation for credit lesson.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H -1, 3H - 5, 3H - 11, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB - 2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-25	Embryonic development of the nervous system. Derivatives of the neural tube.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, 3H-3, 3H-4, 3H-5, 3H-10, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-26	The main structural components of the blood-brain barrier.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof.



				Dudok O.V., Assist. Prof. Dumych T.I.
CPC-27	Histophysiology of the eye. Thin ultrastructure of rods and cones.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-28	Histophysiology of the vestibuloauditory system.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, Y <sub>M</sub> -1, Y <sub>M</sub> 2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-29	Histophysiology of the microcirculatory system.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, Y <sub>M</sub> -1, Y <sub>M</sub> 2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-30	Embryonic hematopoiesis.	Preparation of answers to the list of questions.	3H-1, 3H-6, Y <sub>M</sub> -1, Y <sub>M</sub> -2,	Prof. Lutsyk A.D., Prof. Bilyy R.O.,

		Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, K-1	Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-31	Structural features and functional value of the spleen.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -7, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-32	Age-associated thymic involution.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -6, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -7	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-33	Hypothalamo-hypophyseal tract in the regulation of endocrine functions of the body.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for	3 <sub>H</sub> -1, 3 <sub>H</sub> -2, 3 <sub>H</sub> -3, 3 <sub>H</sub> -4, 3 <sub>H</sub> -5, Y <sub>M</sub> -1, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -6, Y <sub>M</sub> -8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V.,

		the topic.		Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-34	Cytophysiological aspects of synthesis and secretion of catecholamines and steroid hormones.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, YM-1, YM2, YM-3, YM-4, YM-5, YM-8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-35	Embryonic development of the Digestive system.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-36	Relationship between structural and functional features of the oral cavity.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-11, YM-1, YM-2, YM-3, YM-4, YM-5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-37	Membranous and luminal digestion in the small intestine. Features of absorption of various	Preparation of answers to the list of questions.	3H-1, 3H-5, 3H-7, 3H-8, YM-	Prof. Lutsyk A.D., Prof. Bilyy R.O.,

	types of nutrients.	Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-1, AB-3	Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-38	Cytophysiological aspects of synergistic and antagonistic functions of different type insulocytes.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -7, Y <sub>M</sub> -1, Y <sub>M</sub> 2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-39	Relationship between morphology and functional features of the liver.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -11, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, AB-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-40	Air-blood barrier. Surfactant and its functions.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3 <sub>H</sub> -1, 3 <sub>H</sub> -5, 3 <sub>H</sub> -7, 3 <sub>H</sub> -8, Y <sub>M</sub> -1, Y <sub>M</sub> -2, Y <sub>M</sub> -3, Y <sub>M</sub> -4, Y <sub>M</sub> -5, Y <sub>M</sub> -8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof.

				Dudok O.V., Assist. Prof. Dumych T.I.
CPC-41	Endocrine function of the kidney. Morphological aspects of the renin-angiotensin system.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-42	Spermatogenesis – hormonal regulation.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-5, 3H-7, 3H-8, YM-1, YM-2, YM-3, YM-4, YM-5, YM-8, AB-1, AB-3	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-43	Relationship between ovarian and menstrual cycles. Morphofunctional aspects of the use of hormonal contraceptives.	Preparation of answers to the list of questions. Preparation of answers to questions for self-control. Preparation of creative tasks for the topic.	3H-1, 3H-2, 3H-3, 3H-4, 3H-8, YM-1, YM-3, YM-4, YM-5, YM-6, YM-7, YM-8, K-2	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof. Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
CPC-44	The basics of histocompatibility as a key aspect of in vitro fertilization.	Preparation of answers to the list of questions. Preparation of answers to questions for self-	3H-1, 3H-5, 3H-6, YM-1, YM-2, YM-3, YM-4,	Prof. Lutsyk A.D., Prof. Bilyy R.O., Assoc. Prof. Chelpanova I.V., Assoc. Prof.

		control. Preparation of creative tasks for the topic.	УМ-5, УМ-7	Yuzych O.V., Assoc. Prof. Smolkova O.V., Assoc. Prof. Dzhura O.R., Assist. Prof. Dudok O.V., Assist. Prof. Dumych T.I.
<b>8. Verification of results</b>				
<b>Current control</b>				
<i>Current control is performed during the studying classes and is aimed at checking the mastering by students the learning material. Forms of current control should be standardized and include control of theoretical and practical training. The final grade for the current educational activity is set on a 4-point (traditional) scale.</i>				
Learning outcome code	Kind of class code	The method of learning outcomes verification	Criteria of evaluation	
3H-1	Л-1-7;, П-1-12,, CPC-1-19	Attending lectures and practical classes. Preparation of written tasks (tests, questions for self-control, clinical cases). Display of microscopy results of specimens in sketchbooks during the practical classes. Participation in discussions.	For successful passing of the discipline it is necessary to: fully comply with the requirements of the working program; find a correct solution to tasks both during classroom work and those offered for independent study.	
3H-2	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC-3, CPC-4, CPC-5, , CPC-9, CPC-10, CPC-11, CPC-12, CC-13, CPC-14, CPC-15			
3H-3	Л-2, Л-3, Л-14, Л- 15, П-2, П-33, П-4, П5, CPC-3, CPC-24, CPC-5, CPC6, CPC7, CPC-8, CPC- 9, CPC-10, CPC-21, CPC-22, CPC-23, CPC-34, CPC-35			
3H-5	Л-3, Л-4, Л-5, П-1, П-3, П-4, П-5, CPC- 5, CPC-6, CPC-7, CPC-8, CPC-9			
3H-6	Л-3, П-3, CPC-5, CPC-6			
3H-7	Л-5, П-5, CPC-9, CPC-12, CPC-13, CPC-14			

