

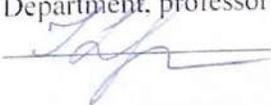
MINISTRY OF HEALTH OF UKRAINE
KHARKIV NATIONAL MEDICAL UNIVERSITY
Department of Pathological anatomy
Academic year 2021-2022

SYLLABUS OF THE ACADEMIC DISCIPLINE
«PATOMORPHOLOGY»

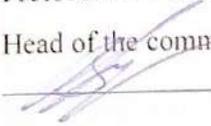
Educational component basic
Type of education full-time
Branch of knowledge 22 "Health care"
Specialty 221 "Dentistry"
Educational and professional program "Dentistry" of the second (master's) level of higher education
Course second, third

The syllabus of the discipline was approved at the meeting of the Pathological Anatomy Department Protocol № 1 from "30" August 2021

Acting Head of the Pathomorphology Department, professor


I. Sorokina

Approved by the methodical commission of KhNMU on problems of general and pre-professional training Protocol № 1 from "31" August 2021

Head of the commission, professor

O. Vovk

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Information about the consultations: consultations in the University: Pathologic Anatomy Department, 4 Nauky Ave., Kharkiv, main building of KhNMU, 3 floor; Online consultations: Online consultations by prior arrangement for which it is necessary to write a letter to the corporate e-mail to the duty teacher according to the schedule of shifts in the department or a teacher of the academic group, and get a link to the conference in Google Meet, where the online consultation will take place.

Location of the Department: 4 Nauky Ave., Kharkiv, main building of KhNMU, 3 floor

INTRODUCTION

The syllabus of the discipline "Pathomorphology" is compiled in accordance with the Educational and Professional Program "Dentistry" and the Standard of Higher Education of Ukraine (hereinafter - the Standard) of the second level (master) branch of knowledge 22 "Health" speciality 221 " Dentistry ".

General characteristics of the discipline Pathomorphology is an academic discipline that gives the concept of the structural basis of human diseases for enhance study of the basic medicine and the clinical picture of diseases with the subsequent use of knowledge in the practice of doctor.

The study of the structural basis of human diseases consists of two sections: General and Clinical (Systemic) Pathomorphology, and Thanatology.

General Pathomorphology is the structural basic of typical general pathologic processes, which determine the morphologic and functional manifestations of diseases.

Systemic (clinical) Pathomorphology provides knowledge of the structural basis of human diseases and their clinical manifestations, recovery, complications and consequences (outcomes); knowledge of changes in diseases that develop in connection with changes in human living conditions and the environment (pathomorphosis); knowledge of diseases arising as a result of various medical procedures – preventive, diagnostic, treatment, cosmetic, anesthesiologic, resuscitation (pathology of therapy, resuscitation pathology, iatrogenic).

Thanatology establishes knowledge about the causes, mechanisms and types of human death, on which modern advanced intensive care is based.

The basis of knowledge about the organization and purpose of pathology department in hospital, practical work of the pathologist, skills of analysis and prevention of diagnostic and treatment mistakes, as well as the issuance of a medical certificate of death provides a special elective biopsy-autopsy course.

The basis of Pathomorphology is pathologic anatomy.

The subject of study of the discipline is the structural basis of human diseases for enhance study of the basis of medicine and the clinical picture of diseases with the subsequent use of knowledge in the practical work of the doctor.

The role and place of Pathomorphology in the system of training The basis of Pathomorphology is Pathologic anatomy (Pathology). Pathologic anatomy (from the Greek *pathos* – suffering) – a basic science of the structural basis of disease and pathologic processes, which studies changes in organelles, cells, intercellular matrix, tissues and organs of the sick person, as well as the causes and mechanisms of death. Pathologic anatomy is both a clinical science and a branch of practical medicine, it plays a central role in the lifelong and postmortem diagnosis of human diseases. Diagnosis (Greek. *Diagnösis*) in medicine – is the recognition, definition of the disease. Pathologists who work in medical institutions and specialized pathology departments recognize diseases during the life of patients, as well as after their death.

Without the study of Pathomorphology it is impossible to understand the structural basis of pathologic processes, as well as it is impossible to obtain any specialization of the doctor.

Interdisciplinary links:

Discipline prerequisite: human anatomy and physiology, histology, cytology, embryology and genetics, microbiology, virology and immunology, biological chemistry, medical biology, medical physics;

Discipline corequisite: pathologic physiology, propaedeutic of internal medicine, general surgery;

Discipline postrequisite: dentistry, internal medicine, genetics, family medicine, obstetrics and gynecology, surgery, infectious diseases.

Discipline page in the Moodle:

<http://distance.knmu.edu.ua/course/view.php?id=239>

1. The purpose and objectives of the discipline

1.1 The **purpose** of the discipline "Pathomorphology" is to study the microscopic and ultramicroscopic structure of human organs, their development and changes in various living conditions; to study the clinic, differential diagnosis and use of knowledge in the practice of doctor, taking into account age.

1.2 The main **objectives** of studying the discipline are:

- Study of typical general pathologic processes which determine the morphologic manifestations of diseases.
- To study the structural basis of the diseases development and their clinical manifestations, the structural basis of recovery, complications and consequences (outcomes).
- To study methods of pathomorphologic examination: autopsy, biopsy.

