

SYLLABUS

INTERNATIONAL EUROPEAN
UNIVERSITY



SCHOOL OF
MEDICINE

Pathomorphology

2021



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Discipline 

 Pathomorphology

Lecturer 




Lecturer's profile 



Consultations (full-time, online)

On-campus consultations

 Third Tuesday of the month from 15:00 to 16:00

Online consultations

 Third Wednesday of the month from 15:00 to 16:00

Contact number 



E-mail 



Discipline page 



Form of final control

Final test

Diff.credit

Exam





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1 Short abstract of the discipline

Pathomorphology — is an educational discipline that gives the concept of the structural basis of human diseases for in-depth assimilation of the fundamentals of medicine and the clinical picture of diseases, followed by the use of the knowledge gained in the practical work of a doctor.

2 Prerequisite for studying the discipline

Pathomorphology as an academic discipline is based on students' assimilation of human anatomy and physiology, histology, cytology, embryology and genetics, microbiology, virology and immunology, biological chemistry, medical biology and medical physics. The assimilation of pathomorphology integrates with the study of pathological physiology and clinical disciplines. Based on students' study of medical biology, anatomy, histology and embryology, integrates with these disciplines; lays the foundations for students' study of physiology, biochemistry, pathological physiology, propedeutics of clinical disciplines, which involves the integration of teaching with these disciplines and the formation of the ability to apply knowledge of pathomorphology in the process of further training and professional activity.

3 The purpose and objectives of the discipline

The purpose of teaching the discipline "Pathomorphology" is the study of etiology, pathogenesis, microscopic and ultramicroscopic changes in organs and tissues of the human body in various living conditions, which provides:

- study of typical general pathological processes, the totality of which causes morphological manifestations of diseases,
- studying the structural basis of the development of diseases and their clinical manifestations, structural foundations of recovery, complications and consequences,
- study of methods of pathomorphological research: autopsy, biopsy, study of biopsy material, experimental modeling of diseases.

The main tasks of studying the discipline "Pathomorphology" are the following:

- understanding the basics of cell pathology and general pathological processes, the totality of which causes morphological manifestations of certain diseases;
- knowledge of morphology of diseases at different stages of their development (morphogenesis), structural foundations of recovery, complications and consequences of diseases;
- study of variants of pathomorphosis of diseases arising in connection with human living conditions change due to various therapeutic measures (pathology of therapy);
- correlation of morphological and clinical manifestations of diseases at all stages of their development, pathological conditions and diseases of the oral cavity;
- obtaining the skills of clinical and anatomical analysis, synthetic generalization of diagnostic signs of diseases and their correct interpretation in causal ratios.

4 Learning Outcomes

PLO-1 Collect data on patient complaints, medical history, history of life.

PLO-2 To study information about the diagnosis by applying a standard procedure on the basis of the results of laboratory and instrumental studies (on the list 4).

PLO-3 Specify leading clinical symptom or syndrome (on list 1). Establish the most likely or syndrome diagnosis of the disease (on list 2).

Prescribe laboratory and/ or instrumental examination of the patient (on the list 4).

Carry out differential diagnosis of diseases (with list 2). Establish a preliminary clinical diagnosis (on list 2).

PLO-6 Define the principles and nature of treatment (conservative, operative) disease (on list 2).

PLO-7 Inscesis diagnosis (on list 3).



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PRNA-14 Determine the source and/or location of the necessary information depending on its type; receive the necessary

information of the selected source;

PL0-18 Discover negative environmental factors; analyze the health of a certain contingent; determine the existence of a connection between the state of the environment and the state of health of a certain contingent; develop preventive measures on the basis of data on the relationship between the state of the environment and the state of health of a certain contingent. Conduct impact assessment socio-economic and biological determinants for the health of the individual, family, population.

PL0-21 Form goals and define the structure of personal activity. Be able to make informed decisions, choose ways and strategies of communication to ensure effective teamwork. Be responsible for the choice and tactics of the way of communication.

PL0-23 Ins realize and be guided in its activities by civil rights, freedoms and responsibilities, to raise the general cultural level.

PL0-24 Adhere to the requirements of ethics, bioethics and deontology in its professional activities.

