



**CD 8.5.1 DISCIPLINE SYLLABUS
FOR UNIVERSITY STUDIES**

Edition: 10

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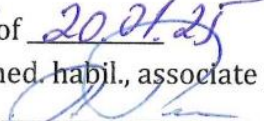
FACULTY MEDICINE NO.2

STUDY PROGRAM 0912.1 MEDICINE

DEPARTMENT/CHAIR PATHOLOGY

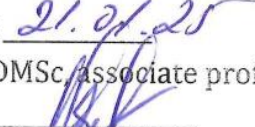
APPROVED

at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum in Medicine

Minutes No. 4 of 20.04.25
Chairman, dr. med. habil., associate professor
Pădure Andrei 

APPROVED

at the Council meeting of the Faculty Medicine No.2

Minutes No. 4 of 21.04.25
Dean of Faculty, DMSc, associate professor
Bețiu Mircea 

APPROVED

approved at the meeting of the chair Pathology

Minutes No.6 of 01.03.2024

Head of chair, dr. med. habil., associate professor

Melnic Eugen 

SYLLABUS

DISCIPLINE CLINICAL PATHOMORPHOLOGY

Integrated studies

Type of course: **Optional discipline**

Curriculum developed by the team of authors:

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Chisinau, 2024



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I. INTRODUCTION

- General presentation of the discipline: place and role of the discipline in the formation of the specific competences of the professional / specialty training program

The clinical pathomorphology discipline is an important component in the field of preclinical and clinical education, with the major objective of studying the material substrate of the disease, making up the subject of nosology. The syllabus consists of courses and practical hours organized with the involvement of students to cover all areas of basic medical knowledge in pathomorphology and clinical pathomorphology. Student performance in courses and practical hours is taken into account when designing and updating the curriculum. There is sufficient flexibility in selective programs that also offers the opportunity to better develop clinical skills in selected pathological areas, and to intensely explore interests for specific research. A major goal of the program is to create a positive learning environment so that there are both appropriate opportunities for in-depth experience in all aspects of pathology and the opportunity to enhance that experience through reading and study.

- Mission of the curriculum (aim) in professional training

The mission of this syllabus is designed to provide training in all major areas of pathomorphology and / or clinical pathomorphology, while remaining flexible enough to accommodate private and academic practice or other fields. Rotations in the discipline of pathomorphology and clinical pathomorphology are included in the syllabus to allow the integration of both components. The discipline of clinical pathomorphology is taught in the seventh semester. At the end of module, students take the passing exam. The general objectives are as follows:

- To provide training in all compartments of pathomorphology and / or clinical pathomorphology that will provide the necessary conditions for the qualification exam.
 - To provide the flexibility in training that will cover the needs of students in their careers as future leaders in pathological practice, education and research.
 - To ensure a comprehensive syllabus that will include all areas of pathomorphology and / or clinical pathomorphology with clear goals and objectives that will guide students through an intensive training process, so students will become competent in patient care, by possessing medical knowledge, skills communication, professionalism with the application of practice-based learning and system-based practice.
 - To ensure an educational experience through didactic teaching, teaching experiences and individual study, through a variety of compulsory and elective rotations, conferences, practical hours.
 - To provide appropriate mentoring and role models for all students and for all future career options.
 - The department will strive to provide a work environment that emphasizes safety, stress reduction, collegiality and professionalism.
- Language (s) of the discipline: Romanian, russian, english, french.

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- Beneficiaries: students of the IIIrd year, faculty medicine.

