

Federal State Autonomous Educational Institution of Higher Education
«Peoples' Friendship University of Russia»

Medical Institute

Recommended MCSD

SYLLABUS
(STUDY GUIDE)

Subject

Autopsy Course

Recommended for the direction of training (specialty)

31.05.01 General Medicine

Program (profile, specialization)

General Medicine

1. Aims and objectives of the discipline:

The aim of the discipline:

students gaining knowledge on the structure of the pathoanatomical service; teaching students the rules for the formulation of final clinical and pathoanatomical diagnoses; and the principles of their comparison in accordance with the WHO experts recommendations set out in the International Statistical Classification of Diseases and Health Problems of the Tenth Revision (ICD-10), and use acquired knowledge in the general physician practice. Gaining knowledge on the possibilities of intravital morphological diagnostics and the acquisition of skills in the use of pathoanatomical conclusions in medical and diagnostic practice.

Objectives of the discipline:

- Studying objectives and structure of the pathoanatomical service based on the work of the pathoanatomical departments and histological laboratories, the rules for assessing the work of medical and prophylactic institutions based on the materials of quarterly and annual autopsy reports;
- studying pathogenesis and outcomes of specific diseases developing in individual organs and systems;
- familiarizing with the principles of intravital and postmortem diagnosis of diseases of individual organs and systems;
- studying the rules and responsibilities of the clinician for collecting, labeling, storing and delivering biopsy and surgical (including urgent intraoperative) material to the pathoanatomical department, as well as the rules for preparing the corresponding medical documentation. Responsibility of the clinician for timing and safety of the surgical biopsy material;
- Study of the basic principles and rules for the application of the International Classification of Diseases (ICD-10) in relation to causes of death and conditions;
- Studying the rules for formulation of the final clinical and pathoanatomical diagnoses, principles of their comparison, taking into account recommendations of the WHO experts and the Ministry of Health of the Russian Federation.

2. Place of discipline in the structure of OP HE.

The discipline Autopsy course refers to the variable part (B.2) of professional discipline cycle of the curriculum.

Table №1 given preceding and following discipline aimed at forming competence discipline in accordance with the matrix competences OP HE.

Table 1

Preceding and following the discipline aimed at creating competencies

No.	Code and name of competence	Preceding courses	Subsequent courses (groups of courses)
General professional competencies			
1	GPC-1	Propedeutics of Internal Diseases; Radiation diagnostics; Faculty therapy; Urology; Hospital therapy; Infectious diseases; General surgery; Faculty surgery; Hospital surgery, pediatric surgery; Oncology, radiation therapy; Traumatology and Orthopedics; Maxillofacial Surgery;	Phthisiology; Endoscopic urology.
Professional competences			
1.	PC-2 (2.7)	Propedeutics of Internal Diseases; Radiation diagnostics; Faculty therapy; General surgery; Faculty surgery; Hospital surgery, pediatric surgery; Oncology, radiation therapy; Traumatology and Orthopedics; Maxillofacial Surgery;	Phthisiology

3. Requirements for the results of mastering the course:

- The process of studying the course is aimed at the formation of the following competencies:

Table 2

Formed competencies

Competencies	Competency name	Competence achievement indicators
GPC-1.	GPC-1. Being able to implement moral and legal norms, ethical and deontological principals in professional activity	GPC-1.1. Being able to abide by the ethical standards and legal regulations in professional activity. GPC-1.2. Being able to present professional information in the process of intercultural interaction observing the principles of ethics and deontology.
PK-2	Being able to examine a patient in order to determine a diagnosis	PC-2.7. Being able to carry out differential diagnosis with other diseases/conditions, including the urgent ones, as well as to make a diagnosis taking into account the current international statistical classification of diseases and problems related to health (ICD).