1.3 Competencies and Learning outcomes

1.3.1. According to the requirements of the Standard, the discipline provides students with the acquisition of **competencies**:

General competencies:

- Ability to abstract thinking, analysis and synthesis.
- Knowledge and understanding of the subject area and understanding of professional activity.
- Ability to use knowledge in practice.
- Ability to communicate in the state language both orally and in writing.
- Skills in the use of information and communication technologies.
- Ability to search, process and analyse information from various sources.
- Ability to adapt and act in a new situation.
- Ability to identify, pose and solve problems.
- Ability to be critical and self-critical.
- Ability to act socially, responsibly and consciously.

- Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, use different types and forms of physical activity for active recreation and a healthy lifestyle.

Professional competencies:

- Ability to collect medical information about the patient and analyse clinical data.
- Ability to interpret the results of laboratory and instrumental examination.
- Ability to diagnose: determine the preliminary, clinical, final, final diagnosis, emergencies.
- Ability to plan and implement measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region.
- Ability to determine the tactics of patients' management with diseases of the organs and tissues of the oral cavity and maxillofacial region with accompanying somatic diseases.
- Ability to assess the impact of the environment on the health of the population (individual, family, population).
- Processing of state, social and medical information.

1.3.2. Program learning outcomes

PLO 1 - Have general and special fundamental and professionally-oriented knowledge, skills, abilities, competencies necessary to perform typical professional tasks related to activities in the medical field in the relevant position

PLO 2. To have knowledge about psychophysiological features of the person, human health, support of health, prevention of diseases, treatment of the person, health of the population

PLO 3 - to apply the acquired knowledge, skills and understanding to solve typical problems of the doctor, the scope of which is provided by lists of syndromes and

symptoms, diseases, emergencies, laboratory and instrumental research, medical manipulations

PLO 4 - to collect information about the patient

PLO 5 - evaluate the results of surveys, physical examinations, laboratory and instrumental research data

PLO 6 - to establish a preliminary clinical diagnosis of the disease

PLO 7 - to determine the nature, principles of treatment of diseases

PLO 16 - assess the impact of the environment on public health

PLO 18 - to assess the state of human health and provide its support taking into account the impact of the environment and other health factors

PLO 20 - apply the acquired knowledge about the existing health care system to optimize their own professional activities and participate in solving practical problems of the industry

PLO 21 - adhere to the code of ethics of the doctor, which ensures the formation of a specialist with appropriate personal qualities

1.3.3. The study of the discipline provides students with the following social skills

(Soft skills):

- information management
- ability to form one's own opinion and make decisions;
- emotional intelligence;
- ability to communicate with colleagues and relatives of patients.

2. INFORMATION CONTENT OF THE COURSE

Index	Branch of knowledge, speciality, educational degree, EPP	Characteristics of the discipline	
Amount of credits – 6,0	Branch of knowledge 22 "Health care"	Basic	
Amount of hours – 180	Specialty 221 "Dentistry"	Course:	
		2	3
		Semester	
		IV	V
		Lectures	
		20 hours	10 hours
		Practical classes	
		40 hours	40 hours
Amount of classroom hours – 110 hours. individual self-study of students – 70 hours.	the second (master's) level of higher education EPP "Dentistry"	Lab classes	
		Self-study	
		35 hours	35 hours
		Individual tasks:	
		Type of control: exam	

2.1 Description of the discipline

2.2.1 Lectures:

№	Topic	Amount of hours
1	Subject and tasks of Pathomorphology. Basic thanatology (birth and death, periods of thanatogenesis, signs of clinical death, causes and early signs of biological death, cadaveric changes). The main stages of pathologic anatomy development. Methods of pathological diagnosis. Cellular dystrophies: hyaline-drop, hydropic, keratin (horny), fatty. Pathomorphology of accumulation of complex proteins (hyalinosis) and lipids.	2
2.	Pathomorphology of accumulation of disturbed metabolism products. Disorders of iron metabolism and metabolism of hemoglobinogenic pigments, Pathomorphologic manifestations of melanin synthesis, nucleoprotein and copper metabolism disorders. Calcinosis (calcification) of tissues. Formation of stones.	2
3.	Acute systemic circulatory disorders (acute coronary insufficiency, shock) and systemic circulatory disorders in chronic heart failure and their consequences. Regional circulatory disorders (hyperemia, ischemia, plasmorrhagia, bleeding and hemorrhage). Disorders of lymph formation and circulation. Thrombosis. Embolism.	2