PL0-25 Organize the required level of individual safety (own and persons concerned) in case of typical dangerous situations in the individual field activity.

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ECTS Loans

6 credits / 180 academic hours

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Structure of discipline

Theme	Lecture	Practice sessions	SRS	Individual dua-lyna work
Section 1. General pathomorphology				
Theme 1. Subject and tasks of pathomorphology. Methods of pathomorphological research: autopsy and biopsy. General information about pathogenic factors (endogenous and exogenous) and types of cellular reactions to them pathomorphology.	1	2,5	2	
Theme 2. Elements of ultrastructural cell pathology. Cellular-matrix interactions. Cellular and extracellular regulation mechanisms.			2	
Theme 3. The concept of damage. Morphology of reversible and irreversible damage to cells and tissues. Nekrose and apoptosis. Selective death of cells induced by the immune system, and cell destruction by activated compliment. Death, determination, signs of death.	1	2,5	2	
Theme 4. Chronic damage. Concepts of dystrophy. dystrophy (intracellular accumulation of proteins, fats and carbohydrates).	1	2,5	2	



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Theme 5. Disorganization of connective tissue. Vascular-stromal dystrophy (extracellular accumulation).	1	2,5	2	
Theme 6. Accumulation of endogenous and exogenous pigments (hemoglobinogenic, tyrosynogenic, lipidogenic). Pathomorphological manifestations of violation of the metabolism of nucleoproteids and mineral metabolism (iron, copper). Sedimentation (calcinosis): metastatic, dystrophic.		2,5	3	
Theme 7. Violation of ion-osmotic, water balance and acid-base condition. Equivalents.		2,5	2	
Theme 8. Hemostasis disorders: thrombosis, DVZ syndrome. Embolism: types, morphological characteristics. Myocardial. Shock: causes, pathogenesis, pathomorphological manifestations.		2,5	2	
Theme 9. Colloquium 1: Causes, pathogenesis, macro- and microscopic manifestations, complications and consequences of alteration and circulatory disorders.		2,5		
Theme 10. Protective mechanisms and their morphological equivalents. Concepts of nonspecific and specific defense mechanisms. General doctrine of inflammation. Acute and chronic inflammation. Exudative inflammation. Morphology of exudative inflammation.	1	2,5	3	
Theme 11. Productive inflammation. Granulomatosis. proliferative inflammation.	1	2,5	2	
Theme 12. Pathomorphology of the immune system. Reactions and mechanisms of hyper-sensitivity. Autoimmune diseases. Immunodeficiency states.		2,5	3	
Theme 13. Adaptation and compensation processes. physiological adaptation of organs and cells. Types and morphological manifestations of adaptation processes (hyperplasia, hypertrophy, hypoplasia, atrophy, metaplasia). Regeneration and reparations. Sclerosis.		2,5	2	



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Theme 14. General doctrine about tumors. Nomenclature and morphological features of tumors from the epithelium	1	2,5	3	
Theme 15. Nomenclature and morphological features of tumors Mesenchymal origin		1	2,5	
Theme 16. Nomenclature and morphological features of tumors of neuroecto-dermal origin		1	3	
Theme 17. Hemaotic tumors.		2,5	3	
Theme 18. . Features of childhood tumors. Embryonal tumors. Herminogenic tumors. "adult type.			3	
Theme 19. Colloquium 2: Macro- and microscopic signs, complications and effects of inflammation, immunopathological and compensatory processes and tumors.		2,5		
Final control	<i>Passed</i>			
Total hours – 90	8	40	42	
Theme	Lecture	Practice sessions	SRS	Individual dua-lyna work
Section 2:10 Special pathomorphology				
Theme 20. Introduction to nosology. The concept of "disease", manifestations and complications of diseases. Diagnosis. The concept of "pathomorphosis" of the disease. Types of pathomorphosis.		1,5	2	
Theme 21. Anemia. Hemorrhagic syndromes: vasopathy, thrombocytopenia, thrombo-cytopathy, coagulopathy.		1,5	1	
Theme 22. Diseases of the cardiovascular system. Atherosclerosis and arteriosclerosis (menkeberg mediocalcinosis, arteriolosclerosis). aortic aneurysm (atherosclerotic, delaminating). Cardiomyopathy.	2	3	1	
Theme 23. Rheumatism. Systemic diseases of connective tissue with autoimmunization: systemic lupus erythematosus, rheumatoid arthritis systemic sclerodermia, dermatomyositis, BechtereV's disease, Sjögren's syndrome. Systemic vasculitis: nodular periarteritis, Takayasu arteryitis, temporal (giant cellular) arteritis, obliterative thrombangitis, Kawasaki disease, Shenlain-Genoa purple, Reynaud's disease and syndrome. ANZA-associated vasculitis: microscopic polyangitis, granulema Vegenera),		3	1	