II. MANAGEMENT OF THE DISCIPLINE

Code of discipline		S.07.A.065.4	
Name of the discipline		Clinical pathomorphology	
Person(s) in charge of the discipline		Melnic Eugen	
Year	IV	Semester/Semesters	VII
Total number of hours, including:			30
Lectures	10	Practical/laboratory hours	10
Seminars	-	Self-training	10
Form of assessment	E	Number of credits	1

III. TRAINING AIMS WITHIN THE DISCIPLINE

At the end of the discipline study the student will be able to:

- **at the level of knowledge and understanding:**
 - ✓ The acquisition of a glossary specific to pathomorphology and clinical pathomorphology, necessary in the dialogue with the representatives of the different medical specialties;
 - ✓ Interpretation and description of macroscopic surgical specimens.
 - ✓ Interpretation and description of non-surgical macroscopic specimens.
 - ✓ Possess sufficient clinical knowledge to examine, interpret and ensure clinico-pathological correlations for sections and specimens prepared for microscopic visualization, including FNA, frozen sections, fixation, routine histochemistry, and immunohistochemistry.
 - ✓ Formulation of an appropriate differential diagnosis of lesions present in a given patient;
 - ✓ Understanding the role of the pathological examination in establishing the diagnosis;
 - ✓ Determining a correct diagnosis using clinical and anatomopathological data;
 - ✓ Access to information and assistance in interpreting specimens.
- **at the application level:**
 - ✓ To develop the ability to solve complex clinical problems by applying a solid knowledge of the basics without having to rely on a specific model.
 - ✓ To be able to adjust a microscope with ergonomic safety and use it efficiently.
 - ✓ To be able to microscopically recognize the structure of the tissue in the norm and pathology, depending on the level of formation reached.
 - ✓ To be able to meet internationally established reporting standards.
 - ✓ To know when to use special techniques.
 - ✓ To be able to recognize the histological characteristics of histochemical and immunohistochemical staining in normal and pathological tissues.



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- **at the integration level:**
 - ✓ To understand the importance of integrating clinical and pathological outcomes for correct diagnosis;
 - ✓ To understand the importance of the correctness of the application form and the correspondence of the specimens / samples, as well as the requirement to identify and resolve any discrepancy errors;
 - ✓ To understand the need for attention to detail during surgical reporting and the need to correlate it with the clinical description;
 - ✓ To demonstrate the importance of surgical pathology;
 - ✓ To understand cost issues when it is considered necessary to use special techniques;
 - ✓ To be able to learn, which will contribute to the management of the career path.

IV. PROVISIONAL TERMS AND CONDITIONS

- Knowledge of the language of teaching;
- Competences confirmed in the disciplines of previous years of studies;
- Digital competences (use of the internet, document processing, electronic tables and presentations, use of graphics programs);
- Ability to communicate and team work;
- Qualities - tolerance, compassion, autonomy.

V. THEMES AND ESTIMATE ALLOCATION OF HOURS

Lectures, practical hours/ laboratory hours/seminars and self-training

No. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self-training
1.	Introduction to clinical pathomorphology. The structure, aims and objectives of the pathological service. Methods of investigation in histopathology and cytopathology: biopsy, smears, surgical pathology. Staining methods: routine (H-E), histochemistry, immunohistochemistry and molecular markers.	1	1	1
2.	General aspects and the importance of the cytopathological service. Pap smear, screening program and its role in diagnosing pretumoral processes. Bethesda classification.	1	1	1
3.	Pathology of the cardiovascular system. Investigation methods. Current classification of myocardial infarction and cardiomyopathies. Heart tumors.	1	1	1
4.	Respiratory system pathology. The role of biopsy in the diagnosis of lung pathology. Cytology of broncho-alveolar lavage. Morphological characteristics of pneumonia, bacterioscopic examination. Interstitial pneumonia. Acute respiratory distress syndrome. Chronic obstructive pulmonary disease. Pulmonary hypertension. Lung cancer. The structure of the diagnosis in the pathology of the respiratory system.	1	1	1



