Supplement 2

Syllabus of discipline «Autopsy Course»

1. General Information	
Name of faculty	**Faculty of Foreign Students**
Educational program	22 Health Care, 222 Medicine, second (master's degree) level of higher education, full-time
Academic year	2023-2024
Name of discipline, code	«Autopsy Course» Code OK 40.3
Department	Department of Pathological Anatomy and Forensic Medicine 790010, Lviv, Pekarska str. 52 Phone number: +380322769371 Kaf_pathanatomy@meduniv.lviv.ua
Head of the Department	DMSc, Professor Yu.O.Pospishil
Course of study	**5th** year of study
Semester	during **IX** or **X** semesters
Type of discipline	**Mandatory**
Teachers	O.M.Gavrilyuk, MD, DMSc, Associate Professor – e.m.gavrilyuk@gmail.com V.I.Vovk, MD, PhD, Associate Professor – vovkvi@yahoo.com M.I.Servetnyk, MD, PhD, Associate Professor – doctorservetnyk@gmail.com I.V.Hritsyna, MD, PhD, Associate Professor – hritsyna@gmail.com Ju.I.Kuzyk, MD, DMSc, Associate Professor - juliakuzyk21@gmail.com
Erasmus yes/no	no
Person responsible for syllabus	M.I.Servetnyk, MD, PhD, Associate Professor doctorservetnyk@gmail.com I.V.Hritsyna, MD, PhD, Associate Professor – hritsyna@gmail.com
Amount of credits ECTS	**0,5**
Amount of hours	Total – **15** hours Practical lessons – **8** hours Self-reliant study – **7** hours
Language of study	**English**
Information about consultations	According to approved schedule
Address, phone number and regulations of clinical base	Lviv Region Pathological Anatomy Bureau 79010, Lviv, Pekarska str.,52 phone/ fax: +38032275-74-08 E-mail: lopab@ukr.net Head: Varyvoda Olena, phone number +38032275-74-08 Located on the territory of the Department of Pathological Anatomy

2. Short Annotation to the Course

"Autopsy course" as a discipline lays the foundations of knowledge about the organization of pathological service and its purpose, provides knowledge of morphological and clinical manifestations of diseases at all stages of their development, summarizes skills of clinical and anatomical analysis, analysis of diagnostic signs and their correct interpretation, causal relationships, which is necessary for further professional activity. The study of the course is carried out in the 9th and 10th semesters of the 5th year of study. The types of educational activities of students according to the curriculum are practical classes and self-reliant work of students (SRS).

The subject of study of the discipline is an in-depth study of the morphological background, clinical manifestations, complications and consequences of therapeutic, surgical, infectious diseases in order to learn the fundamentals of medicine and clinical picture of diseases with subsequent use of knowledge in practice.

Interdisciplinary links: the study of the discipline is based on students' knowledge of pathomorphology, pathophysiology, forensic medicine, therapy, surgical diseases, infectious diseases, pediatrics, obstetrics and gynecology, urology, oncology, and integrates with these disciplines; this involves the formation of ability to apply the acquired knowledge and practical skills from the section-biopsy course in the process of further training and in future professional activity.

3. Aim and Objectives of the Course

1. The purpose of studying of the discipline "Autopsy Course" is an in-depth study of the morphological basis, clinical manifestations, complications and consequences of therapeutic, surgical, infectious diseases with the aim of mastering the fundamental basics of medicine and the clinical picture of diseases with further use of the acquired knowledge in the practical work of doctor:

- study of the main tasks and organization of the pathological service,
- study of the basics of deontology of pathologist work,
- study of the structure and logic of the composition of pathological diagnosis,
- study of methods of pathomorphological researches: autopsy, biopsy, research of biopsy material, method of immunohistochemical research of biopsy and surgery material, electron microscopic research, molecular biological research

2. The main tasks of study of the discipline "Autopsy Course" are the next:

- formulation of the student's knowledge of methods for diagnosing pathological processes and diseases by examining biopsies and postsurgery material (light and electron microscopy, immunohistochemistry, histochemistry and cytochemistry);
- understanding the importance of clinical and anatomical analysis as a method of knowing the circumstances of diseases (morphogenesis), the peculiarities of their course, causes and mechanisms of death, their development (thanatogenesis);
- acquisition of skills of clinical and anatomical analysis, generalization of diagnostic signs of diseases and their correct interpretation in causal relations;
- knowledge of the structural basis of recovery (sanogenesis), complications and consequences of diseases;
- knowledge of the structure of clinical and pathological diagnoses;
- comparison of morphological and clinical manifestations of diseases at all stages of their development, pathological conditions and diseases of the oral cavity;
- study of variants of pathomorphosis of diseases that occur in connection with human living conditions, change as a result of various therapeutic measures (pathology of therapy).