As a result of studying the discipline, the student must:

Know:

- The structure, topography and development of cells, tissues, organs and systems of the body in combination with their function in health and disease, especially the organismic and population levels of life organization;
- Concepts of etiology, pathogenesis, morphogenesis of a disease, nosology, principles of classification of diseases; basic concepts of general nosology;
- Structural and functional bases of diseases and pathological processes, causes, main mechanisms of development and outcomes of typical pathological processes, dysfunctions of organs and systems;

Be handly at:

- Use educational, scientific and popular science literature, and the Internet for professional activities;
- Be able to describe morphological changes in various diseases at the macroscopic and microscopic levels;
- Visually assess and record changes in the organs and tissues of the corpse, substantiate nature of a pathological process and its clinical manifestations;
- Conclude on the cause of death and formulate a pathological diagnosis.
- Substantiate the principles of intravital and postmortem diagnostics of diseases of individual organs and systems;
- Analyze the issues of general pathology and modern theoretical concepts and trends in medicine.

Manage:

- The skill of comparing morphological and clinical manifestations of diseases;
- Methods of clinical and anatomical analysis of the study and assessment of the biopsy and surgical material.

4. Volume of the discipline and types of study.

General credit value of the discipline is **1 credit unit**.

Type of study load	Semester
	12
Class hours (total)	18
Autopsy	6
Laboratory research (LR)	12
Of these, in interactive form:	3
Independent work (total)	18
Include:	
Autopsy protocol	8
Preparation and passing of current, intermediate certification	10
Total labor input (hours)	36
<i>Credit Unit</i>	1

5. Content of the discipline**5.1. The content of the discipline sections**

№ п/п	Name of the section of the discipline	Contents of the section
1	Organization of the pathology service.	Introduction to pathological anatomy. History of the development of pathological anatomy. Characteristics and forms of pathology work in health care settings. Medical ethics and deontology. Features of ethics and deontology in pathological anatomy.
2.	Rules of the sectional studies.	Rules of conduct in the sectional, clothing doctor. Safety behavior in the sectional. Features clothing doctor with suspected infectious diseases. Compliance with sanitary and anti-epidemic rules of work in the sectional room and biopsy block. Common techniques, working with tools. Evisceration by Shore, by Virchow, cut along Leshke. The procedure for autopsy: the appearance of the deceased, the state of the musculoskeletal system and hematopoietic organs. An autopsy study of the cranial cavity and its contents, the study of the pituitary. Chest dissection, thoracic cavity examination, carrying out a sample for pneumothorax and air embolism. Abdominal cavity dissection, the study of the digestive system, opening of the retroperitoneal space.
3.	Rules of biopsy studies.	Accident prevention, clothes of a doctor. Reception of surgical material. Incisure. Processing of material in the laboratory. Urgent biopsies. Viewing of biopsy glasses.
4.	Principles of design and comparison of the final clinical and pathologic diagnoses.	Underlying disease, competing disease, comorbidities, baseline disease. Complication of the underlying disease. Comorbidities. Guidelines for issuing medical certificates of death. Categories differences diagnoses. Objective and subjective reasons of diagnostic errors.

5.2. Sections of the discipline and types of classes.

№ п/п	Name of the discipline's section	Practical exercises and laboratory work		SS	Total
		LR	of them in IF		
1.	Organization of the pathology service.	3		3	6
2.	Rules of the sectional studies.	6		6	12
3.	Rules of biopsy studies.	4		4	8
4	Principles of design and comparison of the final clinical and pathologic diagnoses.	5	3	5	10
TOTAL		18	3	18	36

6. Laboratory training

№ п/п	№ discipline section	Subject of laboratory training	Workload
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			(hours)
1.	Section 1. Organization of the pathology service.	<ol style="list-style-type: none"> 1. History of the development of pathological anatomy. 2. Characteristics and forms of pathology work in health care settings. 3. Features of ethics and deontology in pathological anatomy. 	3
2.	Section 2. Rules of the sectional studies.	<ol style="list-style-type: none"> 1. Rules of conduct in the sectional, clothes of a doctor. Safety behavior in the sectional. 2. Features clothing doctor with suspected infectious diseases. 3. The procedure for opening: the appearance of the deceased, the state of the musculoskeletal system. 4. An autopsy study of the cranial cavity and its contents, the study of the pituitary. 5. Chest dissection, thoracic cavity examination, carrying out a sample for pneumothorax and air embolism. 6. Abdominal cavity dissection, the study of the digestive system, opening of the retroperitoneal space. 	6
3.	Section 3. Rules of biopsy studies.	<ol style="list-style-type: none"> 1. Accident prevention, clothes of a doctor . 2. Receiving operational material. Incisure. 3. Material processing in the laboratory. View biopsy preparations. 	4
4.	Section 4. Principles of design and comparison of the final clinical and pathologic diagnoses.	<ol style="list-style-type: none"> 1. Underlying disease, competing disease, comorbidities, baseline disease. 2. Complication of the underlying disease. Comorbidities. 3. Guidelines for issuing medical certificates of death. 4. Categories differences diagnoses. 5. Objective and subjective reasons of diagnostic errors. 	5

