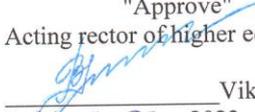


National Pirogov Memorial Medical University, Vinnytsya

"Approve"
Acting rector of higher education institution

Viktoriia PETRUSHENKO
" 31 " 08 2023

" AGREED
Head of the Department of
Pathomorphology

Artur BEREZOVSKY
" 20 " 08 2023

**SYLLABUS
of academic discipline**

"Biopsy-section course"

Specialty	222 "Medicine"
Educational level	the second (master's) level
Educational programme	EPP Medicine, 2022
Academic year	2023-2024
Department	Pathological Anatomy
Lecturer (if lectures are given)	assoc.profs. HEI Artur BEREZOVSKY
Contact information	patanatomy@vnm.edu.ua Pirogova street, 56 (morphological building), (0432) 553938
Syllabus compiler	assoc.profs. HEI Artur BEREZOVSKY

1. Status and structure of the discipline

Discipline status	Compulsory
Discipline code in EPP/discipline place in EPP	EC 14, discipline of elective training
Course / semester	<i>5th year (IX-X semesters)</i>
The amount of discipline (the total numbers of hours/number of credits ECTS)	60 hours / 2,0 credits ECTS
Number of content modules	1 concluding test
The structure of the discipline	Lectures - 10 hours Practical classes 20 hours Independent work 30 hours
Language of study	English
Form of study	Full-time (<i>or remote full-time by order</i>)

2. Description of the discipline

Short annotation of the course, relevance.

The main focus of the programs is to reject knowledge of the vibrational discipline "Biopsy-sectional pathological course" in the medical university and to develop students of clinical and anatomical analysis of biopsy, operational documentary and sectional technical form Throughout the course, students learn about the structure of the pathological service, as there is no other warehouse part of the system to protect the health of Ukraine. The pathologist service is focused on advancing the quality of the diagnostic and prophylactic robots and the more sophisticated.

Prerequisites. The study of biopsy-section course takes place in the V year, so it requires knowledge and skills of students in previous theoretical disciplines: normal anatomy, histology, normal physiology, biochemistry, microbiology, pathological anatomy, pathological physiology, internal medicine, general surgery, oncology, infectious diseases and obstetrics and gynecology. That is, there is a prior interdisciplinary connection, and at the time of studying clinical pathomorphology, students must have basic and clinical knowledge and skills regarding the diagnosis and differentiation of norms and pathology in different organs and systems. This knowledge and skills become the basis for work in the health care system of Ukraine and other countries in the future. They allow medical students to interpret autopsy data, draw conclusions about the immediate and main cause of death, the survival of the injury, fill out a "Medical Certificate of Death." In this case, the main task of interdisciplinary integration is to activate and update previously acquired knowledge, skills and abilities necessary for its study, taking into account the interests of the following subjects. Interdisciplinary integration can be implemented in different ways: interdisciplinary lecture, theoretical complex conversation, solving problems with a broad interdisciplinary

context, the use of tests of integrated content and more. The most adequate form of interdisciplinary integration today is the method of forming meaningful connections.

The purpose of the course and its significance for professional activities. "Biopsy-section course" as a medical discipline at the Medical University is to study the relationship between clinical manifestations and morphological basis of general and special pathology of human diseases, their morphogenesis, pathogenesis, pathokinesis, thanatogenesis, as well as participation in lifelong diagnosis of diseases by biopsy .

Postrequisites. Starting from the basic preclinical disciplines, a holistic perception of this system is formed through the presentation of integrated concepts in practical classes with an emphasis on common approaches in the study of this system by different disciplines. The study of biopsy-section course provides knowledge and skills to students for further postgraduate study and their application in practice. Interdisciplinary connections can be one-way, two-way and multi-vector, direct and inverse.

3. Learning outcomes.

After successful study of the discipline the applicant will be able to:

1. To analyse the morphological basis of human diseases for in-depth mastering of the fundamentals of medicine and the clinical picture of diseases with the subsequent use of the acquired knowledge in the practical work of the doctor;
2. To interpret morphological and clinical manifestations of diseases at all stages of their development;
3. Compare morphological and clinical manifestations of diseases at all stages of their development;
4. To carry out differential diagnosis of results of immunophenotyping of malignant new growths with the subsequent use of the received knowledge in practical work of the doctor;
5. Formulate pathological and clinical diagnoses.

4. Content and logistic of the discipline

Lectures	20 hours	Lectures №1-5
Practical classes	IX/X semester 10 hours	Practical classes № 1-10
Independent work	IX/X semester 30 hours /	Topics for self-study № 1-8

The course includes 10 topics.