3. Competences and learning results, the formation of which is facilitated by discipline "Autopsy Course"

According to the requirements of Higher Education Standards, the subject provides development of the following **competences:**

integral: the ability to solve typical and complex specialized problems and practical problems in the learning process, which involves research and / or innovation and is characterized by the complexity and uncertainty of conditions and requirements.

general:

- ability to abstract thinking, analysis and synthesis;
- ability to learn and master modern knowledge;
- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject field and understanding of professional activity;
- ability to adapt and act in a new situation;
- ability to make informed decisions;
- ability to work in a team;
- ability for interpersonal interaction;
- ability to communicate in a foreign language;
- ability to use information and communication technologies;
- ability to search, process and analyze information from various sources;
- determination and perseverance regarding the assigned tasks and assumed duties;
- awareness of equal opportunities and gender issues;
- ability to preserve and multiply the moral, cultural, scientific values and achievements of society based on an understanding of 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, technology and technologies, to use different types and forms of motor activity for active recreation and leading a healthy lifestyle.

special (professional, subject):

- ability to collect medical information about the patient and analyze clinical data;
- ability to determine the necessary list of laboratory and instrumental studies and their evaluation results;
- ability to establish a preliminary and clinical diagnosis of the disease;
- ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility;
- ability to maintain medical documentation, including electronic forms;
- ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population;
- ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources;
- to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying;
- ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches;
- ability to develop and implement scientific and applied projects in the field of health care;
- compliance with ethical principles when working with patients and laboratory animals;
- observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;

4. Prerequisites of the Course

To successfully study and master the competencies of the discipline "Sectional biopsy course" the student must have knowledge of the following disciplines:

1. Pathomorphology
2. Pathophysiology
3. Forensic medicine
4. Internal diseases
5. Surgical diseases
6. Obstetrics and gynecology
7. Oncology
8. Infectious diseases

5. Programmed Results of Study

List of Studying Results		
ПРН1 (PLO1) Зн-1-20, Ум-1-8, К-1-3,АВ-1-3	To have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that requires updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК5 ability to adapt and act in a new situation; ЗК6. ability to make informed decisions; ЗК7 ability to work in a team; ЗК8 ability for interpersonal interaction; ЗК9 ability to communicate in a foreign language; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ЗК13 awareness of equal opportunities and gender issues; ЗК15 ability to preserve and multiply the moral, cultural, scientific values and achievements of society based on an understanding of 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,

		technology and technologies, to use different types and forms of motor activity for active recreation and leading a healthy lifestyle. ФК1 ability to collect medical information about the patient and analyze clinical data; ФК2 ability to determine the necessary list of laboratory and instrumental studies and evaluate their results; ФК3 ability to establish a preliminary and clinical diagnosis of the disease; ФК11 ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility ФК16.compliance with ethical princi-ples when working with patients and laboratory animals; ФК17 ability to maintain medical documentation, including electronic forms; ФК18. ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources; ФК21 to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying; ФК22 ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches; ФК23 ability to develop and implement scientific and applied projects in the field of health care; ФК24 compliance with ethical principles when working with patients and laboratory animals; ФК25 observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;

ПРН2 (PLO2) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	Understanding and knowledge of fundamental and clinical biomedical sciences at a level sufficient for solving professional tasks in the field of health care	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК5 ability to adapt and act in a new situation; ЗК6. ability to make informed decisions; ЗК7 ability to work in a team; ЗК8 ability for interpersonal interaction; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ФК1 ability to collect medical information about the patient and analyze clinical data; ФК2 ability to determine the necessary list of laboratory and instrumental studies and evaluate their results; ФК3 ability to establish a preliminary and clinical diagnosis of the disease; ФК11 ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility ФК16.compliance with ethical principles when working with patients and laboratory animals; ФК17 ability to maintain medical documentation, including electronic forms; ФК18. ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources; ФК21 to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying; ФК22 ability to manage healthcare workflows that are complex,

		unpredictable and require new strategic approaches; ФК23 ability to develop and implement scientific and applied projects in the field of health care; ФК24 compliance with ethical principles when working with patients and laboratory animals; ФК25 observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;
ПРН3 (PLO3) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК5 ability to adapt and act in a new situation; ЗК6. ability to make informed decisions; ЗК7 ability to work in a team; ЗК8 ability for interpersonal interaction; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ФК1 ability to collect medical information about the patient and analyze clinical data; ФК2 ability to determine the necessary list of laboratory and instrumental studies and evaluate their results; ФК3 ability to establish a preliminary and clinical diagnosis of the disease; ФК11 ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility ФК16.compliance with ethical princi-ples when working with patients and laboratory animals; ФК17 ability to maintain medical documentation, including electronic forms;

