

**SYLLABUS OF THE EDUCATIONAL COMPONENT
CLINICAL PATHOLOGY**

Specialty: **221 “Dentistry”**

Educational and professional program: **Dentistry**

Component code in the educational program: **EC37**

Level of higher education: **second (master's)**

Form of education: **full-time (day)**

Year of study: **3**

Semester(s): **VI (spring)**

Type of educational component: **elective**

Academic year: **2026-2027**

Volume: **3 ECTS credits (90 hours)**

Classes: **practical classes, consultations**

Final assessment: **credit**

Prerequisites: **knowledge of human anatomy and physiology, histology, cytology, embryology and genetics, microbiology, virology and immunology, biological chemistry, medical biology and medical physics, pathological anatomy, and related educational components of forensic medicine.**

Department/division: **Department of Pathological Anatomy**, 4 Nauky Ave., main building, 3rd floor

Head of the educational component: Prof. **V.D. Markovskiy**, email: vd.markovskiy@kntmu.edu.ua

1. Page of the educational component in the Distance Learning System of Kharkiv National Medical University (Moodle): <https://distance.kntmu.edu.ua/course/view.php?id=4863>

DESCRIPTION OF THE EDUCATIONAL COMPONENT

Clinical pathology is an educational component that reveals the basic principles of the role and place of a pathologist in the healthcare system, the organization and purpose of the pathologist service, lifetime pathomorphological diagnosis, skills in analyzing and preventing diagnostic and treatment mistakes, as well as issuing a medical death certificate. It highlights the professional responsibilities of a pathologist, the concepts of nosology, primary disease, its complications, and causes of death. It reveals the approach to the autopsy of both adults and infants with examples of writing an autopsy protocol, a clinical and pathological autopsy epikrizis, and the registration of a death certificate. It provides recommendations on the practical work of a pathologist.

COURSE OBJECTIVE: to teach students the method of clinical and anatomical analysis of biopsy, surgical, and autopsy material, as well as the principles of diagnosis, autopsy techniques, and the preparation of pathological anatomy documentation.

LEARNING RESULTS:

– evaluate information regarding diagnosis in a healthcare facility or its department, using knowledge of the structural basis of diseases, based on autopsy results and methods of lifetime diagnosis of diseases.

CONTENTS OF THE EDUCATIONAL COMPONENT**List of lecture topics (0 hours):****List of practical class topics (20 hours):**

1. Tasks, methods, and organization of the pathological anatomy service, its place in the Ukrainian healthcare system. History of the development of the pathological anatomy service in Ukraine. Basic principles of organizing the pathological anatomy service in medical and preventive institutions. Basic pathological anatomy documentation (orders, regulations, instructions). Mandatory forms of medical documentation in a pathological anatomy institution (department).
2. Method of examination of biopsy, surgical material, and specimens. Rules for examination and procedure for documentation of morphological material examination. Participation in macroscopic examination, cutting, and marking of materials for lifetime morphological diagnosis.

3. Analysis and evaluation of the results of morphological examination of biopsies, surgical materials, and specimens. The role of morphological studies in the complex examination and treatment of patients.
4. Pathological autopsy of a dead person (adult, newborn, stillborn, or fetus). The importance of autopsy as a reliable source of information about the causes of human death and mortality, the quality of diagnosis and treatment in medical and preventive institutions. The procedure for conducting an autopsy and preparing pathological documentation related to it. Rules for completing a “Medical Certificate of Death” and a “Medical Certificate of Perinatal Death.” The International Classification of Diseases (ICD) is a regulatory document that ensures the uniformity of methodological approaches and international verification of materials. ICD 10th and 11th revisions. Working with the International Classification of Diseases, 10th revision (1995), according to the pathological diagnosis of the autopsy. Procedure for completing the pathological autopsy report.
5. Principles of formulating clinical and pathological diagnoses. Compiling a pathological diagnosis. Clinical and morphological analysis of the materials of the pathological autopsy of the cadaver in terms of assessing the quality of ante-mortem diagnosis and treatment (pathological examination). Comparison of clinical and pathological diagnoses. Categories of diagnostic inconsistencies. Writing a pathological epicrisis.
6. Features of the course and variability of diseases. Pathomorphosis of diseases (natural and induced). Pathology of diagnostic and therapeutic procedures (iatrogenesis).
7. Preparation and conduct of a meeting of the medical control commission, the commission for the study of fatal outcomes, and a clinical-anatomical conference. Deontological and ethical aspects in pathological anatomy practice.
8. Final class. Credit assessment.

