INTERNATIONAL EUROPEAN UNIVERSITY

EDUCATIONAL AND SCIENTIFIC INSTITUTE
"EUROPEAN MEDICAL SCHOOL"

Department of surgical diseases with a course
of anesthesiology and intensive care

APPROVED
by the Scientific and Methodological Council
of the University,
protocol dated 08/29/2023 No. 7
Deputy Chairman of the IMC
_____ Oksana LISNICHUK

COURSE TRAINING PROGRAM
ON
MEDICAL PRACTICAL TRAINING WITH FUNCTIONAL DIAGNOSTICS WORKSHOP

for the training of students of higher education at the second (master's) level
(full-time and/or part-time study)

Knowledge area: 22 Public Health

Specialty: 222 Medicine

Educational program: "Medicine"

Discipline status: Mandatory

Kyiv - 2023

The academic program of the educational discipline **"Medical practical training with functional diagnostics workshop" is** compiled on the basis of the educational and professional program "Medicine" for the second (master's) level, specialty 222 "Medicine", approved by the Academic Council of the University on May 30, 2023, protocol No. 4.

Organizers of the program:

Associate Professor
Professor of the Department of Surgical Diseases with a course in Anesthesiology and Intensive Care, Doctor of Medicine. _____ Fedir LAPIY

_____ Hennadiy BABAENKOV

Associate Professor of the Department of Surgical Diseases with a course in anesthesiology and intensive care, Doctor of Medicine. _____ Yevhenii SIMONETS

Professor of the Department of Internal Medicine, Doctor of Medicine. _____ Maksym ZAHORODNIY

Acting Head of the Department of Internal Medicine,associate professor, candidate of medical sciences _____ Lyudmyla ZAKORDONET

Reviewer:

professor _____ Rostyslav BONDARYEV

Guarantor LP:

head of the department of pediatrics, immunology, infectious and rare diseases, Doctor of Medicine, Professor _____ Anastasiia BONDARENKO

The educational program of the academic discipline was reviewed and approved by the Department of Surgical Diseases with the course of Anesthesiology and Intensive Care, Protocol No. 1 dated August 25, 2023.

Head of the Department of Surgical Diseases with a Course in Anesthesiology and Intensive Care, Doctor of Medicine, Professor _____ Rostyslav BONDARYEV

Reviewed and approved by the Academic Council of the Educational and Scientific Institute "European Medical School", protocol No. 1 dated August 29, 2023.

Head of the Scientific Council of the National Institute of Medicine, European Medical School, Doctor of Medicine, Associate Professor _____ Yevhenii SIMONETS

1. DESCRIPTION OF THE EDUCATIONAL DISCIPLINE

<table>
<tr><td rowspan="2">Name of indicators</td><td rowspan="2">Field of knowledge, direction of training, educational and qualification level</td><td>Characteristics of the academic discipline</td></tr>
<tr><td>Full-time education</td></tr>
<tr><td rowspan="2">Number of credits – 10</td><td>Field of knowledge
22 "Health care"</td><td rowspan="2"><u>Normative</u></td></tr>
<tr><td>Direction of training
"Medicine"</td></tr>
<tr><td rowspan="4">Total number of hours - 300</td><td rowspan="4">Specialty:
222 "Medicine"</td><td>Year of preparation</td></tr>
<tr><td>5-th</td></tr>
<tr><td>Semester</td></tr>
<tr><td>9-th, 10-th</td></tr>
<tr><td rowspan="8">Modules – 4</td><td rowspan="8">Education level:
Master's degree</td><td>Lectures</td></tr>
<tr><td>-</td></tr>
<tr><td>Practical training</td></tr>
<tr><td>160 h.</td></tr>
<tr><td>Individual work</td></tr>
<tr><td>140 h.</td></tr>
<tr><td>Type of control:</td></tr>
<tr><td><u>Differentiated test</u></td></tr>
</table>

2. EXPLANATORY NOTE TO PRACTICE:

Industrial medical practice with functional diagnostics practicum involves a student of higher education undergoing practical training from the following sections, which in turn are divided into modules:

1) "Industrial medical practice" section: the tasks of practice are a consolidation of knowledge and skills acquired during the study of the main clinical and theoretical disciplines (examination of the patient, establishment of clinical diagnosis, appointment of treatment) and further improvement of practical skills, familiarization with the organization of the medical case and working conditions of the doctor in various departments of the medical institution, as well as consolidation of sanitary and educational work skills.

- Module 1. Industrial medical practice: acting family doctor (therapeutic aspect);
- Module 2. Industrial medical practice: acting district surgeon;
- Module 3. Industrial medical practice: acting district pediatrician;
- Module 4. Industrial medical practice in obstetrics. (acting doctor of the maternity department).