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No. d/o	THEME	Number of hours		
		Lectur es	Practical hours	Self-training
5.	Gynecological pathology. The role of the screening program in cervical cancer prophylaxis, early detection and evidence. Classification of cervical cancer, morphology and benign mimics - as an important factor in the diagnosis of cancer. Uterine and ovarian tumors: morphology, staging and grading of tumors according to the latest classifications and their importance in patient records. Test No. 1: topics 1-5.	1	1	1
6.	Surgical pathology of the gastrointestinal system. The importance of endoscopic investigations and their correct orientation in the primary diagnosis of tumors. Pathology of the liver and pancreas. The structure of the diagnosis in gastrointestinal and hepato-pancreatic pathology.	1	1	1
7.	Central nervous system pathology. Cerebrovascular pathology. Classification of brain tumors. Pathology, diagnosis and evidence of patients with brain tumors. Infantile brain tumors.	1	1	1
8.	Pathology of the renal and male genital system. Clinical manifestations of kidney diseases: congenital anomalies, glomerular, tubular, interstitial and blood vessel pathology, polycystic kidney disease, classification of kidney tumors.	1	1	1
9.	Pathological characteristics of pregnancy. Gestational and placental pathology. Pathology of the mammary gland, the last classification of tumors.	1	1	1
10.	Iatrogeny. Definition, classification. The structure of the pathological diagnosis. International classification of diseases. Test No. 2: topics 6-10.	1	1	1
Total		10	10	10

VI. PRACTICAL TOOLS PURCHASED AT THE END OF THE COURSE

Mandatory essential practical tools are:

- Acquisition and correct use of specific medical terminology in the field of clinical pathomorphology;
- Developing the ability to critically evaluate and assimilate data from the literature and include it in practice to facilitate evidence-based assistance
- Application of differential diagnosis between different types of lesions depending on the study method;
- Learning the technique of collecting samples for histopathological examination;
- Awareness of the role of establishing the anatomopathological diagnosis following the



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- intravital, post-mortem examination as well as for the research activities;
- Understanding the need to correlate the anatomopathological diagnosis with other methods of investigation (ultrasound, radiological, microbiological examination, etc.), as the diagnosis is ultimately the result of teamwork.
 - Awareness of the need for permanent documentation and continuous practice of mastered techniques.

VII. OBJECTIVES AND CONTENT UNITS

Objective	Content units
Theme (chapter) 1. Introduction to clinical pathomorphology	
<ul style="list-style-type: none">• To know the content of the death certificate;• To know the main methods of performing the autopsy and their essence;• To know the basic documents that are sent to the pathology department.	<ol style="list-style-type: none">1. The structure, aims and objectives of the pathological service;2. Methods of investigation in histopathology and cytopathology: biopsy, smears, surgical pathology;3. Staining methods: routine (H-E), histochemistry, immunohistochemistry and molecular markers.
Theme (chapter) 2. General aspects and the importance of the cytopathological service	
<ul style="list-style-type: none">• To be able to define and understand the importance of the screening program;• To identify the risk groups and the evidence of patients with various precancerous lesions;• To interpret and to understand various types of pretumor lesions.	<ol style="list-style-type: none">1. The importance of the health screening program;2. Pap smear, screening program and its role in diagnosing of pretumor processes;3. Bethesda classification. Accuracy of assessment and date of collection.
Theme (chapter) 3. Pathology of the cardiovascular system	
<ul style="list-style-type: none">• To describe the pathogenesis, pathophysiology, and symptoms of peripheral vascular disease and coronary atherosclerosis;• To know the major pathological lesions of atherosclerosis and to list three major complications;• To describe the macro and microscopic features and complications of myocardial infarction and their correlation with localization and clinical symptoms;• To know the pathogenesis of rheumatic heart disease and to describe the typical cardiac lesions for rheumatic fever;	<ol style="list-style-type: none">1. Methods of investigation in cardiac pathology;2. Current classification of myocardial infarction and cardiomyopathies; Correlation between clinical and pathological data;3. The biological behavior of heart tumors.