7. Practicals *are not considered*

8. Material and technical support of the course:

1. Museum of macro-preparations on various types of human pathologies.
2. A set of micro-preparations for various types of pathologies.
3. Binocular microscopes for the study of micro-preparations.

4. Tables for various types of pathologies.
5. Computers and multimedia projectors.
6. Discs with multimedia presentations of lecture materials and photomicrographs to each laboratory lesson.

9. Information support of the discipline

Databases, reference and search systems:

1. RUDN University Educational Portal: <http://web-local.rudn.ru>.
2. Universal Library ONLINE: <http://biblioclub.ru>.
3. Library of electronic journals BENTHAMOPEN:
<http://www.benthamscience.com/open/a-z.htm>.
4. Elsevier Library of electronic journals:
<http://www.elsevier.com/about/open-access/open-archives>.
5. Online Medical Library MedLib <http://med-lib.ru/>
6. U.S. National Library of Medicine National Institutes of Health:
7. <http://www.ncbi.nlm.nih.gov/pubmed/>
8. Electronic Scientific Library: <http://elibrary.ru/defaultx.asp>
9. Russian Society of Pathology website: <http://patolog.ru>

Internet Resources:

1. RUDN University Electronic Library System and external Electronic Library Systems (ELS) to which university students have access due to appropriate agreements:

- RUDN University Electronic Library System – RUDN ELS
<http://lib.rudn.ru/MegaPro/Web>
- Online University Library ELS <http://www.biblioclub.ru>
- Urait ELS <http://www.biblio-online.ru>
- Student's Consultant ELS www.studentlibrary.ru
- Full Collection of Cambridge University Press Journals
<https://www.cambridge.org/core>
- Journals published by Nature Publishing Group
<http://www.nature.com/siteindex/index.html>
- Oxford Journals, Full Collection <https://academic.oup.com/journals/>
- Scientific Journals Archive of SAGE Publications
<http://arch.neicon.ru/xmlui/handle/123456789/2757634/browse?type=source>
- Science online of American Association for the Advancement of Science (AAAS) <http://science.sciencemag.org/content/by/year>
- ScienceDirect (ESD), FreedomCollection, Elsevier
<http://www.sciencedirect.com/>
- Springer Electronic Resources <https://rd.springer.com/>

- Taylor & Francis journals <https://www.tandfonline.com/>
- Thieme <https://science-of-synthesis.thieme.com/>
- Wiley Online Library - Multidisciplinary Collection of Journals
<http://www.wileyonlinelibrary.com/>

2. Databases & Search Engines:

RUDN University Educational Portal:

<http://web-local.rudn.ru/web-local/kaf/rj/index.php?id=86>

U.S. National Library of Medicine National Institutes of Health:

<http://www.ncbi.nlm.nih.gov/pubmed/>

Electronic Scientific Library:

<http://elibrary.ru/defaultx.asp>

Russian Society of Pathology website:

<http://patolog.ru>

The Royal College of Pathologists <https://www.rcpath.org/>

Pathology Information Database

<https://www.pathologyoutlines.com/>

University of Utah Pathology Web Laboratory

<https://webpath.med.utah.edu/>

10. Educational and methodological support of the course:

a) Basic literature:

1. Rogov K.A. Compilation of the descriptive part of the autopsy protocol: the Study Guide - Electronic Text Data. – M.: Izd. RUDN, 2020. – 24 p.
2. Shuravin P.V. Autopsy. Basics of dissection practice: Guidelines. –M.: Izd. GEOTAR-Media, 2021. -160 p.
3. Krivolapov Yu.A. Macroscopic examination of biopsy and surgical material: A guide for pathologists. – M.: Izd. Prakticheskaya Meditsina, 2019. – 352 p.
4. Paltsev M.A. Biopsy and Autopsy Course Guide. – M.: Shiko, 2015. – 256 p.
5. International Statistical Classification of Diseases and Related Health Problems. - 10-th Revision. - Vol. 3 - Guidance. - Geneva. - WHO. - *M.: Meditsina, 1998. 923 p.: il. - (ICD-10).*
6. International Statistical Classification of Diseases and Related Health Problems. - 10-th Revision. - Vol. 1 - Guidance. - Geneva. - WHO. -*M.: Meditsina, 1995. 698 p.: il. - (ICD-10).*

b) Additional References

1. Gribunov Yu.P., Rogov K.A., Shestakova I.N., and Ivina A.A. The basic principles of the final clinical and post-mortem diagnoses. – M.: Izd. RUDN, 2015.- 19 p.
2. Zairatiyants O.V. et al. Pathoanatomy: The Atlas. – M.: Izd. GEOTAR-Media, 2009. – 472 p.

3. Zairatiyants O.V. and Kakturskiy L.V. Formulation and comparison of clinical and post-mortem diagnoses. The Guide. - 2nd Ed., revised and amended.- M.: OOO Meditsinskoe Informatsionnoe Agentstvo, 2011.-576 p.
4. Microscopic Equipment: The Manual / Ed. D.S. Sarkisov and Yu.L. Perov. - M.: Meditsina, 1996. -544 p.
5. Sapozhnikov A.G. and Dorosevich A.E. Histological and Microscopic Equipment: The Manual. - Smolensk: SAU, 2000. - 476 p.
6. Serov V. Verification methods of morphological diagnosis // Vrach. - 2000. - No. 12. P. 22-23.

11. Guidelines for students on the development of the discipline:

At the workshops and lectures in the classroom conducted analysis of relevant topics using multimedia technology (computer, projector). For each classroom lecture and presentation are prepared in the program Microsoft Power Point, containing from 10 to 60 slides. The main purpose of practical training is to study the morphological basis of the pathogenesis and outcome of typical pathological processes and diseases of individual organs and systems.

Self-study of the student

Independent work of students in extracurricular hours can pass both in the classrooms of the department where students can study the macro and the slides. Training manuals in electronic form on a number of topics studied posted on the Department of Pathological Anatomy in the Internet:

<http://web-local.rudn.ru/web-local/kaf/rj/index.php?id=85>

Summaries and abstracts on various sections of the course prepared by students provide as a form of self-study.

Students' independent work includes:

- Study material for textbooks, teaching aids on paper and electronic media.
- Preparation of the autopsy protocol.
- Preparation for tests and test tasks.

Current control.

Control of knowledge and success of the curriculum in terms of full-time training is conducted in the form of an oral interview or computer-based testing.

Boundary control.

Passage of each section is completed boundary control knowledge in the form of an oral interview with the student. In the process of boundary control student must show their knowledge on the topic passed and skills. Also monitors the attendance of lectures and practical exercises.

Final control (interim certification).

The final control of knowledge held in the form of set-off. Set-off is performed in the form of an oral interview. The student must demonstrate knowledge of the

morphology of typical pathological processes and disease, primary pathological reactions of cause-and-effect relationships in the pathology of the whole organism, the value of reactivity in the occurrence, development and outcome of typical pathological processes and disease pathogenesis and laws sanogenesis typical pathological processes and diseases phasic development of typical pathological processes and diseases, their complications and outcomes, syndromes and symptoms of common diseases. Also, the student requires the ability to accurately diagnose the study of macro- and microscope slide. In addition the student must demonstrate skills in solving clinical problems.

12. The fund of assessment tools for intermediate certification of students by discipline (module)

Materials for assessing the level of mastering training content of the Autopsy Course (evaluation materials), including a list of competencies indicating the stages of their formation, description of indicators and criteria for evaluating competencies at various stages of their formation, description of the assessment scales, typical control tasks necessary for assessment of knowledge, abilities, skills and/or experience of activities characterizing stages of formation of competencies during mastering the educational program, methodological materials that determine the procedures for assessing knowledge, skills and/or experience of activities characterizing the stages of formation of competencies, developed in full and are available for students on the course page at the TTIS RUDN University.

The program is designed in accordance with the requirements of the Federal State Educational Standard of Higher Education.

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