		ФК18. ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources; ФК21 to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying; ФК22 ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches; ФК23 ability to develop and implement scientific and applied projects in the field of health care; ФК24 compliance with ethical principles when working with patients and laboratory animals; ФК25 observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;
ПРН4 (PLO4) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	To reveal and identify leading clinical symptoms and syndromes; according to standard methods, using data from the patient's history, examination of the patient, knowledge about the person, his organs and systems, establish a preliminary diagnosis of the disease	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК5 ability to adapt and act in a new situation; ЗК6. ability to make informed decisions; ЗК8 ability for interpersonal interaction; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ФК1 ability to collect medical information about the patient and analyze clinical data; ФК2 ability to determine the necessary list of laboratory and instrumental studies and evaluate their results; ФК3 ability to establish a preliminary and clinical diagnosis of the disease;

		ФК17 ability to maintain medical documentation, including electronic forms; ФК18. ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources;
ПРН7 (PLO7) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	Prescribe and analyze additional (mandatory and additional) examination methods (laboratory, functional and/or instrumental) for patients with diseases of organs and body systems for differential diagnosis	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК6. ability to make informed decisions; ЗК8 ability for interpersonal interaction; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ФК1 ability to collect medical information about the patient and analyze clinical data; ФК2 ability to determine the necessary list of laboratory and instrumental studies and evaluate their results; ФК3 ability to establish a preliminary and clinical diagnosis of the disease; ФК17 ability to maintain medical documentation, including electronic forms; ФК18 ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources;

ПРН21 (PLO21) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	Find the necessary information in the professional literature and databases of other sources, analyze, evaluate and adequately apply this information	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК5 ability to adapt and act in a new situation; ЗК6 ability to make informed decisions; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ФК17 ability to maintain medical documentation, including electronic forms;
ПРН23 (PLO23) (Зн-1-20, Ум-1-8, К-1-3, АВ-1-3)	Assess the impact of the environment on human health to assess population morbidity	ЗК1ability to abstract thinking, analysis and synthesis; ЗК2 ability to learn and master modern knowledge; ЗК3 ability to apply knowledge in practical situations; ЗК4 knowledge and understanding of the subject field and understanding of professional activity; ЗК11 ability to search, process and analyze information from various sources; ЗК12 determination and perseverance regarding the assigned tasks and assumed duties; ЗК15 ability to preserve and multiply the moral, cultural, scientific values and achievements of society based on an understanding of 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, technology and technologies, to use different types and forms of motor activity for active recreation and leading a healthy lifestyle; ФК11 ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical

		responsibility; ФК21 to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying; ФК22 ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches; ФК23 ability to develop and implement scientific and applied projects in the field of health care; ФК24 compliance with ethical principles when working with patients and laboratory animals; ФК25 observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;
ПРН23 (PLO23)	Communicate freely in the national and English languages both orally and in writing to discuss professional activities, research and projects	ЗК7 ability to work in a team; ЗК8 ability for interpersonal interaction; ЗК9 ability to communicate in a foreign language; ЗК10 ability to use information and communication technologies; ЗК11 ability to search, process and analyze information from various sources; ФК23 ability to develop and implement scientific and applied projects in the field of health care;
ПРН28 (PLO28)	Make effective decisions about health care problems, evaluate the necessary resources, take into account social, economic and ethical consequences	ФК11 ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility ФК16 compliance with ethical princi-ples when working with patients and laboratory animals; ФК18 ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources; ФК21 to convey cleary own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying; ФК22 ability to manage healthcare workflows that are complex,