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Objective	Content units
<ul style="list-style-type: none">• To know the pathogenesis, pathophysiology and pathological changes in hypertension;• To identify common types of heart valve disease such as aortic stenosis, mitral regurgitation and (rheumatic) mitral stenosis;• To identify the most common types of infectious endocarditis and to describe the macro and microscopic features.	
Theme (chapter) 4. Respiratory system pathology	
<ul style="list-style-type: none">• To list the major chronic obstructive pulmonary disease;• To define chronic bronchitis and describe the typical lesions and complications of this disease;• To define emphysema, pathological changes and clinical symptoms;• To define bronchiectasis, causes, pathological changes and clinical symptoms;• To define the cor pulmonale, pathological changes and clinical symptoms;• To compare lobar pneumonia and bronchopneumonia;• To compare bacterial and viral pneumonia;• To describe the typical lesions, macroscopic appearance and histological features associated with various types of lung cancer;• To define sarcoidosis and pathological changes.	<ol style="list-style-type: none">1. The role of biopsy in the diagnosis of lung pathology;2. Cytology of broncho-alveolar lavage;3. Morphological characteristics of pneumonia, bacterioscopic examination;4. Interstitial pneumonia. Acute respiratory distress syndrome. Chronic obstructive pulmonary disease. Pulmonary hypertension. Lung cancer;5. The structure of the diagnosis in the pathology of the respiratory system.
Theme (chapter) 5. Gynecological pathology	
<ul style="list-style-type: none">• To know the classification and subclassification of ovarian tumors.• To identify the histological types of cervical carcinoma and to know the microscopic characteristics of cervical carcinoma;• To explain the concept of intraepithelial cervical neoplasia (CIN);• To define endometriosis and adenomyosis;• To know the histological types of cervical carcinoma;• To know the notion of endometrial carcinoma, its clinical presentation and its morphology;• To describe the morphology of leiomyomas and leiomyosarcomas and their clinical effects.	<ol style="list-style-type: none">1. The role of the screening program in cervical cancer prophylaxis, early detection and evidence;2. Classification of cervical cancer, morphology and benign mimics - as an important factor in the diagnosis of cancer;3. Uterine and ovarian tumors: morphology, staging and grading of tumors according to the latest classifications and their importance in patient records.
Theme (chapter) 6. Surgical pathology of the gastrointestinal system	
<ul style="list-style-type: none">• To define reflux esophagitis in terms of its clinical significance, symptoms, histological changes and possible consequences;	<ol style="list-style-type: none">1. The importance of endoscopic investigations and their correct orientation in the primary



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Objective	Content units
<ul style="list-style-type: none">• To know the notion of esophageal carcinoma in terms of etiology, clinical presentation, prognosis, as well as macro- and microscopic characteristics;• To define acute and chronic gastritis and to understand the role of H. pylori in gastrointestinal diseases;• To define peptic ulcer and to know the locations, the macro- and microscopic characteristics and the complications of this disease;• To know the macro- and microscopic characteristics in gastric carcinoma, staging, complications, causes of death and prognosis;• To know the notion of colon adenocarcinoma including the most common location, macroscopic appearance, histopathology, clinical presentation, biological behavior and staging;• To describe liver pathological changes induced by liver viruses;• To define cirrhosis, causes, to describe macro- and microscopic features, clinical manifestations and laboratory data;• To know three major types of primary liver tumors and be familiar with their etiology and pathogenesis.	<ul style="list-style-type: none">1. diagnosis of tumors;2. Pathology of the liver and pancreas;3. The structure of the diagnosis in gastrointestinal and hepato-pancreatic pathology;4. Liver transplantation: indications, compatibility, rejection5. Tumors of the gastrointestinal tract.
Theme (chapter) 7. Central nervous system pathology	
<ul style="list-style-type: none">• To know the main neuropathological characteristics of bacterial, viral and chronic meningitis;• To describe the main neuropathological features of purulent encephalitis;• To describe the main features of glial and neuronal tumors;	<ul style="list-style-type: none">1. Cerebrovascular pathology. Causes, lethal complications.2. Classification of brain tumors. pathology, diagnosis and evidence of patients with brain tumors.3. Infantile brain tumors. Incidence, complications, prognosis.
Theme (chapter) 8. Pathology of the renal and male genital system	
<ul style="list-style-type: none">• To know the pathogenesis, clinical evolution and complications of post-streptococcal glomerulonephritis and rapidly progressive glomerulonephritis;• To know the main causes of nephrotic syndrome.• To recognize the most important macro- and microscopic features of different types of acute glomerulonephritis;• To know the clinical symptoms and pathological changes of acute and chronic pyelonephritis;• To compare the morphological picture of	<ul style="list-style-type: none">1. Clinical manifestations of kidney disease: congenital anomalies, glomerular pathology, tubules, interstitium and blood vessels;2. Polycystic kidney disease. Types, incidence, complications;3. Classification, types, causes and complications of prostate testicular and kidney tumors.