List of topics for independent study (70 hours)

1. Tasks, methods, and organization of the pathological anatomy service, its place in the Ukrainian healthcare system. History of the development of the pathological anatomy service in Ukraine. Basic principles of organizing the pathological anatomy service in medical and preventive institutions. Basic pathological anatomy documentation (orders, regulations, instructions). Mandatory forms of medical documentation in a pathological anatomy institution (department).
2. Method of examination of biopsy, surgical material, and specimens. Rules for examination and procedure for documentation of morphological material examination.
3. Rules for taking and processing material obtained from various organs and pathological formations
4. Analysis and evaluation of the results of morphological examination of biopsies, surgical materials, and specimens. The role of morphological studies in the complex examination and treatment of patients.
5. Pathological autopsy of a deceased person (adult, newborn, stillborn, or fetus). The importance of autopsy as a reliable source of information about the causes of human death and mortality, the quality of diagnosis and treatment in medical and preventive institutions. The procedure for conducting an autopsy and preparing pathological documentation related to it. Rules for completing a “Medical Certificate of Death” and a “Medical Certificate of Perinatal Death.” The International Classification of Diseases (ICD) is a regulatory document that ensures the uniformity of methodological approaches and international verification of materials. ICD 10th and 11th revisions. Working with the International Classification of Diseases, 10th Revision (1995), according to the pathological diagnosis of the autopsy.
6. Procedure for completing the pathological autopsy report. Procedure for ordering and performing pathological autopsies. General principles. Procedure for performing autopsies on persons who died in a hospital. Procedure for performing autopsies on persons who died outside a hospital. Procedure for autopsies on newborns and stillborns, and children's corpses.

7. Methods of pathological autopsy of a corpse. Features of autopsy of a newborn, stillborn, or fetus.
8. Principles of formulating clinical and pathological diagnoses. Formulation of a pathological diagnosis. Clinical and morphological analysis of materials from a pathological autopsy of a corpse in terms of assessing the quality of ante-mortem diagnosis and treatment (pathological examination). Comparison of clinical and pathological diagnoses. Categories of diagnostic inconsistencies. Writing a pathological epicrisis.
9. Features of the course and variability of diseases. Pathomorphosis of diseases (natural and induced). Pathology of diagnostic and therapeutic procedures (iatrogenesis).
10. Preparation and conduct of a meeting of the medical control commission, the commission for the study of fatal outcomes, and a clinical-anatomical conference. Deontological and ethical aspects in pathological anatomy practice.
11. Pathomorphological basis of resuscitation and intensive care, their connection with forensic medical assessment of changes in organs and tissues. Procedure for reviewing medical history.

Independent work by students is aimed at deepening and consolidating the theoretical knowledge acquired during classroom training and contributes to the formation of professional competencies. The results of independent work are subject to control and are included in the final assessment of knowledge.

Consultations: online, by prior registration on the course page in the Distance Learning System.

Teaching methods: exercises and practical tasks, solving situational tasks and case studies.

ASSESSMENT

Current educational activities (CEA). The assessment of the academic performance of students is carried out in accordance with the Instructions for assessing the educational activities of higher education students at KhNMU (<https://knmu.edu.ua/documents/normatyvni-dokumenty-navchalnogo-proczesu/>). The grade for a practical or final class ranges from 2 to 5 points. Submitting tasks late for insignificant reasons will result in a lower grade in accordance with the percentage of the delay in relation to the time of completion of the task. Tasks are checked within 24 hours. Grades are entered into an electronic journal. Unsatisfactory grades are retaken in accordance with the Regulations on the procedure for retaking academic classes by students of KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).