		unpredictable and require new strategic approaches; ФК23 ability to develop and implement scientific and applied projects in the field of health care; ФК25 observe professional and academic integrity, bear responsibility for the reliability of the obtained scientific results;
Student must **know:**		
Зн-1	Construction, main tasks and systems of pathological measures service, its place in the structure of the health care system of Ukraine.	
Зн-2	Principles and rules of basic documentation - protocol of postmortem pathological examination - autopsy), medical certificate of death, referral for histopathological examination of biopsy and surgical material.	
Зн-3	The structure and logic of the construction of pathological diagnosis, its components parts, variants of the main disease.	
Зн-4	Definition of the underlying disease, complications of the underlying disease, concomitant disease.	
Зн-5	Structure and logic of construction of the combined pathological diagnosis, its constituent parts.	
Зн-6	Definition of the combined basic disease competing the basic disease, background disease.	
Зн-7	Options for formulating a pathological diagnosis in different cases somatic diseases in adults and in cases of perinatal pathology	
Зн-8	The structure and logic of filling out a medical death certificate.	
Зн-9	The structure and logic of filling out a medical certificate of perinatal death.	
Зн-10	Definition of pathomorphosis, iatrogenic (second disease), their place in the diagnosis.	
Зн-11	Principles of comparison of clinical and pathological diagnoses.	
Зн-12	Causes of incorrect clinical diagnoses (objective, subjective).	
Зн-13	Categories of discrepancies of diagnoses: P-1, P-2, P-3.	
Зн-14	Principles of preparation and holding of the meeting of the medical control commission,commissions for the study of fatalities and clinical and anatomical conference.	
Зн-15	Method of biopsy and surgical examination of material, types of biopsies.	
Зн-16	The value of the method of lifelong morphological diagnosis - biopsy	
Зн-17	Methods of fixation and research of material, preparation of microscopic slides.	
Зн-18	Basic and additional methods of histological examination (histochemical, immunomorphological, electron microscopy).	
Зн-19	Rules for collection and referral of material for histological examination.	
Зн-20	Basic ethical and deontological principles in the work of a pathologist	
Student must **be able to:**		
Ум-1	Define the tasks of the pathology bureau, centralized prosecution and pathological department of the central district hospital	
Ум-2	To establish the causes (etiology), mechanisms of development (pathogenesis), morphological bases of these mechanisms (morphogenesis), consequences of diseases, namely recovery and its mechanisms (sanogenesis), complications, and mechanisms death (thanatogenesis).	
Ум-3	Detect diagnostic errors and fill out a medical certificate about death.	

Ум-4	To formulate a pathological diagnosis indicating the main disease rupture, complications, comorbidities and causes of death.
Ум-5	To determine changes in the course and pathomorphology of diseases (pathomorphosis).
Ум-6	To diagnose macro- and microscopic manifestations of developing diseases due to the doctor's activity (iatrogenic).
Ум-7	To interpret the results of different types of histopathological examination biopsy and surgical material
Ум-8	To determine the role of clinical and anatomical conferences, medical and control commissions and commissions for the study of fatalities.
К-1	Ability to solve typical and complex specialized problems and practical problems in the learning process, which involves research and / or innovation and is characterized by complexity and uncertaintyconditions and requirements
К-2	Ability to apply knowledge of pathomorphology in practical situations; ability to choose communication strategy; ability to work in a team; interpersonal skills; ability to communicate in the state language both orally and in writing; ability to communicate in another language; skills of using information and communication technologies; ability to abstract thinking, analysis and synthesis, ability to learn and be modernly trained; ability to evaluate and ensure the quality of work performed; certainty and perseverance in relation to the tasks and responsibilities.
АВ-1	Independently plan and conduct scientific research.
АВ-2	Take personal responsibility for the results of your own professional activities.
АВ-3	Adhere to generally accepted norms of behavior and morality interpersonal relationships.

6. Format and scope of discipline

Format of the Discipline	**Full-time**	
Type of the lesson	Hours	Groups
Lectures	**-**	According to approved schedule
Practical trainings	**8**	-«-
Self-reliant study	**7**	-«-

7. Topics and content of the discipline

Types of educational activities of students according to the curriculum are: a) practical classes, b) self-reliant study of students (SRS).

Practical classes include:

1) students study the organizational structure of the pathology service and orders of the Ministry of Health of Ukraine, which regulate its work, including knowledge of the documentation of the pathology bureau and pathology departments;

2) participation of students in pathological autopsy and registration of the autopsy protocol, knowledge the procedure for completing and issuing a medical death certificate, a perinatal medical certificate death;

3) rules of research of biopsy and operative material, cytological material, boundaries of biopsies, form of pathological and histological conclusion;

4) participation in the clinical and anatomical conference, preparation and holding, the main tasks of medical control commissions and commissions for the study of fatalities;

5) knowledge of deontological and ethical aspects in pathological practice.