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Objective	Content units
<p>glomerulonephritis and pyelonephritis;</p> <ul style="list-style-type: none">• To describe the pathological features and clinical manifestations of renal cell carcinoma, Wilms tumor, and urothelial carcinoma of the renal pelvis and urinary bladder;• To know the causes and complications of benign prostatic hyperplasia;• To know the incidence, causes, histopathological picture and peculiarities of metastases of prostate carcinoma;• To know the incidence, causes, histopathological picture and the peculiarities of metastases of malignant testicular tumors.	
Theme (chapter) 9. Pathological characteristics of pregnancy. Gestational and placental pathology. Pathology of the mammary gland.	
<ul style="list-style-type: none">• Be able to perform macro and microscopic examination of products of conception (POC);• To understand the clinical context of POC diagnosis and the importance of diagnosis (eg negative POC, gestational trophoblastic disease) for patient care;• To be able to perform macro and microscopic examination of the placenta, understand the importance of diagnosis (marked acute chorioamnionitis with vasculitis, diffuse villitis) for patient care;• To describe gestational trophoblastic disease, with particular emphasis on hydatidiform molar and choriocarcinoma;• To name the most common benign breast tumor and to describe its macroscopic appearance, histological features and incidence by age;• To describe the macroscopic and microscopic pathological changes characteristic of breast cancer and to list the clinical and pathological manifestations that have the most significant prognostic value in breast cancer.	<ol style="list-style-type: none">1. Hydatidiform mole, invasive mole, choriocarcinoma, ovarian tumors, breast cancer. Causes, histopathological picture, complications;2. Gestational and placental pathology. Pathology of the mammary gland. Causes, histopathological picture, complications;3. Diagnosis of gestational trophoblastic disease (histopathology, flow cytometry);4. Diagnosis of products of conception, interpretation of techniques for chromosomal studies in miscarriages (FISH and cytogenetics);5. Macro and microscopic types of frequent placental lesions, their clinical importance;6. Forensic aspects of placental examination.
Theme (chapter) 10. Iatrogeny	
<ul style="list-style-type: none">• To define iatrogenic disease;• To understand the difference between iatrogenic disease and medical error;• To identify the iatrogenic complications associated with medical care in the emergency sector of public hospitals;	<ol style="list-style-type: none">1. The history of the notion of iatrogenic disease;2. Categories and classification of iatrogenies;3. Iatrogenesis and iatrogenic artifact;

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Objective	Content units
<ul style="list-style-type: none"> To understand the importance of providing education for nurses that is considered a basis for effective patient care. 	<ul style="list-style-type: none"> 4. Iatrogenic accidents; 5. The contemporary vision of iatrogenic diseases; 6. Avoidable causes of iatrogenicity; 7. Iatrogenic complications in surgical practice.

VIII. PROFESSIONAL (SPECIFIC (SC)) AND TRANSVERSAL (TC) COMPETENCES AND STUDY FINALITIES

✓ **Professional (specific) competences (PC)**

- PC1. The responsible execution of professional tasks with the application of the values and norms of professional ethics, as well as the provisions of the legislation in force;
- PC2. Adequate knowledge of the sciences about the structure of the body, physiological functions and behavior of the human body in various physiological and pathological conditions, as well as the relationships between health, physical and social environment;
- PC3. Solving clinical situations by developing the diagnosis, treatment and rehabilitation plan in various pathological situations and selecting the appropriate therapeutic procedures for them, including the provision of emergency medical assistance;
- PC4. Promoting a healthy lifestyle, applying preventive measures and self-care;
- PC5. Interdisciplinary integration of the doctor's work in the team with the efficient use of all resources.;
- PC6. Conducting scientific research in the field of health and other branches of science.