4.	Inflammation: causes, morphogenesis. Pathomorphology of exudative inflammation. Proliferative (productive) inflammation: with the formation of acute genital warts, around parasitic animals, interstitial Productive inflammation, granulomatous inflammation. Specific proliferative inflammation.	2
5.	Molecular pathomorphologic bases of the immune response. Immune system in the prenatal and postnatal period. Pathology of immune processes: amyloidosis, hypersensitivity reactions, graft rejection reaction. Immune deficiency. Autoimmune diseases.	2
6.	Regeneration. Structural bases of physiological adaptation of organs and cells. Morphology of cell accommodation processes. Compensatory-adaptive processes.	2
7.	Oncogenesis. Anatomical and microscopic features and types of growth of benign and malignant tumors. Morphological characteristics of the main stages of malignant tumors. Benign and malignant non-epithelial (mesenchymal) tumors. Sarcoma: features of development and metastasis. Tumors of fibroblastic, myofibroblastic and fibrohistiocytic origin. Tumors of adipose and muscle tissue, tumors of blood vessels. Clinical and morphologic nomenclature of tumors. Tumors of the epithelium: benign epithelial tumors, cancer (features of development and metastasis, the main histologic forms). Melanocyte tumors.	2
8.	Tumors of hematopoietic and lymphoproliferative tissue.	2
9.	Atherosclerosis and arteriosclerosis. Coronary heart disease. Hypertension and arteriosclerosis. Hypertension and symptomatic hypertension.	2
10.	Systemic connective tissue diseases with autoimmunization: Rheumatism, Systemic lupus erythematosus, Rheumatoid arthritis, Systemic scleroderma, Dermatomyositis, Ankylosing spondylitis. Endocardial and myocardial diseases: cardiomyopathies, endocarditis, myocarditis, acquired heart defects	2
11.	Diseases of the digestive system (gastritis, peptic ulcer, gastric cancer, hepatitis, hepatosis, liver cirrhosis).	2
12.	Diseases of the hard tissues of the tooth (caries, non-carious lesions), pulpitis, periodontitis, periostitis, osteomyelitis of the jaw bones.	2
13.	Tumors and tumor-like processes of the oral cavity and jaw bones: odontogenic and neodontogenic tumors, papilloma, oral cancer, precancerous changes (leukoplakia), non-epithelial tumors, tumors of the jaw bones (osteoblastoclastoma, osteoma, fibrous dysplasia, cherubizm), cysts of jaw bones (follicular cyst, keratocyst, uneruption cyst).	2
14.	Characteristics of the infectious process	2
15	Tuberculosis.	2
	Total amount of hours.	30

2.2.2 Seminars

№ з/п	Topic	Amount of hours	Teaching methods	Types of control
1				
2				

2.2.3 Practical classes

№	Topic	Amount of hours	Teaching methods	Types of control
1.	Subject and tasks of Pathomorphology. The main stages of pathologic anatomy development. Methods of pathological diagnosis.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
2.	Morphologic changes of the cells as a response to injury. Cellular dystrophies: hyaline-drop, hydropic, keratin (horny), fatty.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
3.	Morphologic changes of stroma as response to injury. Pathomorphology of complex proteins (hyalinosis) and lipids accumulation.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
4.	Pathomorphology of products accumulation in disturbed metabolism. Disturbed metabolism of iron and hemoglobinogenic pigments, melanin, nucleoproteins, and copper. Calcification (calcinosis) of tissues. Stone formation.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
5.	Basic thanatology. Necrosis. Clinico-morphologic forms of necrosis. Apoptosis.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
6.	Acute systemic disturbances of blood circulation (acute coronary insufficiency, shock); systemic disturbances of blood circulation in chronic coronary disease, their subsequences. Focal disturbances of blood circulation (hyperemia,	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.

	ischemia, plasmorrhagia, bleeding, hemorrhage). Disturbance of lymph circulation.		visiting the autopsy of the deceased;	
7.	Disturbance of hemostasis: hemorrhagic syndrome, thrombosis, DIC-syndrome. Embolism. Pulmonary artery thromboembolism, thanatogenesis.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
8.	Conclusion 1. Practical skills.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
9.	Inflammation: causes, morphogenesis. Pathomorphology of exudative inflammation	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
10.	Proliferative inflammation. Specific proliferative inflammation.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
11.	Molecular and pathomorphologic basic of immune response. Immune pathology: hypersensitivity reactions, transplant rejection, amyloidosis. Immune deficiency. Autoimmune diseases.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
12.	Compensation. Adaptation. Regeneration.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.

13.	Autopsy. Practical skills.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
14.	Neoplasia. Common pathology of tumors. Classification of tumors.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
15.	Mesenchymal tumours.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
16.	Epithelial tumors.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
17.	Melanocyte tumors. Teratomas.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
18.	Hemopoietic tumours. Leukaemia. Lymphoma.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
19.	Anaemia. Thrombocytopathy.	2	creative discussions, discussions; dialogue with students; work with	Current control: oral survey; written survey; test control;

			macro- and microspecimens; visiting the autopsy of the deceased;	individual tasks; abstracts; Final control: exam.
20.	Conclusion 2. Practical skills.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
21.	Atherosclerosis. Chronic coronary disease.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
22.	Arteriosclerosis. Hypertensive disease.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
23.	Systemic diseases of connective tissue with autoimmunisation: Rheumatism, Systemic lupus erythematosus, rheumatoid arthritis, Behrerev's disease. Diseases of endocardium and myocardium.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
24.	Cerebro-vascular diseases. Postresuscitation encephalopathy, brain death syndrome. Neurodegenerative diseases (Alzheimer's disease). Demyelination diseases (multiple sclerosis). Neuritis. Tumors of nervous tissue and brain membranes.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
25.	Respiratory pathology	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.