In the practical lesson, students solve the problem of test control on the topic of this practical lesson, give answers to standardized questions, knowledge of which is necessary to understand the current topic; demonstrate knowledge and skills in accordance with the topic of the practical lesson.

Classes organization system:

Practical classes are held in the form of interactive communication between teacher and students. In order to prepare for the practical lesson the student must:

1) to study theoretical material using textbooks, manuals and other available sources;

2) perform independent work provided by the curriculum.

Approximate Lesson Plan:

1. Formulation of the purpose and the purposes of employment by the teacher.
2. Interactive discussion of the topic in the form of a discussion, which includes information presented in diagrams and drawings, with a mandatory visit to the autopsy;
3. If possible, autopsy of the deceased followed by a detailed examination of a specific autopsy case, study of the inpatient card, discussion of basic clinical data, filling in the relevant part of the protocol of pathological examination, determining the main and immediate cause of death. Biopsy research.
4. Final control of the lesson material, which includes assessment of independent work, oral answers and test control of theoretical knowledge.

Code of the type of lesson	Topic	Content of study	Code of the result of study	Teacher
PL-1 (practical lesson)	Problem and methods of pathology service and its place in the world system of Public Health. Basic documents used in pathology service. Case history examination. Autopsy. Autopsy examination's report: general requests, main chapters (passport data, final clinical diagnosis, gross view (macroscopical) examination: external and internal views, results of histological examination, final epicrisis). Main principle and rules of autopsy report creation	Determination of the level of knowledge through testing on the MISA platform. Discussion of issues of the topic. Visiting the section hall, performing clinical and situational tasks, final testing. The main tasks of pathology bureau, centralized prosecution and pathological department of the central district hospital. Job requirements for the pathologist and staff of the department. Equipment and facilities of the pathological and anatomical department. Deontological and ethical aspects in pathological practice. Autopsy. Procedure of autopsies in medical and prophylactic institutions. Features of the baby's autopsy. Preservation of organs after autopsy. Examination of organs after autopsy. The main pathoanatomical documentation. Pathological autopsy protocol, its components - pathological and anatomical diagnosis and pathological epicrisis (comparison of clinical and pathological diagnoses, conclusion about the cause of death, defects in diagnosis and treatment).	Зн-1,2,3, Ум-1,2,3, К-1,2,3 АВ-1,2,3	According to approved schedule
PL-2	Final pathomorphological diagnosis, its structure, variants of	Determination of the level of knowledge through	Зн-3,4,5,6,7 Ум-4	

	combined primary disease(s) (paired main diseases, concur main diseases, main disease and a background pathology). Definition of main disease, its complications, secondary (accompanied) diseases. Variants of pathomorphological diagnosis in cases of various pathology of CNS diseases, cardio-vascular system diseases, respiratory system diseases, diseases of GIT and urinary tract and in cases of perinatal pathology. Peculiarities of diagnosis in cases of complicated surgical treatment. Peculiarities of diagnosis in cases of obstetric pathology, pathology of pregnancy, delivery and post-partal period. Main cause of death. Definition. Medical death certificate, its role for statistics. Rules of death certificate's filling in.	testing on the MISA platform. General digging topics. Visiting the section hall, performing clinical and situational tasks, final testing. The structure of pathological diagnosis. The main links of patho and thanatogenetic connection in filling out a medical certificate of death. The concept of the main and immediate cause of death. The structure of pathological and anatomical diagnosis in cases of various diseases and in cases of perinatal pathology. The main links of patho- and thanatogenetic connection in filling out a medical certificate of perinatal death. The concept of the main and immediate cause of death.	К-1,2,3 АВ-1,2,3	According to approved schedule
PL-3	Definition of iatrogenic pathology, its place in a final pathomorphological diagnosis. Definition of pathomorphosis. Types of pathomorphosis. Diagnostical mistakes. Classification of concordance between clinical and pathological diagnosis. Clinical-anatomical conference.	Determination of the level of knowledge through testing on the MISA platform. Discussion of issues of the topic. Visiting the section hall, performing clinical and situational tasks, final testing. Preparation and holding of a meeting of the medical control commission, the commission for the study of fatal consequences and a clinical and anatomical conference. General hospital, departmental and profile clinical and anatomical conferences as a kind of joint activities of pathologists and clinicians and their tasks. Date and procedure for conferences. The nature of the material selected for the conference. The role of the pathologist in conducting clinical and anatomical conferences, medical control commissions and commissions for the study of fatalities.	Зн-7,8,9 Ум-3,4 К-1,2,3 АВ-1,2,3	According to approved schedule