2) The section "Practicum of functional diagnostics" provides acquisition by students of practical skills in determining the diagnostic capabilities of functional research methods in internal medicine, indications and contraindications, methods of conducting, interpretation algorithms of the obtained results with further interpretation of the nature and severity of organ function disorders of patients at various

stages of the disease, forming an idea of the relationship between the identified instrumental changes and pathogenesis and clinical manifestations of the disease. The workshop is held in the relevant departments of medical institutions, which are the clinical bases of the International European University

Program learning outcomes , the achievement of which is ensured by the educational discipline. For specialty 222 Medicine:

General competences (GC)	
GC -1	Ability to abstract thinking, analysis and synthesis.
GC -2	ZK- 2 Ability to learn and master modern knowledge.
GC -3	Ability to apply knowledge in practical situations.
GC -4	Knowledge and understanding of the subject area and understanding of professional activity.
GC -5	Ability to adapt and act in a new situation
GC -6	Ability to make informed decisions.
GC -7	Ability to work in a team.
GC -8	Ability to interpersonal interaction.
GC -10	Ability to use information and communication technologies.
GC -11	Ability to search, process and analyze information from various sources.
GC -12	Determination and persistence in relation to assigned tasks and assumed responsibilities.
Professionals competence (PC)	
PC -1	Ability to collect medical information about the patient and analyze clinical data.
PC -2	Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
PC -3	Ability to establish a preliminary and clinical diagnosis of the disease.
PC -4	Ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
PC -5	Ability to determine the nature of nutrition in treatment and prevention diseases
PC -6	Ability to determine the principles and nature of treatment and prevention of diseases.
PC -7	Ability to diagnose emergency conditions.
PC -8	Ability to determine tactics and provide emergency medical care.
PC -10	Ability to perform medical manipulations.
PC -11	Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
PC -12	Ability to determine driving tactics physiological pregnancy , physiological childbirth and postpartum period. Skills of consulting on issues planning family and choosing a contraceptive method .
PC -13	Ability to conduct sanitary and hygienic and preventive measures.
PC -15	Ability to conduct examinations of working capacity.

PC -16	Ability to maintain medical documentation, including electronic forms.
PC -24	Adherence to ethical principles when working with patients and laboratory animals.
PC -25	Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results.
Program learning outcomes (PLO)	
PLO -1	Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
PLO -3	Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine, and related interdisciplinary problems.
PLO -4	To highlight and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using the previous data of the patient's history, the data of the patient's examination, knowledge about the person, his organs and systems, to establish a preliminary clinical diagnosis of the disease (according to list 2).
PLO -5	Collect complaints, history of life and diseases, evaluate psychomotor and physical development of the patient, state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the age of the patient.
PLO -6	Establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution (according to list 2) .
PLO -7	Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PLO - 9	Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the patient's age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation , including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.
PLO - 10	Determine the necessary regime of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to the existing algorithms and standard schemes.
PLO - 11	Determine the approach, plan and tactics of managing physiological pregnancy, physiological childbirth and the postpartum period by making a reasoned decision according to existing algorithms and standard schemes.
PLO - 12	To assess the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.

PLO - 13	Assess and monitor the child's development, provide recommendations on feeding and nutritional features depending on age, organize preventive vaccinations according to the calendar.
PLO - 14	Determine tactics and provide emergency medical assistance in emergency situations (according to list 3) in the conditions limited time according to the existing ones clinical protocols and treatment standards .
PLO - 17	Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
PLO - 18	To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of the person's professional activity, etc. Conduct medical documentation of patient and population contingent on the basis of regulatory documents .
PLO - 19	Plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.
PLO - 21	Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
PLO - 24	To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.
PLO - 29	Plan, organize, and carry out measures for the specific prevention of infectious diseases, including in accordance with the National calendar of preventive vaccinations, both mandatory and recommended. Manage vaccine residues, and organize additional vaccination campaigns, including immunoprophylaxis measures.

3. SECTION "INDUSTRIAL MEDICAL PRACTICE"

Module 1. Industrial medical practice: acting family doctor (therapeutic aspect);
Module 2. Industrial medical practice: acting district surgeon
Module 3. Industrial medical practice: acting district pediatrician;
Module 4. Industrial medical practice in obstetrics.

Module 1. Industrial medical practice: acting family doctor (therapeutic aspect)

Module description (abstract)

The industrial medical practice module of Acting family doctor provides for students of higher education to master practical skills according to the educational and professional program 222

"Medicine". It is held at a time when students of the 5th year of higher education at the medical faculty have acquired knowledge of internal medicine.

Practice is conducted as an acting family doctor (therapist) in accordance with the current curriculum and program. Industrial practice (medical) of students of higher education of the 5th course in the scope of professional duties of a family doctor (therapist) of a polyclinic. Industrial medical practice in Internal Medicine Content module 1.