Module 1. Biopsy-section course

Topic 1. Development of pathological anatomy and projection in Ukraine.

Topic 2. Tasks and methods of the pathological service and its place in the health care system of Ukraine (order № 81 of 12.05.1992 of the Ministry of Health of Ukraine "On the development and improvement of the pathological service in Ukraine" and order № 179 of 29.03.2006 of the Ministry of Health of Ukraine " About the statement of the instruction on definition of criteria of the perinatal period of live birth and stillbirth. The order of registration of live births and stillbirths "). Regulations on the procedure for dissecting corpses in treatment and prevention facilities. Categories of the deceased that must be dissected. Basic pathological documentation.

Topic 3. Technique and sequence of pathological autopsy. The role of the biopsy method in the diagnosis of tumors.

Topic 4. General doctrine of nosology. Definition and characteristics of the disease. ICD-10.

Topic 5. General doctrine of diagnosis and principles of formation of pathological diagnosis (categories of pathological autopsies).

Topic 6. Structure and principles of construction of clinical and pathological diagnoses, their comparison. The concept of nosological unit, underlying disease, complication of the underlying disease, comorbidity, combined underlying disease (competing, combined (contiguous, background). Rules for drawing up a medical certificate of death. Iatrogeny (second disease), medical errors, their causes, solution of situational problems in clinical and anatomical analysis.

Topic 7. Method of biopsy and surgical examination of the material. Solving situational problems in clinical and anatomical analysis .

Topic 8. Features of autopsy after infectious therapy, resuscitation and surgery. Definition of pathomorphosis. Features of the disease. Preparation and holding of a meeting of the medical control commission, clinical and anatomical conference. Solution of situational problems in clinical and anatomical analysis.

Topic 9. Preparation and holding of a meeting of the medical control commission, clinical and anatomical conference. Solution of situational problems in clinical and anatomical analysis.

Topic 10. The course of pathologist action in case of defecting of changes that are characteristic for infectious diseases.

Types of education according to the curriculum are: a) lectures, b) practical classes, c) independent work of students, d) consultations.

Practical classes provide a theoretical justification of the main issues of the topic and the acquisition of the following practical skills:

- 1) the use of knowledge of modern concepts of pathogenesis of diseases;
- 2) determination of the morphological basis of diseases at different stages of their development, complications and clinical and morphological forms of nosological units;
- 3) analysis and differential diagnosis of immunophenotyping results.
- 4) solving situational problems in clinical pathomorphology, having a clinical and diagnostic direction.

In practical classes, students formulate conclusions on the topic and solve clinically oriented situational problems.

The student's independent work involves the processing of clinical, pathomorphological data, ready-made protocols of autopsy for a pathological diagnosis, compilation of clinical and pathological epicrisis, and filling out a medical certificate of death; study of topics for independent extracurricular work, preparation of presentations, tables, elaboration of scientific literature and writing reviews of the provided topics for individual work. The control of mastering the topics of independent extracurricular work is carried out at the intermediate control classes and the final control of the discipline.

The route for obtaining materials: Department of Pathological Anatomy / Student / Full-time / Medicine / 5th year / Educational and methodical materials / or by the link <https://www.vnmu.edu.ua/> Department of Pathological Anatomy #. Access to materials is provided from the student's corporate account s000XXX@vnmu.edu.ua.

5. Forms and methods of monitoring academic performance

Current control in practical studies.	Methods: oral or written questioning, testing, electronic questioning, solving situational problems, interpretation of pathomorphological, histogenetic and enzyme-linked immunosorbent assays and evaluation of their results.
Final control of the discipline – concluding test.	Methods: pre-examination testing, oral questioning (according to the Regulation of the Academic process National Pirogov Memorial Medical University, Vinnytsia (link https://www.vnmu.edu.ua/General information))
Learning success diagnostic tools.	Theoretical questions, clinically oriented situational

	tasks.
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6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in VNMU named after M.I. Pirogov (link link [https://www.vnmua.edu.ua/General information](https://www.vnmua.edu.ua/General%20information))

Continuous assessment	On a four-point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Final control of the discipline	On a 200-point scale (the arithmetic average grade for the semester is converted into points) Credited: 120 to 200 points Not credited: less than 120 points (See Grading Scale)
Discipline assessments	Current performance - score on a four-point system from "2" to "5" Grade 5 "Excellent" - 81% to 100% knowledge; Grade 4 "Good" - 61% to 80% of knowledge; Grade 3 "Satisfactory" - 51% to 60% of knowledge; Grade 2 "Unsatisfactory" - less than 50% of knowledge; Final control (credit) - from 120 to 200 points From 122 to 200 points in total.

Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	A	excellent	credited
170-179,99	B	good	
160-169,99	C		
141-159,99	D	satisfactory	
122-140,99	E	satisfactory	credited
0-121,99	FX	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
	F	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

The scale is outperforming traditional ratings in bali ratings (200 points) for disciplines that end with a bali

5.00 - 200	4.37 - 175	3.74 - 150	3.12 - 125	2.54 - 102	1.92 - 77
4.97 - 199	4.34 - 174	3.72 - 149	3.09 - 124	2.52 - 101	1.89 - 76
4.94 - 198	4.32 - 173	3.69 - 148	3.07 - 123	2.49 - 100	1.87 - 75
4.92 - 197	4.29 - 172	3.67 - 147	3.06 - 122	2.47 - 99	1.84 - 74
4.89 - 196	4.27 - 171	3.64 - 146		2.44 - 98	1.82 - 73

4.87 - 195	4.24 - 170	3.62 - 145	<u>3.00</u>		2.42 - 97	1.79 - 72
4.84 - 194	4.22 - 169	3.59 - 144	2.99 - 121		2.39 - 96	1.77 - 71
4.82 - 193	4.19 - 168	3.57 - 143	2.97 - 120		2.37 - 95	1.74 - 70
4.79 - 192	4.17 - 167	3.54 - 142	2.96 - 119		2.34 - 94	1.72 - 69
4.77 - 191	4.14 - 166	3.52 - 141	2.94 - 118		2.32 - 93	1.69 - 68
4.74 - 190	4.12 - 165	3.49 - 140	2.92 - 117		2.29 - 92	1.67 - 67
4.72 - 189	4.09 - 164	3.47 - 139	2.89 - 116		2.27 - 91	1.64 - 66
4.69 - 188	4.07 - 163	3.44 - 138	2.87 - 115		2.24 - 90	1.62 - 65
4.67 - 187	4.04 - 162	3.42 - 137	2.84 - 114		2.22 - 89	1.59 - 64
4.64 - 186	4.02 - 161	3.39 - 136	2.82 - 113		2.19 - 88	1.57 - 63
4.62 - 185	<u>4.00</u> - <u>160</u>	3.37 - 135	2.79 - 112		2.17 - 87	1.54 - 62
4.59 - 184	3.97 - 159	3.34 - 134	2.77 - 111		2.14 - 86	1.52 - 61
4.57 - 183	3.94 - 158	3.32 - 133	2.74 - 110		2.12 - 85	1.51 - 60
4.54 - 182	3.92 - 157	3.29 - 132	2.72 - 109		2.09 - 84	
4.52 - 181	3.89 - 156	3.27 - 131	2.69 - 108		2.07 - 83	
4.49 - 180	3.87 - 155	3.24 - 130	2.67 - 107		2.04 - 82	

Compliance with the scales for assessing the quality of learning material

The grade in the discipline "Actual problems of clinical pathomorphology" is set on a 200-point scale and is defined as the sum of grades of current educational activities in points.

Credits are credited for the studied discipline provided that the student accumulates 122 points (which corresponds to the minimum value of the E grade on the ECTS scale).

Upon receiving an unsatisfactory grade in the discipline within 60-121.99 points (FX), the student has the right to re-pass it: once to the departmental commission with the participation of the head of the department, the last time - the commission with the participation of the head of the department and the dean's office.

If the student receives an unsatisfactory grade in the range of 1-59 points (F), he is obliged to re-study it. The decision is made by the management of NMU by the regulations approved in the prescribed manner.

Criteria for student knowledge assessment

Assessment of oral / written response, practical skills, tests during the current assessment

Score "Excellent"

Exhibited to a student who has at least 81% to 100% knowledge of the topic both during the survey and test control. Well versed in subject terminology. Clear formulates answers to questions. Practical work is performed in full. The grade "good" is given to a student who knows and has a good theoretical material, teaches it correctly, does not allow inaccuracies in the answer, can reveal the topic from the standpoint of its medical significance and practical application, but the answers do not go beyond the textbook, guidelines.

Score "Good"

Exposed to a student who knows the amount of not less than 61% to 80%, makes minor mistakes, which he corrects by answering questions. Answers 75% of the questions during the test tasks. Practical work is done in full, minor errors are allowed.