			visiting the autopsy of the deceased;	
26.	Conclusion 2. Practical skills.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
27.	Pathology of gastrointestinal tract	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
28.	Oral pathology: Tumours and tumour-like diseases; cysts of jaw-bones.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
29.	Oral pathology: Pathology of salivary glands	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
30.	Oral pathology: pathology of hard tooth tissues, parodontium, periodontium; osteomyelitis of jaw-bones.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
31.	Oral pathology: pathology of lips, tongue, oral mucosa; development defects of oral cavity.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
32.	Pathology of urinary tract	2	creative discussions, discussions;	Current control: oral survey;

			dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	written survey; test control; individual tasks; abstracts; Final control: exam.
33.	Pathology of endocrine system.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
34.	Conclusion 4. Practical skills.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
35.	Infectious diseases: common characteristics, classification. Alimentary tract infections.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
36.	Viral airborne infections. COVID-19 infection. HIV infection. Rabies. Rickettsia infections. Prion infections.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
37.	Children's infections	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
38.	Tuberculosis.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens;	Current control: oral survey; written survey; test control; individual tasks;

			visiting the autopsy of the deceased;	abstracts; Final control: exam.
39.	Sepsis. Quarantine infections. Syphilis.	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
40.	Conclusion 5. Practical skills	2	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral survey; written survey; test control; individual tasks; abstracts; Final control: exam.
Total amount of hours		80		

2.2.4. Lab classes

№ з/п	Topic	Amount of hours	Teaching methods	Types of control
1				
2				
	Amount of hours			

2.2.5. Individual self-study of a student

№	Topic	Amount of hours	Teaching methods	Types of control
1.	Systemic vasculitis: nodular periarteritis, Takayasu arteritis, temporal (giantcell) arteritis, Wegner's granulomatosis, obliterative thrombangitis, Kawasaki disease, Sheinlein-Henoh disease, Reyno syndrome. Shegren's syndrome.	10	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
2.	Morphologic features of oral cavity organs. Development defects of the face, neck and oral cavity.	10	creative discussions, discussions; dialogue with students; work with macro- and microspecimens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks;

				abstracts; Final control: exam.
3.	Diseases of jaws, salivary glands, lips, tongue, soft tissues of the oral cavity.	10	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
4.	Diseases of musculoskeletal system. Tumours of bones and cartilages. Parathyroid osteodystrophy; osteoporosis; Paget's disease; osteomyelitis; pathology of joints; muscle dystrophy; myasthenia.	4	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
5.	Precancerous changes in lips, tongue, soft tissues of oral cavity. Dental symptoms of other pathology.	10	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
6.	Oral pathology: pathology of hard tooth tissues, parodontium, periodontium; inflammatory diseases of lips, tongue, oral mucosa.	10	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
7.	Male and female reproductive pathology. Pathology of pregnancy. Breast pathology.	2	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
8.	Prenatal and perinatal pathology	4	creative discussions, discussions; dialogue with students; work with macro- and	Current control: oral examination; written survey; test control;

			microspeciemens; visiting the autopsy of the deceased;	individual tasks; abstracts; Final control: exam.
9.	Radiation disease. Occupational diseases.	2	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
10.	Preparation for conclusions	8	creative discussions, discussions; dialogue with students; work with macro- and microspeciemens; visiting the autopsy of the deceased;	Current control: oral examination; written survey; test control; individual tasks; abstracts; Final control: exam.
Total amount of hours		70		

Individual tasks:

Writing of essays, preparing of presentations, making of projects.

3. ASSESSMENT POLICY

3.1. The current learning activities of students are controlled in practical classes in accordance with specific goals and during the individual work of the teacher with students: computer tests; solving situational problems; structured written works; structured according to the procedure control of practical skills and abilities (assessment of knowledge and skills to analyse and interpret macro- and microscopic changes of cells, tissues, organs and systems in certain pathological processes).

Assessment of individual self-study of a student:

Assessment of students' individual self-study, which is provided in the topic along with classroom work, is carried out during the current control of the topic in the relevant practical class.

Assessment of topics that are submitted only for individual self-study and are not included in the topics of classroom training, is controlled by the final control.

The final control is carried out upon completion of all topics study in the last control class of the school year.

Students who have completed all types of work provided in the curriculum and got amount of points not less than the minimum are allowed to pass the final control.

Assessment current learning activities (CLA)

During the assessment of each topic of the discipline (CLA) and the Conclusion classes (CC) the student gets a mark according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

The Semester assessment final amount of points for CLA and CC is defined as the arithmetic mean of traditional marks for each class and CC, rounded to 2 decimal places and listed in a multi-point scale according to Table1. The minimum amount of Semester assessment points that a student must get to be allowed to pass exam – 70 points, the minimum positive amount of points on the exam, respectively, 50 points.

Conclusion classes assessment

CC required during the semester on schedule, during classes.

CC is provided by the teacher of the academic group.

Materials for preparation for the CC are placed on the information desk in the Department hall and in the course of the Pathologic Anatomy Department in SDL KhNMU Moodle, as:

- basic questions for “KROK-1” exam;
- list of theoretical questions (including questions on individual self-study);
- list of practical skills;
- list of macro- and microspecimens,
- criteria for assessing of the knowledge and skills of students;
- schedule of students completing missed classes (work off) during the semester.

Exam

Pathomorphology exam – it is a process in which there is assessment of:

- theoretical knowledge level;

- level of creative thinking;
- individual self-study skills;
- competencies – the ability to synthesise received knowledge and use of those knowledge in solution of practical tasks.

To conduct the exam, a session schedule is established, approved by the rector of KhNMU, indicating the specific dates of the exams, which are set aside outside the semester.

If the exam is failed, the dates of repassing during the holidays are set, until the beginning of the next semester.

The department approves the methodology of the exam and approves it in the curriculum (program) of the discipline in the prescribed manner.

1. Test which includes not less than 30 KROK questions. Assessment criteria – 90% of correct answers; “passed” or “failed”.
2. Assessment of practical skills (“passed” or “failed”) and theoretical knowledge about all the Pathomorphology topics in exam day. For assessment of theoretical knowledge student gets an exam card with theoretical questions. Assessment of theoretical knowledge is provided in accordance with table 2.