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eosinophilic granulomatosis with polyangitis (Cherge-Stros syndrome). Endocardial lesions: infectious endocarditis, eosinophilic endocarditis, Leffler. Lesamiocardium: Idiopathic Myocarditis Abramov-Fidler.		3	1	
Theme 24. Acute inflammatory diseases of the respiratory system: upper respiratory tract (rinitis, sinusitis, laryngitis, epiglottitis, laryngotracheobronchitis), bronchiolysis, pneumonia. Chronic obstructive diseases of the respiratory system: chronic obstructive bronchitis, chronic obstructive emphysema, bronchoectasis and bronchoectric disease, bronchial asthma. Chronic restrictive pulmonary diseases (fibrous, granulomatous; allergic and associated with smoking). Pulmonary hypertension, pulmonary heart. Tumors of the upper respiratory lung cancer.	2	3	1	
Theme 25. Diseases of the oropharynx, salivary glands, esophagus, acute and chronic gastritis (autoimmune, Helicobacter pylory-associated), Menetrye disease. Peptic ulcer, ulcer. Enteritis, colitis, idiopathic nonspecific bowel diseases (nonspecific ulcerative colitis, Crohn's disease). Tumors of the oropharynx, esophagus, stomach, small and colon.	1	1,5	1	
Theme 26. Diseases of the liver, biliary system and pancreas. Hepatosis, hepatitis, cirrhosis, tumors. Hepatocellular Failure. Portal hypertension. Bile-stone disease, acute and chronic cholecystitis, tumors. Acute and chronic pancreatitis, tumors.	1	1,5	1	
Theme 27. 2007 - 2008 - Did not enter complications and consequences of diseases of the cardiovascular, respiratory system, gastrointestinal tract. Pathoanatomical autopsy.		3		
Theme 28. Kidney disease: glomerulopathy, acute tubulonecrosis, tubulointerstitial nephropathy, pyelonephritis, urolithiasis, chronic renal failure. Hydronephrosis. Cystic kidney disease: Malformation urinary system. Tumors of the kidneys and urinary system.	2	3	1	
Theme 29. Diseases of the female and male reproductive system. Sexually transmitted diseases breast diseases		3	1	



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(syphilis, gonorrhea, papillomavirus infection, chlamydia, ureaplasmosis, thyromoniasis. Pathology of pregnancy and postpartum period. Spontaneous and medical abortions. pregnancy. NPG-gestosis. Trophoblast disease. Pathology of the litter.		3	1	
Theme 30. Prenatal pathology (gametopatia, blasto-, embryo-, fetopaty) and perinatal pathology (asphyxia of the fetus and newborn, maternity injury, intracular hemorrhagics, infectious diseases of the TORCH-complex. Congenital syphilis). Congenital developmental defects: morphological characteristics.		1,5	1	
Theme 31. Diseases of the organs of the endocrine system: Hypoatalamo-pituitary disorders. Pathology of the endocrine apparatus of the pancreas. MEN syndrome.	2	1,5	1	
Theme 32. Diseases of the central nervous system: Neurodegenerative (neurodystrophic) (Alzheimer's disease) and demyelinating diseases (multiple sclerosis), lateral amyotrophic sclerosis. Neuropathy (neuropathy). Infectious diseases: encephalitis, meningitis. Slow viral neuroinfections and prion diseases (kuru, Kreutzfeldt's disease – Jacob). Tumors of the central nervous system (astroglial, oligodendroglial, ependimal, neuronal, meningeal), cranial and parasinal nerves. Post-resuscitation encephalopathy and brain death syndrome.	1	1,5	1	
Theme 33. Diseases of muscles, bones, joints: Paget's disease; fibrous dysplasia; osteoelilite; Duchenne Muscular Dystrophy; myotonia; congenital and toxic myopathies; lesions of the neuromuscular compound - myastenia gravis.	1	1,5	1	