Score "Satisfactory"

Exhibited to a student who has knowledge of the topic in the amount of at least 51% to 60%, during testing answers at least 60% of questions. The answers are not accurate enough, leading questions correct them. Practical work has not been completed in full. The grade "unsatisfactory" is given to a student who does not know the theoretical foundations of the topic, makes gross mistakes in answering, does not understand the basic concepts and definitions, can not explain the importance of theoretical material for practical medicine.

Score "Unsatisfactory"

Exhibited to a student who has not mastered the required minimum knowledge of the subject within 50%. Unable to answer leading questions, operates with inaccurate formulations. Test control tasks are performed by less than 59% and below. Has no practical skills.

Assessment of the oral answer during the final control (concluding test)**Score "Excellent"**

exhibited to a student who competently and in a logical sequence provides answers to the questions of the examination ticket. During the answer demonstrates the ability to analyze theoretical material, makes thorough conclusions about the importance of theoretical material for practical medicine, provides clear correct answers to additional non-standard questions, correlates between morphological changes and clinical manifestations of diseases, knows protocols for sampling, labelling and biopsy. and surgical materials, protocols of immunohistochemical studies and polymerase chain reactions.

Score "Good"

is presented to a student who has a good command of theoretical material and in a logical sequence provides answers to the questions of the examination ticket, but admits minor inaccuracies, which he quickly corrects when answering the clarifying questions of the examiner. During the answer demonstrates the ability to analyze theoretical material, makes thorough conclusions about the importance of theoretical material for practical medicine, provides clear correct answers to additional questions, correlates between morphological changes and clinical manifestations of diseases, knows protocols for sampling, labelling and fixation of biopsy and operating materials, protocols for immunohistochemical studies and polymerase chain reactions.

Score "Satisfactory"

is presented to a student who demonstrates knowledge of basic concepts and definitions when answering the question of the examination ticket, admits significant inaccuracies or has difficulties in answering the question demonstrates difficulties in analyzing theoretical material, makes incomplete conclusions about the importance of theoretical material for practical medicine, provides correct answers to additional questions, admits inaccuracies in the correlation between morphological changes and clinical manifestations of diseases, has a rough knowledge of the protocols of collection, labelling and fixation of biopsy and surgical materials, protocols of immunohistochemical studies and polymerase chain reactions.

Score "Unsatisfactory"

is presented to a student who does not know the answer to one of the questions of the examination ticket, makes gross mistakes in answering additional questions, can not explain the basic concepts and definitions, does not know the protocols of sampling, marking and fixation of biopsy and surgical materials, protocols of immunohistochemical studies and polymerase chain reactions

Policy of discipline/course

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified tutoring during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in VNMU named after M.I.Pirogov and the principles of academic integrity (link <https://www.vnmdu.edu.ua/General> information).

(link <https://www.vnmdu.edu.ua/General> information)

Adherence to the rules of VNMU, safety techniques in practical classes.

Observance of the rules of the VNMU regulations, safety precautions at practical classes. Instruction on biosafety, safety of handling chemical reagents and burners is conducted at the

first practical lesson by the teacher. The instructed students are registered in the Safety Instruction Journal. A student who has not been instructed is not allowed to perform practical work.

Requirements for preparation for practical classes.

The student should be prepared for a practical lesson, testing tasks for the current topic should be solved in a workbook.

A student should come to class on time, without delay. A student who is more than 10 minutes late is not allowed to the practical class and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform (medical gown, hat). Students who do not have a work uniform are not allowed to practice.

The student must follow the rules of safety in practical rooms and at the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and be cleaned after performing practical work.

Usage of mobile phones and other electronic devices.

The use of mobile phones and other electronic devices in the classroom is allowed only during electronic testing or surveys.

Academic integrity. When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of VNMU named after M.I. Pirogov (link: <https://www.vnmdu.edu.ua/General> information)/ Code of Academic Integrity). In case of violation of the norms of academic integrity during the current and final controls student receives a grade of "2" and must work to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment).

Missed classes Missed classes are working out in the manner prescribed by Regulations of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmdu.edu.ua/General> information) at the time of work out schedule (published on the website of the department [https://www.vnmdu.edu.ua/ Department of Pathological Anatomy#](https://www.vnmdu.edu.ua/Department of Pathological Anatomy#)) to the teacher on duty

The procedure for admission to the discipline final control is given in the Regulation of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmdu.edu.ua/General> information). Students who do not have missed practical classes and lectures and received an average traditional grade of at least "3" are allowed to final control.