PL-4	Biopsies. Definition. Types of biopsies. Investigation of operation material. Main stages of preparation of histological slides. Methods of fixation and staining. Special histological techniques of slides examination (histochemical methods, immunostaining methods, method of electron microscopy). Concluding session.	Determination of the level of knowledge through testing on the MISA platform. Discussion of issues of the topic. Visiting the section hall, performing clinical and situational tasks, final testing. Rules for sending objects for examination to the pathology department. Processing of material obtained from various organs and pathological formations. Deadline for biopsies. Boundaries of biopsy sampling. The form of the pathologist's response to the biopsy. Shelf life of histological preparations of biopsies.	Зн-15,16, 17,18,19, Ум-3,4 К-1,2,3 АВ-1,2,3	According to approved schedule

SRS-1	Preparation of an autopsy report	Processing of relevant sections autopsy protocol (according to the real case); compilation of pathological Diagnostic. Secondary diseases	Зн-1,3,4, 5,6,7 Ум-1,2,3,4 К-1,2,3 АВ-1,2,3	According to approved schedule
SRS-2	Pathomorphology as a fundamental scientific-theoretical and practical medical discipline. Deontology and ethics in practical work of pathologist	Self-learning	Зн-20, К-1,2,3 АВ-1,2,3	According to approved schedule
SRS-3	Preparation of final pathological diagnosis. Rules and procedure for filling.Work with ICD X revision (1995) according to the pathological diagnosis of autopsy.	Self-learning	Зн-1, 3,4,5,6,7 Ум-1,2,3,4 К-1,2,3 АВ-1,2,3	According to approved schedule
SRS-4	Medical death certificate, it's filling in. The concept of the main and immediate cause of death.	Composition of Death Certificates according to the clinical tasks	Зн-7,8,9 Ум-3,4 К-1,2,3 АВ-1,2,3	According to approved schedule

8.Verification of the Results of Study

Current control

The current control over each practical lesson concerns the specific goals of the topic, as well as during the separate work of the compilers with the student for those topics that the student develops independently and which are not included in the structure of the practical lesson. It is recommended to use the following tools to diagnose the level of preparation of students: tests; solving situational problems; structured written works; structured according to the procedure of control over practical navigation and changes (assessment of knowledge and ability to analyze macro- and microscopic changes of organs and systems at autopsy of the deceased from use, involvement of medical institutions in death, perimeter death, ability to prepare and conduct clinical and anatomical conferences in the form of role play, knowledge of types and principles of biopsy material research).
Criteria for evaluating the current educational activity - during the evaluation of mastering each topic for the current educational activity of the student grades are set on a 4-point (traditional) scale. This takes into account all types of work provided by the curriculum. The student must receive a grade for each topic. Forms of assessment of current educational activities include control of theoretical and practical training.
"Excellent" ("5") - The student correctly answered 90-100% of the A format tests. Correctly, clearly, completely and logically answers the standardized questions of the current topic. Closely connects theory with practice and correctly demonstrates the implementation of practical skills, correctly performing all tasks related to the topic. Freely interprets the position of the topic, and is able to summarize the material.
"Good" ("4") - The student correctly answered 70-89% of the tests of format A. Correctly and essentially answers the questions of the current topic. Demonstrates the performance of practical skills, correctly or with minor errors performed all tasks related to the topic of the lesson. Correctly uses theoretical knowledge to interpret situational problems. Has the necessary practical skills and techniques to perform them in excess of the required minimum.
"Satisfactory" ("3") - The student correctly answered 60-69% of the tests of format A. Incomplete, with the help of additional questions, answers the standardized questions of the current topic. Cannot build a clear, logical answer on their own. During the answer and demonstration of practical skills makes significant mistakes, with significant mistakes completed the task. The student solves only easy situational problems, has only a minimum of necessary practical skills.
Unsatisfactory ("2") - The student answered correctly less than 60% of the tests of format A. Does not know the material of the current topic. Cannot independently build a logical answer to additional questions, does not understand the content of the material. When answering and demonstrating, performing practical skills makes significant, big mistakes.