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Signs of discipline

Term of teaching	Semester	International disciplinary integration	Course of the year (training)	Cycles: General Training/ Training/ Free Choice
1 year	V, VI	Yes	3	General Training Cycle



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Rating system and requirements

The current success of students is estimated on a 4-point scale (2; 3; 4; 5) at each practical level, taking into account the approved evaluation criteria for the relevant discipline. The student must receive an assessment on each topic for further conversion of grades into scores on a multi-point (200-point) scale.

Evaluation criteria for current academic activities:

Excellent ("5") – the student correctly answered 90-100% of A-format tests (from the "Krok-2" database).

Good ("4") - the student correctly answered 70-89% of tests format A. Has the necessary practical skills and techniques for their implementation to the extent exceeding the required minimum.

Satisfactory ("3") - the student correctly answered 50-69% of tests format A. Has only a mandatory minimum of research methods.

Unsatisfactory ("2") - the student correctly answered 50% of the tests format A. During the response and demonstration of practical skills makes significant, gross mistakes.

Evaluation of students' independent work on preparation for classroom practical classes is carried out during the current control of the topic at the appropriate classroom.

Semester scoring is rated on a two-point scale (enrolled/not counted) and on a 200-point scale by determining the average arithmetically for each practice session on a 4-point scale and its subsequent conversion into a 200-point scale. The minimum number of points that an applicant must score is 120.

In the V semester, when studying "General Pathomorphology", the form of final control is the scoring.

In the VI semester, when studying "Special Pathomorphology", the form of final control is the test from the relevant section of the discipline ("Special Pathomorphology") and the exam in the discipline "Pathomorphology".

Semester test is a form of final control, which consists in assessing the student's assimilation of educational material solely on the basis of the results of the implementation of all types of tasks provided for by the working curriculum. Semester test in the discipline "Pathomorphology" is carried out after the completion of the study of Section 1 "General Pathomorphology" and Section 2 "Special Pathomorphology". The test in the discipline (the corresponding content module) is carried out after the completion of the study, before the beginning of the examination session.

The exam is a form of final control over the student's assimilation of theoretical and practical material in the discipline "Pathomorphology".

QR Code: <https://ie.u.edu.ua/docs/rate-of-study.pdf>



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9 Conditions of admission to final control

Students who have completed all types of work, tasks provided by the curriculum for a semester in accordance with the academic discipline are admitted to semester final control, visited all classes provided for by the curriculum, wrote and passed the medical history and have an average score for the current academic activity of at least "3" (72 points and on a 120-point scale).

QR Code: <https://ie.u.edu.ua/docs/rate-of-study.pdf>

10 Discipline policy

The policy of academic discipline is determined by the requirements that scientific practical employees present to the applicants in the study of clinical discipline. The condition for a successful educational process is the personal observance of the rules of conduct adopted by each student of a higher educational institution both at the university and in society.

The student must come to class on time, be dressed in an academic medical uniform (white robe or surgical suit). The student must adhere to the schedule of the educational process, come to classes prepared on the topic of the lesson. During the class, the student should not leave the classroom without the permission of the teacher; use during classes mobile phone and other means of communication and obtaining information without the permission of the teacher, engage in third-party activities, distract other students. When writing different types of works, the student must adhere to the rules of academic integrity.

The teacher must adhere to the implementation of the educational and thematic plan, objectively evaluate the knowledge and skills of students. During the educational process, the teacher should remember about anti-corruption measures and not conduct corruption activities.

11 Policy on skipping classes and completing tasks after the deadline

The student, who, for good reasons, confirmed documented, was not subject to the current control of the masses the right to undergo current control within two weeks after returning to study.

A student who was absent from classes without good reason, did not participate in current control measures, did not eliminate academic debt, is not allowed to final semester control of knowledge in this discipline, and on the day of passing the exam in the examination information, the scientific and pedagogical staff is assessed "unacceptable". Re-preparation of a differentiated test in the discipline is appointed subject to the implementation of all types of educational, independent (individual) work provided for by the working curriculum of the discipline and is carried out in accordance with the schedule of liquidation of academic debt approved by the Director.