✓ **Transversal competences (TC)**

- TC1. Autonomy and responsibility in the activity.

✓ **Study finalities**

- To demonstrate skills in correlating morphological lesions with clinical data;
- To know the etiology, pathogenesis and epidemiology of diseases;
- To identify the specific characteristics of the clinical and laboratory examination of patients;
- To identify the morphological characteristics of diseases;
- To define diagnostic criteria and be able to perform differential diagnosis;
- Establish diagnosis and provide medical care;
- To master the methods of investigation in clinical pathomorphology.

IX. STUDENT'S SELF-TRAINING




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No.	Expected product	Implementation strategies	Assessment criteria	Implementation terms
1.	Work with information sources	Careful reading of lecture or the textbook material on the theme. Reading the questions on the theme, that requires a reflection on the subject. Refer to the list of additional information sources on the theme. Choose the source of additional information on the theme. Reading of the text entirely, carefully and writing down the essential content. Making generalizations and conclusions related to the importance of the theme/subject.	The ability to extract the essential; skills to interpret; the volume of work.	By the end of the module
2.	Application of various learning techniques		The volume of work, the degree of penetration into the essence of various themes, the level of scientific argumentation, quality of conclusions, elements of creativity, demonstration understanding the problem, formation of personal attitude.	By the end of the module
3.	Working with materials online	Self-assessment online, study of materials online on the WEBSITE of the department, expressing one's own opinions through the forum and chat.	The number and duration of entries on the SITE, the results of self-assessment.	By the end of the module
4.	Preparation and presentation of research	Choice of the theme for research, making plan the research plan, provision of the terms of realization. Setting PowerPoint project / theme components,	Volume of work, the degree of penetration into the essence of the theme of the project, the level of scientific	By the end of the module

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	purpose, results, conclusions, practical applications, bibliography. Reviews of colleges. Reviews of professors and lecturers.	argumentation, the quality of conclusions, elements of creativity, personal attitude formation, coherence of exposure and scientific correctness, graphic presentation, presentation method.	

X. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

✓ Teaching and learning methods used

The teaching of the clinical pathomorphology discipline uses different methods and didactic procedures designed to achieve and effectively realize the objectives of the didactic process. In the theoretical lessons, with the help of traditional methods (lesson-exposure, lesson-conversation, synthesis lesson) are used and modern methods (lesson-debate, lesson-conference, problem lesson). Practical work uses forms of individual activity, in group, situation issues. In order to acquire deeper materials, different semiotic systems (scientific, graphic and computerized language) and teaching materials (tables, schemes, micro photographers) are used. Courses and extracurricular activities include Communication Technologies - PowerPoint presentations, on-line lessons.

Recommended learning methods

- **Observation** - Identification of characteristic elements in different pathologies, comparison of normal and pathological structures.
- **Analysis** - Imaginary decomposition of the whole into component parts. Highlighting the essential elements. Studying each element as part of the whole.
- **Schema / figure analysis** - Selection of required information. Recognition based on knowledge and information selected structures indicated in the scheme, drawing. Analysis of the functions / role of recognized structures.
- **Comparison** - Analysis of the first object / process in a group and the determination of its essential features. Analysis of the second object / process and the determination of its essential features. Comparing objects / processes and highlighting common features. Comparing objects / processes and determining differences. Setting criteria for differentiation, which underlies the differential morphological diagnosis between several pathological processes. Formulation of conclusions.