Criteria for evaluating of independent work: Assessment of independent work of students, which is provided in the topic along with classroom work, is carried out during the current control of the topic on appropriate classroom. Assessment of topics that are submitted only for independent work and are not included in the topics of classroom classes, is controlled during the test in the discipline.

Code of Study Results	Code of the Type of the Lesson	The Way of verification of Study Results	Criteria of Credit
Зн-1-20,Ум-1-8, К-1,2,3АВ-1,2,3	П-1-4,СРС-1-4	See schemes that were described above in the chapter "Current Control"	During the evaluation mastering each topic for the current educational activities of the student grades are set at 4 points (traditional) scale. This takes into account all types of work provided by the curriculum. Student must receive a positive grade on each topic. Forms of assessment of current educational activities include control of theoretical and practical training.

Final Control

Form of the final control according to Learning Plan is – **semesters' credit**

General system of assessment	Participation in the work during the semester – 100%	
Scales of assessments	Traditional 4-score scale, multi-score (200-score) scale, rating scale ECTS	
Conditions for admission to final control	Student attend all practical lessons and received not less than 120 points for current activity	
Type of final control	semesters' credit	Credits' criteria
Credit	All topics submitted for current control must be passed. The average arithmetic mean of the grades given during the semester on a 4-point scale is converted into points on a multi-score (200-score) scale in accordance with the Regulation "Criteria, rules and procedures for evaluating the results of student learning activities"	*Maximum number of points - 200. The minimum number of points - 120*

Determining the number of points that student scored in the discipline.

The grade from the sectional course is based on the results of the current educational activity and is expressed on a two-point scale "passed" or "not passed". To be enrolled, a student must receive a score of at least 60% of the maximum amount of points in the discipline (200 points) for the current academic activity.

The calculation of the number of points is based on the grades obtained by the student on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (CA), rounded to two decimal places. The resulting value is converted into points on a multi-point scale as follows:

$$x = \frac{CA \times 200}{5}$$

Conversion table on a 200-point scale:

4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale
5	**200**	**4.45**	**178**	**3.92**	**157**	**3.37**	**135**
4.97	**199**	**4.42**	**177**	**3.89**	**156**	**3.35**	**134**
4.95	**198**	**4.4**	**176**	**3.87**	**155**	**3.32**	**133**
4.92	**197**	**4.37**	**175**	**3.84**	**154**	**3.3**	**132**
4.9	**196**	**4.35**	**174**	**3.82**	**153**	**3.27**	**131**
4.87	**195**	**4.32**	**173**	**3.79**	**152**	**3.25**	**130**
4.85	**194**	**4.3**	**172**	**3.77**	**151**	**3.22**	**129**
4.82	**193**	**4.27**	**171**	**3.74**	**150**	**3.2**	**128**
4.8	**192**	**4.24**	**170**	**3.72**	**149**	**3.17**	**127**
4.77	**191**	**4.22**	**169**	**3.7**	**148**	**3.15**	**126**
4.75	**190**	**4.19**	**168**	**3.67**	**147**	**3.12**	**125**
4.72	**189**	**4.17**	**167**	**3.65**	**146**	**3.1**	**124**
4.7	**188**	**4.14**	**166**	**3.62**	**145**	**3.07**	**123**
4.67	**187**	**4.12**	**165**	**3.57**	**143**	**3.02**	**121**
4.65	**186**	**4.09**	**164**	**3.55**	**142**	**3**	**120**
4.62	**185**	**4.07**	**163**	**3.52**	**141**	**<3**	**Insufficient**
4.6	**184**	**4.04**	**162**	**3.5**	**140**		
4.57	**183**	**4.02**	**161**	**3.47**	**139**		
4.52	**181**	**3.99**	**160**	**3.45**	**138**		
4.5	**180**	**3.97**	**159**	**3.42**	**137**		
4.47	**179**	**3.94**	**158**	**3.4**	**136**		

9. The Course Policy
Students during the study of the discipline "Autopsy course" must act in educational and professionalsituations, based on the positions of academic integrity and professional ethics, namely - to independently perform educational tasks; correctly refer to sources of information in the case of borrowing ideas, statements, information; be aware of the importance of the norms of academic integrity, evaluate examples of human behavior in accordance with them; evaluate examples of human behavior in accordance with the norms of academic integrity; to give a moral assessment of one's own actions, to correlate them with moral and professional norms.