At the end of the semester, the average grade for the semester is converted into a multi-point grade (120–200 points) in accordance with Table 2 of the Assessment Instructions (see above). The average arithmetic mean of the CEA for both semesters constitutes **the overall academic performance (OAP)**.

Individual assignments (IA) are graded on a scale of 10 points.

Final assessment: the candidate is graded according to the traditional 4-point system: “excellent”, “good”, ‘satisfactory’ and “unsatisfactory”.

Grade for the discipline (GD). $GD = \text{Arithmetic mean (CEA + FA)}$.

Appellations of final assessment results are conducted in accordance with the procedure established by KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_apel_kontrol.pdf).

EDUCATIONAL COMPONENT POLICIES

Recommendations for coursework: actively participate in all forms of classwork, devote 1-2 hours daily to independent work and preparation for classes, ask questions during classes, attend consultations, submit assignments on time, and complete all forms of assessment.

Class attendance. Attendance at practical classes is obligatory. The dress code for offline classes is a white medical coat. If you are more than 5 minutes late, you may not be admitted to the class. Missed classes are made up in accordance with the Regulations on the procedure for making up classes by

students of the Kharkiv National Medical University (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).

Academic integrity. KNMU has a zero-tolerance policy toward academic misconduct. Any violations of the principles of academic integrity will result in liability in accordance with the procedure established at KNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_ad-1.pdf).

The use of electronic gadgets and artificial intelligence tools is permitted only with the permission of the instructor.

Policy regarding individuals with special educational needs. Applicants with special educational needs should contact the instructor to develop an individual educational trajectory.

Instructor response time: 24 hours.

Technical requirements for the course:

- access to a computer, laptop, tablet, or smartphone
- a corporate Google account with your own photo
- skills in working with Google Workspace (Google Meet, Docs, Sheets, Slides, Forms) та Moodle

Technical support: ACM (ev.shevtsov@knmu.edu.ua), Google (tehotdelknmu@gmail.com), Moodle (al.korol@knmu.edu.ua)

RECOMMENDED REFERENCES

1. Pathomorphology: National Textbook / V.D. Markovsky, V.O. Tumansky, I.V. Sorokina et al., edited by V.D. Markovsky, V.O. Tumansky. — Kyiv: VSV “Medicine.” 2015 — 936 p., color edition. ISBN 978-617-505-450-5.
2. Pathomorphology = Pathomorphology: Atlas = Atlas (in Ukrainian and English) / [Bagriy M. M., Bodnar L. P., Bodnar P. Ya. et al.; edited by: Bodnar Ya. Ya., Bagriy M. M., Zerbino D. D., Romanyuk A. M., Voloshin V. D.]. – Vinnytsia: Nova Knyha, 2021. – 648 p. ISBN 978-966-382-918-0
4. Kumar V. Robbins' Principles of Pathology: 10th English edition: in 2 volumes / Viney Kumar, Abdul K. Abbas, John K. Aster; scientific editors: Prof. I. Sorokina, S. Gychka, I. Davydenko. – Kyiv: VSV “Medicine”, 2019. – XII, 420 p.
5. 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.).
6. Histology for Pathologists/ ad. Stacey E. Mills – Philadelphia – Baltimore - New York – London – 2020 – 1320P.
7. International Statistical Classification of Diseases and Related Health Problems. WHO, Geneva, 1998. Volumes 1, 2, and 3.
8. ORDER of the Ministry of Health of Ukraine dated 06.09.2021 No. 1877 “On Approval of the Procedure for Performing Pathological Autopsies.”

Head of the Department of Pathological Anatomy

Volodymyr MARKOVSKIY