Final Pathomorphology mark

Discipline final mark is defined as arithmetic mean for both semesters assessment points which have been transferred to the 120-points scale of ECTS (table 1) with added exam points. Max points that student can get as Final Pathomorphology mark is 200 including max mark for semesters assessment – 120 points, max exam mark is 80 points. Min Final Pathomorphology mark is 120 including min mark for semesters assessment – 70 points; min exam mark is 50 points.

Assessment of individual tasks for students

Points for individual tasks are accrued once by commission which includes head of the Department, Head teacher, and group teacher only in a case of its successful

fulfilment. In any case total amount of points could not be more than 120 points for current learning activities.

Assessment of individual self-study of students

Those topics which only for self-study are checked in conclusions and final exam.

Table 1

Recalculation of the average mark for current activities in a multi-point scale (for disciplines ending with an exam)

4-point scale	200-point scale	4-point scale	200-point scale
5	120	3.91-3,94	94
4.95-4,99	119	3.87-3,9	93
4.91-4,94	118	3.83- 3,86	92
4.87-4,9	117	3.79- 3,82	91
4.83-4,86	116	3.74-3,78	90
4.79-4,82	115	3.7- 3,73	89
4.75-4,78	114	3.66- 3,69	88
4.7-4,74	113	3.62- 3,65	87
4.66-4,69	112	3.58-3,61	86
4.62-4,65	111	3.54- 3,57	85
4.58-4,61	110	3.49- 3,53	84
4.54-4,57	109	3.45-3,48	83
4.5-4,53	108	3.41-3,44	82
4.45-4,49	107	3.37-3,4	81
4.41-4,44	106	3.33- 3,36	80
4.37-4,4	105	3.29-3,32	79
4.33-4,36	104	3.25-3,28	78
4.29-4,32	103	3.21-3,24	77
4.25- 4,28	102	3.18-3,2	76
4.2- 4,24	101	3.15- 3,17	75
4.16- 4,19	100	3.13- 3,14	74
4.12- 4,15	99	3.1- 3,12	73
4.08- 4,11	98	3.07- 3,09	72
4.04- 4,07	97	3.04-3,06	71
3.99-4,03	96	3.0-3,03	70
3.95- 3,98	95	less 3.0	Not enough

Conclusion class:

1. Test which includes not less than 30 KROK questions. Assessment criteria – 90% of correct answers; “passed” or “failed”.

2. Assessment of practical skills including abilities in macro- and microspeciements studying (“passed” or “failed”).

3. In assessment of theoretical knowledge which are included in conclusion student gets a traditional mark which in turn converted to multi-point scale with marks for CLA (Table 1).

Table 2

Assessment of theoretical knowledge

Amount of questions	«5»	«4»	«3»	Oral answer on the exam card about theoretical part	For every question answer student gets from 10 to 16 points, which refers to: «5» - 16 points; «4» - 13 points; «3» - 10 points.
1	16	13	10		
2	16	13	10		
3	16	13	10		
4	16	13	10		
5	16	13	10		
	80	65	50		

Technology of Discipline Assessment

Assessment of the Discipline study results is carried out directly during final exam. The Discipline final mark is defined as the sum of points on the Semester assesment and exam and is min – 120 to max – 200. The correspondence of grades on the 200-point scale, four-point (national) scale and ECTS scale is given in Table 3.

Table 3

The correspondence of points on the 200-point scale, four-point (national) scale and ECTS scale

200-point scale	ECTS scale	Four-point (national) scale
180–200	A	Excellent
160–179	B	Good
150–159	C	Good
130–149	D	Satisfactory
120–129	E	Satisfactory
Less than 120	F, Fx	Unsatisfactory

Criteria for evaluating the results of educational activities of students

Mark	Evaluation criteria
"Excellent"	The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations.
"Very good"	The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects mistakes, the number of which is insignificant
"Good"	The student is able to compare, summarize, systematize information under the guidance of the teacher; as a whole to apply it independently in practice; control their own activities; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions
"Satisfactory"	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic provisions; with the help of the teacher can analyze the educational material, correct mistakes, among which there are a significant number of significant ones
"Enough"	The student has the study material at a level higher than the initial, a significant part of it is reproduced at the reproductive level
"Unsatisfactory" with the possibility of re-compiling the semester control	The student has the material at the level of individual fragments that constitute a small part of the study material
"Unsatisfactory" with mandatory re-study of credit	The student has the material at the level of elementary recognition and reproduction of individual facts, elements, objects
In particular, criteria for assessing practical skills in disciplines	
"Completed"	The student independently demonstrates the performance of practical skills, admitting some inaccuracies, which he quickly corrects, has theoretical knowledge (knows the method of performing practical skills, indications and contraindications, possible complications, etc.)

"Completed"	The student corresponds to a high (creative) level of competence: the student shows special creative abilities, without errors demonstrates the implementation of practical skills and has systematic theoretical knowledge (knows the methods of practical skills, indications and contraindications, possible complications, etc.) and has ability to make decisions in unusual situations.
"Completed"	The student demonstrates the implementation of practical skills, making some mistakes that can be corrected by their teacher, has satisfactory theoretical knowledge (knows the basic principles of methods of practical skills, indications and contraindications, possible complications, etc.).
"Failed"	The student cannot independently demonstrate practical skills (performs them, making gross errors), does not have a sufficient level of theoretical knowledge (does not know the methods of practical skills, indications and contraindications, possible complications, etc.).