3H-8	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC6, CPC- 7, CPC-8, CPC-9, CPC-10, CPC-11, CPC-12, CPC-13, CPC-14, CPC-15		
УМ-1	Л-1, Л-2, Л-3, Л-4, Л-10, П-11, П-12, П13, П-4, П-5, CPC- 1, CPC-2, CPC-3, CPC-4, CPC-5, CPC6, CPC-11, CPC-12, CPC-22	<p>Attending lectures and practical classes. Preparation of written tasks (tests, questions for self-control, clinical cases). Display of microscopy results of specimens in sketchbooks during the practical classes. Participation in discussions.</p>	<p>For successful passing of the discipline it is necessary to: fully comply with the requirements of the working program; find a correct solution to tasks both during classroom work and those offered for independent study.</p>
УМ-2	Л-1, П-1, П-2, П-3, П-4		
УМ-3	Л-3, Л-4, Л-5, П-1, П-3, П-4, П-5, CPC- 5, CPC-6, CPC-7, CPC-8, CPC-9		
УМ-4	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC-8		
УМ-5	Л-2, Л-3, Л-4, Л-5, П-2, П-3, П-4, П5, CPC-8, CPC-9, CPC-10, CPC-11		
АВ-1	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC-3, CPC-4, CPC-5, CPC-11, CPC-12, CPC-13, CPC-14, CPC-15		
АВ-2	Л-3, Л-4, Л-5, П-1, П-3, П-14, П-15, CPC-15, CPC-16, CPC-17, CPC-18, CPC-19	<p>Attending lectures and practical classes. Preparation of written tasks (tests,</p>	<p>For successful passing of the discipline it is necessary to: fully comply with the</p>

AB-3	Л-3, П-3, CPC-5, CPC-6	<p>questions for self-control, clinical cases). Display of microscopy results of specimens in sketchbooks during the practical classes. Participation in discussions.</p>	<p>requirements of the working program; find a correct solution to tasks both during classroom work and those offered for independent study.</p>
AB-4	Л-5, П-5, CPC-9, CPC-10, CPC-12, CPC-12, CPC-13, CPC-14		
AB-5	Л-1, Л-2, Л-3, Л-14, Л-15, П-22, П-23, П24, П-4, П-5, CPC-1, CPC-2, CPC-23, CPC-24, CPC-25, CPC26, CPC-7, CPC-8, CPC-9, CPC-10, CPC-11, CPC-12, CPC-13, CPC-14, CPC-15		
AB-6	Л-1-7, П-1-12, CPC-1-19		
AB-7	Л-2, Л-3, Л-14, Л-15, П-2, П-33, П-4, П5, CPC-3, CPC-24, CPC-5, CPC6, CPC7, CPC-8, CPC-9, CPC-10, CPC-21, CPC-22, CPC-23, CPC-34, CPC-35		
K-1	Л-3, Л-4, Л-5, П-1, П-3, П-4, П-5, CPC-5, CPC-6, CPC-7, CPC-8, CPC-9	<p>Attending lectures and practical classes. Preparation of written tasks (tests, questions for self-control, clinical cases). Display of microscopy results of specimens in sketchbooks during the practical classes. Participation in discussions.</p>	<p>For successful passing of the discipline it is necessary to: fully comply with the requirements of the working program; find a correct solution to tasks both during classroom work and those offered for independent study.</p>
K-2	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC-3, CPC-4, CPC-5, CPC6, CPC-7, CPC-8		
K-3	Л-1, Л-2, Л-3, Л-4, Л-5, П-1, П-2, П3, П-4, П-5, CPC-1, CPC-2, CPC-3, CPC-4, CPC-5, CPC6, CPC-7, CPC-8		