Additional points. Individual points in the discipline that student can receive for individual work, is determined by the results of his work according to Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsia (link <https://www.vnmdu.edu.ua/General> information) and policy of the course.

Conflict resolution. In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, the student should submit his / her claims to the teacher. If the issue is not resolved, the student has a right to apply to the head of the department according to Complaints Consideration Procedure ([https://www.vnmdu.edu.ua/ General information / Basic documents](https://www.vnmdu.edu.ua/General information / Basic documents)).

Politics in terms of remote learning. Distance learning regulated by the Regulations of the elements of remote learning in National Pirogov Memorial Medical University, Vinnytsia ([https://www.vnmdu.edu.ua/ General information](https://www.vnmdu.edu.ua/General information)). The main training platforms for studying are Microsoft Teams and Google Meet. Practical classes, exercises and consultations during distance learning is published on the website of the department ([https://www.vnmdu.edu.ua/ Department of Pathological Anatomy/ Student or https://www.vnmdu.edu.ua/Department of Department of Pathological Anatomy/ News](https://www.vnmdu.edu.ua/Department of Pathological Anatomy/ Student or https://www.vnmdu.edu.ua/Department of Department of Pathological Anatomy/ News)).

Feedback from teachers is via messengers (Viber, Telegram, Signal) or e-mail (at the teacher's choice) during working hours.

Educational resources.

Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmu.edu.ua/> Department of pathological anatomy, forensic medicine and law / To students). Consultations are held twice a week according to the schedule.

Recommended reading:

1. Klatt Edward C. Robbins and Cotran Atlas of Pathology 3rd Edition / Edward C. Klatt, MD – Canada: Elsevier - 2015 – 600p.
2. Kumar V. Robbins Basic Pathology. 10th Edition / Vinay Kumar, Abul Abbas, Jon Aster. – Canada: Elsevier – 2018. – 952p.
3. Kumar V. Robbins Basic Pathology Professional 9th Edition / Kumar V., Abbas A.K., Aster J.C. – Canada: Elsevier Health Sciences, 2015 – 1408p.
4. Diagnostic Immunohistochemistry Theranostic and Genomic Applications 5th Edition / David J. Dabbs, MD – Canada: Elsevier – 2019 – 944p.
5. Quick Reference Handbook for Surgical Pathologists Second Edition / Natasha Rekhman, Marina K Baine, Justin A. Bishop – Switzerland: Springer – 2019 – 211p.

Additional reading:

2. Neuroendocrine Tumours / Yalcin, Suayib, Öberg, Kjell (Eds.) - Switzerland: Springer- 2015 – 577p.
3. World Health Organization Classification of Tumors 5th Edition Volume 25 / IARC - Canada: Elsevier - 2019
7. Neville B. Neville's Oral and Maxillofacial Pathology – Middle East Adapted Reprint – 1 st Edition/ B. Neville. – Elsevier India. – 2017. – 558p.
8. Regezi J. Oral Pathology: Clinical Pathologic Correlations. 7th Edition / Joseph Regezi, James Sciubba, Richard Jordan. – Elsevier. – 2015. – 496p.
9. Sivapathasundharam B. Shafer's Textbook of Oral Pathology. 8th Edition B Sivapathasundharam. – Elsevier India. – 2016. – 794p.

Electronic resources:

1. E-mail address of the university website: <http://vnmu.edu.ua>
2. E-mail address of the university library website: <http://library.vnmu.edu.ua>
3. World Health Organization <http://www.who.int/en/>
4. Testing centre <https://www.testcentr.org.uk/>
5. Ministry of Health of Ukraine <https://moz.gov.ua/>
6. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
7. <http://library.med.utah.edu/WebPath/webpath.html>
8. <http://www.webpathology.com/>
9. <https://www.geisingermedicallabs.com/lab/resources.shtml>
10. <https://www.rcpath.org/>
11. <https://www.cap.org/>
12. <https://www.nccn.org/>
13. <https://pubmed.ncbi.nlm.nih.gov/>

The timetable and distribution of groups with assigned teachers are published on the web page of the department (<https://www.vnmu.edu.ua/> Department of Pathological Anatomy/ To students).

Questions to the intermediate and final semester control (credit) of the discipline are published on the web page of the department (<https://www.vnmu.edu.ua/> Department of Pathological Anatomy/ To students).

The syllabus of the discipline " **Biopsy-section course** " was discussed and approved at the meeting of the department pathological anatomy (record № 1, dated "28" 08 2023)

Head of the pathological anatomy



assoc.profs. HEI Artur BEREZOVSKY