QR Code: <https://ie.u.edu.ua/docs/050.pdf>

12 Academic Integrity Policy

Participants of the educational process are guided by the principles of academic integrity

QR Code: <https://ie.u.edu.ua/docs/050.pdf>

13 Recommended sources of information

Basic:

1. Shlopov VG Pathological anatomy: a textbook / VG Shlopov. - Vinnytsia: Nova Kniga, 2004. - 768 p.
2. Strukov AI Pathological anatomy: a textbook / AI Strukov, VV Serov. - 5th ed., P. - M.: Litterra, 2010. - 880 p. : ill.
3. Sinelnikov A. Ya. Atlas of macroscopic human pathology. - M.: РИА «Новая волна»: Издатель Умеренков, 2007. - 320 с: ил.



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4. Paltsev MA Atlas of pathological anatomy. / M.A. Paltsev, AB Ponomarev, Berestova AV - M. Medicine, 2007. - 432 p.
5. Clatt E. Atlas of pathology: lane with English. / Э. Clatt. - Elby SPb, 2010. - 532 p.
6. Pathological anatomy: Textbook / Strukov AI, Serov VV / Per. from the Russian. 4th ed., Stereotyped. - H .: Fakt, 2004. - 864 p., Ill.
7. Pathomorphology: nat. At hand. / VD Markovsky, VO Tumansky IV Sorokina P20 and others, ed. VD Markovsky, VO Tumansky. - К .: ВСВ «Медицина», ». 2015 - 936с., Кольор.вид. ISBN 978-617-505-450-5
8. Sorokina IV Pathological anatomy. Pathological anatomy: A textbook for students / I.V. Sorokina, AF Яковцова. - H .: Fact, 2004. - 648 p .: ill.
9. Sorokina IV Lectures in Pathological anatomy / I.V. Sorokina, AF Yakovtsova .– Kharkiv: Tornado, 2000. - 254 p.
10. Kumar V. Robbins Basic Pathology / Kumar V., Abbas AK, Aster J.C. - Canada: Elsevier Health Sciences, 2013 - 910 p.
11. Anderson's Pathology // Edited by John M. Kissane. The C.V. Mosby Company. - Toronto - Philadelphia, 1990. - 2196 p.
12. Thomas C. Macropathology / Thomas C. - Toronto, Philadelphia: B.C. Decker Inc., 1990. –355 p.

Additional:

1. Tomashova SA, Servetnik MI, Gritsina IV, Gavrilyuk OM, Kuzyk YI, Vovk VI, Vovk VV Edited by Pospisil Yu.O. Pathomorphology workbook. Section "General pathology". Methodical developments for students of medical faculty. - Lviv, 2016. - 100 p.
2. Gritsina IV, Tomashova SA, Gavrilyuk OM Edited by Pospisil Yu.O. Methodical recommendations for medical students. Module 1 "General pathology". Content module 1 "Damage". - Lviv: PE "Aral", 2016. - 60 p.
3. Tomashova SA, Gritsina IV, Servetnik MI, Vovk VI Ed. Hastened Yu.O. Pathomorphology workbook. Section "Special pathology". Methodical developments for students of medical faculty. - Lviv, 2014. - 120 p.

Information resources

1. University websites and electronic resources of the Internet
2. Testing center - base of licensed test tasks "Step-1"
3. <http://library.med.utah.edu/WebPath/webpath.html>
4. <http://www.webpathology.com/>
5. <https://www.geisingermedicallabs.com/lab/resources.shtml>

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Tips for successful training on the course

If you want to be successful in this discipline, then you must:

1. Be active, persistent, inquisitive, consistent
2. Be tidy and polite
2. Systematically prepare for practical classes
3. Perform tasks for independent work and protect them in the classroom.
3. Attend the class in a medical gown
4. Independently solve tests and tasks, actively work in the classroom.
5. Prepare presentations and crossword puzzles in the discipline. Participate in student scientific conferences and engage in research work in scientific circles of the department.

**I wish you perseverance, dedication and motivation to study. . and thensuccess will come to you!
Don't forget your medical gowns!**