The final Pathomorphology mark is given only to those students who passed all conclusions and final exam.

Those students who haven't fulfilled the requirements of the Pathomorphology program (curriculum) have got an Fx mark if they were allowed to the exam but did not pass it. A mark F is given to students who are not allowed to pass the exam.

Marks "Fx" or "F" ("unsatisfactory") are given to students who are not credited with the study of the discipline.

After completing the study of the Pathomorphology, the teacher puts the student's final mark in accordance with the scales (Table 3) in the credit book and fills in the registration form: Y-5.03Б – exam.

Elimination of academic debt (working off).

Missed classes or unsatisfactory marks could be worked off to the teacher of the group or to the duty teacher. All works off and consultations are taken daily from 15:00 to 17:00 and on Saturdays in accordance with the "Regulations on the procedure for students work off" from 07.12.2015 № 415. Missed lectures could be worked off to the teacher of the academic group or to the lecturer by writing down the report and oral answering the questions about topic of missed lecture.

3.2. List of the questions for Pathomorphology exam:

1. Cell - the basic unit of continuity of life. 2. Cell pathology: cell membranes, cell metabolism, cell dysplasia, metaplasia, genetic structure of the cell. 3. Pathology of the cell nucleus. The structure and size of the nucleus (diploidy, polyploidy, aneuploidy). Functional state of the nucleus, structure and distribution of chromatin in it. 4. Changing the shape of the cell nucleus and their number as a manifestation of the functional features of the cell in various types of pathological processes. 5. The structure and size of the nucleoli, nuclear inclusions in pathology. 6. Pathology of mitosis. Classification of mitosis pathology. Environmental factors. 7. Chromosomal aberrations and chromosomal diseases. Down's disease, Patau and Edwards syndrome. 8. Pathology of the cytoplasm. Change of cell membranes (violation of membrane transport, sodium-potassium ATP pump). Hydropic dystrophy, mechanisms of development. 9. Changes in the permeability of the cell membrane ("hypersensitivity diseases"), heavy metal poisoning (mercury, uranium), mechanisms of development. 10. Possibilities of determining the pathological process at the ultrastructural level. Modern methods of diagnosing the donecrotic stage of myocardial infarction. 11. Dystrophies. Classification of dystrophies. Modern methods of studying dystrophies. 12. Parenchymal dystrophies (cellular). Classification of them. 13. Parenchymatous dysproteinosis. Methods for protein identification in tissues. 14. Parenchymal fatty dystrophy. Methods of fat identification in tissues. 15. Parenchymal carbohydrate dystrophy. Identification of carbohydrates in tissues. 16. Stromal-vascular protein dystrophies. Muroid, fibrinoid swelling. 17. Stromal-vascular protein dystrophies. Hyalinosis. 18. Stromal-vascular protein dystrophies. Amyloidosis: characteristics of amyloidosis, morphogenesis of amyloidosis. 19. Amyloidosis. Classification, appearance of organs, Histochemical reactions to amyloid 20. Mixed dystrophies. Disorders of chromoprotein metabolism. Reaction for iron identification. 21. Hemoglobinogenic pigments. Types of jaundice. Reactions for bilirubin identification. 22. Tyrosine - tryptophan pigments. 23. Disorders of nucleoprotein metabolism. 24. Disorders of mineral metabolism, their role and methods of detection in tissues. 25. Disorders of

calcium metabolism. Methods for detecting calcium in tissues. 26. Causes and mechanisms of stone formation. Clinical picture of microelementosis. 27. Necrosis. Necrobiosis. Pathobiosis. Apoptosis. 28. Clinico-morphological forms of necrosis. Characteristics of them. Significance of necrosis complication. 29. Circulatory disorders, its types. 30. Arterial hyperemia, its types. 31. General and local venous hyperemia, its manifestations in the organs. 32. The mechanism and development of nutmeg liver and brown induration of the lungs. 33. Thrombosis. Causes and conditions of thrombosis, types of blood clots, complications of thrombosis. 34. Embolism. It's types. 35. Infarction. Definition, types of infarction, complications. 36. Bleeding and hemorrhage. Terminology. Development mechanisms. Complications. 37. Disorders of tissue fluid metabolism. Types of edema. 38. Shock. Types of shock according to the etiology and pathogenesis. DIC syndrome. Morphological changes in parenchymal organs in shock. 39. Inflammation. Morphological features. Terminology, classification. 40. Exudative inflammation. Phases of exudation. 41. Varieties of exudative inflammation. The difference between transudate and exudate. 42. Productive inflammation. Its types. 43. Specific inflammation, its difference from the unspecific. 44. Granulomatous inflammation. Dynamics of tissue reactions, types of granulomas. 45. Syphilis as a specific inflammation. Types of tissue reactions in it. 46. Immune pathology. 47. Processes of adaptation and compensation. 48. Compensation. Phases of the compensatory process. 49. Hypertrophy (hyperplasia). Types of hypertrophy. Organization. Metaplasia. Dysplasia. 50. Atrophy, its types. 51. Sclerosis. Classification of sclerosis taking into account the etiology and pathogenesis. Morphogenetic mechanisms of sclerosis. 52. Definition of the tumor. Classification. Characteristics of benign and malignant tumors. Precancer. Its types. 53. The appearance of the tumor. Types of tumor growth, types of atypism. Anaplasia. 54. Histogenesis and morphogenesis of tumors. Terminology and theories of tumor growth. 55. Benign and malignant tumors of the mesenchyme. 56. Mature and immature CNS tumors. Features of them. 57. Benign and malignant tumors of melanin-forming tissue. 58. Tumors of the peripheral and autonomic nervous system. 59. Organ-specific benign