K-4	Л-12, Л-13, Л-14, Л-15, П-12, П-13, П-14, П15, CPC-23, CPC-24, CPC-25, CPC26, CPC27, CPC-28, CPC-29, CPC-30		
K-5	Л-2, Л-3, Л-14, Л-15, П-22, П-23, П-24, П-25, CPC-3, CPC-24, CPC-5, CPC6, CPC7, CPC-8, CPC-9, CPC-10, CPC-21, CPC-22, CPC-23, CPC-34, CPC-35		
<b>The final control</b>			
General assessment system	Participation in the work during the semester / exam - 60% / 40% due to a 200-point scale		
Assessment scales	Traditional 4-point scale, multipoint (200-point) scale, ECTS rating scale		
Requirements for final control access	The student attended all practical lessons and received not less than 72 points for current control.		
Type of the final control	Methods of final control	Passing criteria	
Credit	Students must pass all current topics. Scores on a 4-point scale are converted into multipoint scores (200-point scale).	<i>Maximum quantity of points - 200.</i> <i>Minimum quantity of points – 120</i>	
<b>Exam evaluation criteria</b>			
Exam	<p>Totally, for the exam students can obtain from 0 to 80 points.</p> <p>The average score for the current activity is recalculated in multipoint scale for disciplines ending in an exam according to Table №2. The current points (<b><u>min. – 72 points; max. – 120 points</u></b>) are summed with the points on the exam.</p> <p><b>Exam points: 0 – 80 points.</b> (theoretical part 0-20 points; practical part 0-60 points)</p> <p><b>Theoretical part:</b> 40 multiple choice questions (MCQ) with one correct answer, composed according to topics from the subject special histology. Maximum quantity of points 20 (0.5 point for each test).</p> <p><b>Practical part:</b> Description of 6 histological specimens, electronic micrographs and diagrams – 6x10 points = 60 points</p> <p><b>Total quantity – 0 – 80 points (20+60).</b></p>		<p><i>The maximum number of points that a student can score on the exam results is 80 (20 points for the correct answers from theoretical part and 60 points for the correct answers from practical part); the minimum score is 50 (50 points for the correct answers for theoretical and practical parts)</i></p>

**Maximum quantity of points**, which student can collect for the current educational activity for admission to the exam (differentiated credit) makes 120 points.

**Minimum quantity of points**, which student can collect for the current educational activity for admission to the exam (differentiated credit) makes 72 points.

**The calculation of the number of points** is made on the basis of the collected student's marks on the traditional scale during the discipline study, by calculating the arithmetic mean (AM or average), rounded to two decimal places. The obtained value is converted into points according to the scoring scale as follows:

$$x = \frac{AM \times 120}{5}$$

### 9. Course policy

The policy of the course is determined by the system of requirements for the student in the study of the discipline "Histology, Cytology and Embryology" and is based on the principles of academic integrity. Lack of references to used sources, fabrication of sources, writing off, and interference in the work of other students are examples of possible academic dishonesty. Detection of signs of academic dishonesty in the student's work is the basis for its non-enrollment by the teacher, regardless of the extent of plagiarism or deception. Literature resources may be provided by the teacher exclusively for educational purposes without the right to transfer to third parties. Students are encouraged to use other literature resources that are not provided by the recommended list.

### 10. Literature

#### Basic:

1. Lutsyk A, Nakonechna O, Sogomonian A, Smolkova O, Dzhura O, Dudok O. Histology lab guide Cytology, embryology, general histology microscopical anatomy (training manual). Lviv, 2019.
2. Mescher AL. Junqueira's basic histology: text and atlas. 14th ed. Lange, 2016;
3. Gartner LP. Textbook of histology. 4th ed. Elsevier, 2017.
4. Pawlina W, Ross MH. Histology: a text and atlas with correlated cell and molecular biology. 8th ed. Wolters Kluwer, 2020.
5. Sadler NW. Langman's medical embryology. 12th ed. Wolters Kluwer Lippincott Williams Wilkins, 2012.
6. Gartner L.P., Hiatt J.L. Color textbook of histology. 3rd ed. – Philadelphia, Saunders Elsevier, 2007.

#### Additional:

1. Moore K.L. Persaud T.V.N. The developing human: Clinically oriented embryology. 8 th ed. – Philadelphia, Saunders Elsevier, 2008.
2. Ovalle W.K., Nahirney P.C. Netters essential histology. – Philadelphia, Saunders Elsevier, 2008.
3. Kierszenbaum AL, Tres LL. Histology and cell biology: an introduction to pathology. 4th ed. Saunders Elsevier, 2016.
4. Young B, O'Dowd G, Woodford P. Wheater's functional histology: a text and colour atlas. 6th ed. Churchill Livingstone, 2014.

### 11. Equipment, hardware and software resources of the discipline/ course

- Working program of the discipline;
- Multimedia support of lectures;

- Lecture thesis from the discipline;
- Methodical recommendations for teachers;
- Educational platform Misa;
- Methodical recommendations for practical classes for students;
- Test and control tasks for practical classes;
- Questions and tasks for final control (exam)

## 12. Additional information

### **Responsible for the educational process at the department:**

Associate Professor Olga Yuzych.

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Compiler of Syllabus

Assoc. Prof. Yuzych O.V.

(Підпис)

Head of the Department

Assoc. Prof. Chelpanova I.V.

(Підпис)