10. References

Obligatory

1. Robbins&Cotran Pathologic Basis of Disease (Robbins Pathology) 10th Edition by V.Kumar, A.K.Abbas, J.C.Aster. – Canada: Elsevier Health Sciences, 2017 – 952 p.
2. Robbins Basic Pathology (Robbins Pathology) 10th Edition by V.Kumar, A.K.Abbas, J.C.Aster. – Canada: Elsevier Health Sciences, 2017 – 670 p.
3. Robbins and Cotran Atlas of Pathology 3rd Edition by E. Klatt. – Saunders, 2014. – 600 p.

Additional

1. Diagnostic Pathology: Cytopathology 2nd Edition by D.M.Michael, J.Thrall, S.Krishnamuthy. – Elsevier Health Sciences, 2018 – 850 p.
2. S.E.Mills. Histology for Pathologists. – Lippincott Williams and Wilkins, 2012. – 1328 p.
3. Sternberg's Diagnostic Surgical pathology [2-Volume Set] 6th Edition by S.E.Mills, J.K.Greenson, J.L.Hornick, T.A.Longacre, V.E.Reuter. – Lippincott Williams and Wilkins, 2015.
4. Pathology: Implications for the Physical Therapist 4th Edition by C.C.Goodman, K.S.Fuller. – Elsevier Health Sciences, 2015 – 1800 p.
5. Fundamentals of Veterinary Clinical Pathology 2nd Edition by S.L.Stockman, M.A.Scott. – Wiley-Blackwell, 2008. – 908 p.
6. Comprehensive Radiographic Pathology 6th Edition by R.L.Eisenberg, N.M.Johnson. – Elsevier Health Sciences, 2016 – 480 p.
7. BRS Pathology 6th Edition by M.E.Peyton Gupta. – Wolters Kluwer Health, 2020. – 496 p.
8. Molecular Pathology 2nd Edition: The Molecular Basis of Human Diseases by W.Coleman, G.Tsongalis. – Academic Press, 2017. – 802 p.
9. International Classification of Diseases and Related Health Problems (ICD-10). Geneva: WHO, - 1,2 tom, 1995.

Information resources:

1. Order of the Ministry of Health of Ukraine № 81 of 12.05.1992 "On the development and improvement of pathological services in Ukraine"http://www.uazakon.com/documents/date_3z/pg_gmcwxj/index.htm
2. Order of the Ministry of Health of Ukraine № 417 of 19.08.2004 "On the improvement of pediatric pathology service"http://www.moz.gov.ua/ua/portal/dn_20040819_417.html
3. Form № 106 / o "Medical certificate of death" and Form № 106-2 / o "Medical certificate of perinatal death":http://search.ligazakon.ua/l_doc2.nsf/link1/RE13024.html.
4. List of MCD-10 codeshttps://uk.wikipedia.org/wiki/%D0%A1%D0%BF%D0%B8%D1%81%D0%BE%D0%BA_%D0%BA%D0%BE%D0%B4%D1%96%D0%B2_%D0%9C%D0%9A%D0%A5-10
5. Order of the Ministry of Health of Ukraine № 503 dated 29.08.2008 On approval of Methodical recommendations"Coding of morbidity and mortality according to the International Statistical Classification of Diseases and Related Health Problems of the Tenth Revision":http://uazakon.com/documents/date_c0/pg_gbcrwc/index.htm
5. Form № 013 / o "Protocol of pathological examination":http://zakon4.rada.gov.ua/laws/show/z0667-12#n3
6. Form № 014 / o "Referral for pathological examination": http://zakon4.rada.gov.ua/laws/show/z0993-13#n3

11. Equipment, logistics and software of the discipline
Histological laboratories, section halls, microscopes, collections of macro- and micropreparations (educational collection and collection of the Museum of Human Diseases); tables; photo; multimedia presentations; methodical developments for teachers; methodical instructions for practical classes for students; methodicalmaterials that provide independent work of students; MISA training platform software.
Lectures and practical classes are taken place on the basis of the department, at the adress: 790010, Lviv, Pekarska str. 52 Resposible teacher for educational process at the Department: Associate Professor, MD PhD, M.I.Servetnyk, doctorservetnyk@gmail.com Head of students' scientific group: Prof. L.I.Volos, liliya.volos@gmail.com

Sylabus compilers

Servetnyk M.I., MD PhD, Associate Professor, Hrytsyna I.V., Associate Professor MD PhD

Head of the Department

Pospishil Y.O., MD DMSci, Professor