and malignant tumors of the epithelium. 60. Lung cancer. Classification. Metastases. Complication. 61. Clinical and anatomical forms of gastric carcinoma, metastasis, causes of death. 62. Clinical and anatomical forms of esophageal cancer, liver, pancreas and rectum. 63. Tumors of the breast. Breast cancer. 64. Tumors of the uterus and ovaries. 65. Hemoblastosis. Classification of them. 66. Acute and chronic leukemias. Their histogenetic classification. 67. Pathological anatomy of acute and chronic leukemias. Causes of death of patients. 68. Malignant lymphomas. Lymphogranulomatosis. 69. Anemia. Classification and pathological anatomy of them. 70. Diseases of the cardiovascular system. Endocarditis. Myocarditis. Pericarditis. 71. Heart defects. Acquired heart defects. Congenital heart disease. Cardiosclerosis. 72. Atherosclerosis. Etiology. Pathogenesis. Clinical and anatomical forms, causes of death. 73. Hypertensive disease. Etiology and pathogenesis. Stages, clinical and anatomical forms. 74. Symptomatic hypertension. Changes in blood vessels in hypertension. 75. Acute and chronic coronary heart disease (Ischemic heart disease). Causes of death of patients. 76. Cerebrovascular diseases. Classification. Complication. 77. Systemic vasculitis. Classification of them according to the criteria of morphological evaluation. Etiology. Pathogenesis. Primary and secondary vasculitis. 78. Primary vasculitis (nonspecific aortoarteritis, nodular periarteritis, Wegener's granulomatosis, thromboangiitis obliterans). Etiology. Pathogenesis. Pathological anatomy. 79. Connective tissue diseases (rheumatic diseases). Systemic lupus erythematosus. 80. Rheumatism. Clinical and anatomical forms. Causes of death of patients. Complication. 81. Respiratory diseases. Acute inflammatory lung disease. Classification. 82. Lobar pneumonia, etiology. Stages, complications, causes of death of patients. 83. Focal pneumonia. Etiology. Pathogenesis. Types of them, complications. Causes of death of patients. 84. Chronic nonspecific lung diseases. Pulmonary emphysema, its types. 85. Interstitial lung disease. Classification, etiology, pathogenesis, pathological anatomy. Outcomes. 86. Pneumofibrosis. Definition of the concept. Pathanatomy. 87. Bronchial asthma. 88. Tonsillitis (Angina). 89. Acute and chronic gastritis, their classification and pathoanatomy. Outcomes. 90. Gastric or peptic ulcer. Etiology.

The role of Campylobacter in the mechanism of development of peptic ulcer of the duodenum. Complications and causes of death. Stomach cancer. 91. Enteritis and colitis. Morphology and complications. 92. Appendicitis. Etiology. Clinical and anatomical forms. Complications, causes of death of patients. 93. Classification of liver diseases by etiology and origin. 94. Hepatosis. Toxic liver dystrophy. Etiology, pathogenesis. Pathanatomy, result. 95. Hepatitis (primary). Clinical and anatomical forms of viral hepatitis, pathoanatomy, pathogenesis, result. 96. Chronic persistent hepatitis. Markers of hepatitis B virus antigens 97. Cirrhosis of the liver. Mexican classification of them, Results. 98. Cholecystitis. Acute and chronic pancreatitis. 99. Kidney disease. Classification of them. Diffuse glomerulonephritis. Classification. Clinical and anatomical forms. Pathanatomy. Complication. 100. Acute renal failure. Causes, pathogenesis, stages, complications. 101. Pyelonephritis. Kidney stone disease. Pathanatomy, complications, result. 102. Nephrotic syndrome. Renal amyloidosis. 103. Nephrosclerosis. Pathanatomy. Uremia. 104. Diseases of the reproductive system. Classification of them. Dyshormonal diseases of the male and female reproductive system. Pathanatomy. Complication. Outcomes. 105. Diseases of pregnancy and postpartum period (abortion, premature birth, ectopic pregnancy, preeclampsia). 106. Diseases of the endocrine glands. Pituitary pathology. 107. Diseases of the thyroid gland. Goiter. Types, complications, causes of death. 108. Addison's disease. Itsenko-Cushing's disease and syndrome. 109. Diabetes mellitus. Etiology. Pathogenesis. Pathanatomy, complications, causes of death. 110. Avitaminosis. Rickets. Scurvy. Xerophthalmia. Pellagra. Deficiency of vitamin B12 and folic acid. 111. Diseases of the musculoskeletal system. Parathyroid osteodystrophy. Etiology, pathogenesis, pathoanatomy. Causes of death. 112. Osteomyelitis. Classification, pathoanatomy, causes of death. 113. Fibrous dysplasia. Classification, pathoanatomy. Complications, causes of death. 114. Syphilis (congenital and acquired). 115. Toxoplasmosis and cytomegaly. 116. The concept of pre- and perinatal pathology. 117. Asphyxia of newborns. Hemolytic disease of newborns. Birth trauma. 118. Typhoid fever. Stages, clinical and morphological forms. Complications, result. 119. Bacterial and amoebic dysentery,