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- **Classification** - Identify the structures / processes needed to be classified. Determining the criteria on which classification is to be made. Distribution of structures / processes by groups according to established criteria.
 - **Schematic drawing** - Selection of elements to be included in the scheme. Playing the elements selected by different symbols / colors and indicating their relationships. Wording of an appropriate title and legend of the symbols used.
 - **Modeling** - Identify and select the elements needed to model the phenomenon. The imaging (graphical, schematic) of the studied phenomenon. Realizing the phenomenon using the developed model. Formulation of conclusions, based on arguments or findings.
 - **Experiment** - Formulation of a hypothesis, based on known facts, on the process / phenomenon studied. Verifying the hypothesis by performing the processes / phenomena studied under laboratory conditions. Formulation of conclusions, deduced from arguments or findings.
- ✓ **Applied (specific to the discipline) teaching strategies / technologies**
"Brainstorming", "Multi-voting", "The round table", "Group Interview", "Case Study", "Creative Controversy", "Focus-group technique", "Portfolio". Virtual Practices
- ✓ **Methods of assessment** (including the method of final mark calculation)

Current: frontal and / or individual control by:

- (a) applying docimological tests;
- (b) solving problems / exercises;
- (c) analysis of case studies;
- (d) performing role-plays on the topics discussed;
- (e) control works.

At the Clinical pathomorphology discipline, there are 2 computer tests as follows:

Test No. 1 - Introduction to clinical pathomorphology. General aspects and the importance of the cytopathological service. Pathology of the cardiovascular system. Respiratory system pathology. Gynecological pathology.

Test No. 2 - Surgical pathology of the gastrointestinal system. Central nervous system pathology. Pathology of the renal and male genital system. Pathological characteristics of pregnancy. Gestational and placental pathology. Pathology of the mammary gland. Iatrogeny.

At the end of the module, the student is evaluated depending on the degree of completion of individual work, which is marked separately with grades from 0 to 10.

Thus, the formative assessment consists of 3 grades – (2 computer tests and individual work), each test is marked separately with grades from 0 to 10. Average mark is formed from the sum of the marks accumulated from tests and individual work divided by 3.



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The computer-based testing for each test consists of variants of 25 questions each (single choice and multiple choice). The student has a total of 25 minutes to answer the test. The evaluation is performed according to the criteria of the SIMU system of Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova.

Final: Exam

At the Clinical pathomorphology discipline there are 1 passing exams at the end of the module. Exam consists of a computer-based test of 50 tests from all studied themes, of which 40% are single choice and 60% multiple choices. The student has a total of 50 minutes to complete the test. The test is graded from 0 to 10.

The subjects for exams (tests) are approved at the meeting of the department and are brought to the attention of students.

The final mark consists of 2 components: the semester average grade consisting of 2 computer tests taken at the pathology department and individual work (coefficient 0.5). Computer testing held in the academic assessment center of Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova, coefficient 0.5.

Method of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination stages)	National Assessment System	ECTS Equivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,0	6	
6,01-6,50	6,5	D
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-9,00	9	
9,01-9,50	9,5	A
9,51-10,0	10	

The average annual mark and the marks of all stages of final examination (computer assisted, test, oral) - are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in number with two decimals, which is transferred to student's record-book.

Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations in the failed exam.

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XI. RECOMMENDED LITERATURE:

A. Compulsory:

1. Lecture materials
2. Vinay Kumar, Abul K. Abbas, Jon C. Aster. Robbins Basic Pathology, tenth edition, 2018

B. Additional:

1. Jones Bruce. Atlas of Gross Pathology With Histologic Correlation, 2009.
2. Ie. Zota, V. Vataman. General morphopathology, Chişinău, 2014
3. Vinay Kumar, Abul Abbas, Jon Aster. Robbins Basic Pathology. 9th ed. Elsevier Saunders, 2013.
4. Harsh Mohan. Textbook of Pathology, 7th edition, 2015.
5. Rosai, Juan, Lauren V. Ackerman, and Juan Rosai. Rosai and Ackerman's Surgical Pathology. Edinburgh: Mosby, 2011. Internet resource.
6. Steven G. Silverberg. Silverberg's Principles and Practice of Surgical Pathology and Cytopathology, 2-Volume Set. Churchill Livingstone/Elsevier, 2006.
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3. Panoramic Viewer free download: <http://www.3dhistech.com/>
4. Practice test: <http://casecenter-korb2.sote.hu/espractice/>
5. <http://www.pathologyoutlines.com/>