complications, causes of death. 121. Plague: clinical and anatomical forms, pathoanatomy, causes of death. 122. Typhoid fever: pathoanatomy, causes of death. 123. Reverse typhus: pathoanatomy, causes of death. 124. Malaria. 125. Sepsis. Classification, clinical and morphological forms, pathoanatomy, features of modern sepsis. 126. Tuberculosis. Features of modern tuberculosis. Modern classification. 127. Clinical and morphological forms of tuberculosis. Their pathoanatomy. 128. Primary tuberculosis. 129. Hematogenous tuberculosis. 130. Secondary tuberculosis. 131. Occupational diseases. Classification of them. Pneumoconiosis. 132. Radiation sickness. 133. Pathoanatomy of war trauma. 134. HIV infection.

Dentistry: 1. Caries. Non-cariou lesions. 2. Gingivitis. 3. Parodontitis. 4. Periodontitis. 5. Inflammatory diseases of the jaw bones (ostitis, periostitis, osteomyelitis). 6. Cysts of the jaw bones. 7. Tumor-like diseases of the jaw. 8. Tumors of the jaw bones (odontogenic and neodontogenic). 9. Diseases of the salivary glands (inflammatory, sialolithiasis, tumor-like diseases). 10. Diseases of the lips, tongue, soft tissues of the oral cavity (cheilitis, stomatitis, glossitis, precancerous changes, tumors).

3.5. Rules for appealing the assessment

Mark for Discipline is announced to the applicant immediately after the final lesson. If the applicant does not agree with the assessment, he can announce it to the teacher of the academic group. In this case, the applicant has the opportunity to re-take the test of the commission, consisting of the head of the department, head teacher and lecturer of the academic group.

4. Discipline policy:

Students are required to systematically master the theoretical knowledge and practical skills provided by the curriculum of the discipline; always have a neat appearance (white coat, medical cap); turn off mobile devices during practical classes and lectures; comply with the rules of procedure of KhNMU.

During classes it is allowed: to leave the classroom for a short time if necessary and with the permission of the teacher; drink soft drinks; take photos of presentation

slides; take an active part in the class; it is forbidden: to eat (except for persons whose special medical condition requires another – in this case medical confirmation is required); smoking, drinking alcohol and even low-alcohol drinks or drugs; to use obscene language or use words that offend the honour and dignity of colleagues and faculty; gamble; to damage the material and technical equipment of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories); shouting, listening to loud music in classrooms and even in halls of the department during classes. Students are not allowed to be late for practical classes and lectures. During the lecture, students are recommended to make notes of the lesson and keep a sufficient level of silence. Asking questions to the lecturer is perfectly normal. Practical classes involve active participation in the discussion in the classroom, students should be ready to understand the material in detail, ask questions, express their opinion, discuss. During the discussion are important: respect for colleagues, tolerance for others and their experience, receptivity and impartiality, the ability to disagree with the opinion, but to respect the personality of the opponent, careful argumentation of his opinion and the courage to change their position under the influence of evidence, self-expression avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions, mandatory acquaintance with the original sources. A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in local, national and international conferences, competitions and other events in the subject profile. Attendance of practical classes and lectures is compulsory.

During the practical class, the group monitor appoints the student-on-duty, who must provide the group with microscopes and microspecimens according to the lesson topic and is responsible for cleanliness and order in the classroom and storage of equipment, micro- and macrospecimens.

During the control of students' knowledge cheating is forbidden, use of cellphones or other electronic devices, various software, use of hints.

Students with special needs must warn the teacher before the start of classes, at the request of the student it can be done by the monitor of the group. If a student has any questions, he can always solve it first of all with the teacher or head of the department, if necessary.

Occupational Health:

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, etc.

Plagiarism and academic integrity:

The Department of Pathological Anatomy maintains zero tolerance for plagiarism. Male and female students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

5. ACADEMIC INTEGRITY

During the control of students' knowledge, writing, use of various software, tips, use of mobile phones or other electronic devices are not allowed.

The Department of Pathological Anatomy maintains zero tolerance for plagiarism. Students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

6. SUGGESTED TEXT-BOOKS:

- 1) Pathomorphology: textbook / I.V. Sorokina, V.D. Markovskiy, D.I. Halata et al. ; edited by I.V. Sorokina, V.D. Markovskiy, D.I. Halata. – Kyiv : AUS Medicine publishing, 2019. – 320 p. + 2 colour inserts (8p. + 12 p.).
- 2) Robbins & Cotran Pathologic Basis of Disease, 10th Edition / Elsevier, 2017. – 952 p.
- 3) Oral and Maxillofacial Pathology / Brad W. Neville & Douglas D. Damm & Carl M. Allen & Angela C. Chi / Elsevier, - 2015. - 928 p
- 4) Oral Pathology: Clinical Pathologic Correlations, 6th Edition / Joseph A. Regezi & James J. Sciubba / 2016. - 492 p.
- 5) Textbook of Pathology Harsh Mohan // Jaypee Brothers Medical Publishers (P) Ltd. – India, 2010. – 933 p.
- 6) Anderson's Pathology / Edited by John M. Kissane. The C.V. Mosby Company. – Toronto – Philadelphia, 1990. –2196 p.