When passing industrial practice acquirers higher education are obliged to :

- before the beginning of the industrial practice, get advice from the head of the department of industrial practice of the higher educational institution regarding the period of the practical training, the preparation of documentation, etc.;
- get a referral to a basic institution for practice at the dean's office;
- arrive at the practice base on time;
- to fully perform all the tasks provided for by the practice program and the instructions of its supervisors during the cycles;
- to study and strictly follow the rules of labor protection, safety techniques;
- follow the rules of internal labor regulations in force in the medical institution;
- bear responsibility for assigned work and its results at the same level as full-time employees;
- keep a practice diary, other documentation provided for by the practice program;
- after the end of the cycle ("Production medical practice of the acting family doctor") of practice, submit a written report on the performance of all tasks provided for by the program to the head of the practice from the educational institution, a diary filled out and signed by the immediate basic supervisor;
- to pass SMC on practice in a timely manner.

Prerequisites and postrequisites (interdisciplinary connections): study educational disciplines is based on pre received acquirers higher education knowledge :

a) propaedeutics of internal medicine, as well as other basic disciplines (medical biology, medical and biological physics, bioorganic and biological chemistry, histology, cytology and embryology, human anatomy, pathomorphology, physiology and pathophysiology, microbiology, virology and immunology, radiology) and integrates with these disciplines;

b) lays the foundations for students to study internal medicine and other clinical disciplines, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of occupational diseases in the process of further education and professional activities;

c) lays the foundations for a healthy lifestyle and prevention of functional impairment in the process of work.

Goal and tasks of the module:

The Goal of studying "Medical practice acting of a family doctor": consists of consolidation of practical skills within the limits of competencies and learning outcomes defined in the educational and professional training program for specialists in specialty 222 "Medicine" field of knowledge 22 "Health care": mastering basic manipulations and diagnostic methods for making a diagnosis and choosing the right method of treatment; the formation of the responsibility of the student of higher education, as a future specialist, for the level of his training and its improvement during training and professional activity.

The main tasks of the practice are to consolidate the knowledge and skills acquired during the study of the main clinical and theoretical disciplines (examination of the patient, establishing a clinical diagnosis, prescribing treatment) and further improvement of practical skills, familiarization with the organization of the medical case and the working conditions of the doctor in the family department of the polyclinic, as well as consolidation of sanitary and educational work skills.

As a result of studying the academic discipline, the student of higher education should be able to:

- conduct surveys and physical examinations of patients and analysis of their results;
- plan examination schemes for a specific patient depending on the features of the clinical course of the disease;
- analyze the results of basic laboratory and instrumental research methods;
- determine the leading pathological symptoms and syndromes in the most common diseases;
- perform differential diagnostics and make a preliminary diagnosis of the most common diseases;
- interpret the general principles of treatment, rehabilitation and prevention of the most common therapeutic diseases;
- master the methods of diagnosis and providing emergency care at the pre-hospital stage;
- master the necessary medical manipulations;
- familiarize yourself with the maintenance of medical documentation in a primary care center or

polyclinic;

- master the moral and deontological principles of a medical specialist and the principles of professional subordination

The industrial practice involves:

- study by students of higher education of the organizational structure of the primary care center or polyclinic and its separate divisions, as well as the documentation of the Ministry of Health of Ukraine, which regulates its work;
- participation in the outpatient polyclinic of patients and healthy adults by family doctors and specialist doctors, mastering the skills of maintaining the necessary documentation by doctors of outpatient polyclinic institutions;
- mastering the rules of conducting dynamic monitoring of sick and healthy people of individual groups, the possibilities of providing medical assistance in the conditions of a day and home hospital;
- participation in the formation of the basic principles of a healthy lifestyle regarding the prevention of the most common diseases among the population;
- knowledge of the main manifestations, risk factors, and principles of treatment of the main most common diseases with the aim of their prevention, early detection, and timely provision of the necessary assistance.

4. THEMATIC PLAN OF LECTURES

Not provided for in the curriculum.

5. THEMATIC PLAN OF PRACTICAL CLASSES

№ i/o	Subject name	Number of hours
1	Principles of organization of planned and emergency care in outpatient settings. Reception of patients. Conducting a survey and physical examination of patients. Filling out the medical card of an outpatient. Determining the scope of additional research, and evaluating their results. Establishing a preliminary diagnosis. Determination of the tactics of further treatment, rehabilitation, and prevention. Labor forecast.	**3**
2	Work in the office of functional diagnostics: assessment of the function of external breathing, ECG, echocardiography, phonocardiography, radiography and radiography of the organs of the chest, gastrointestinal tract, gall bladder and kidneys, esophagogastroduodenoscopy, colonoscopy.	**4**
3	Work in a physiotherapy office: participation in conducting - electrotherapy with direct current, pulsed currents of low and sound frequency, high-frequency electrotherapy, magnetotherapy, aeroionotherapy, ultrasound therapy, heat and hydrotherapy procedures, etc.	**4**

4	Work in the emergency room of the polyclinic: examination of the patient, identification of syndromes and the presence of emergency conditions. Participation in the provision of emergency care in urgent situations: acute heart failure, hypertensive crisis, paroxysmal heart rhythm disorders, pulmonary embolism, asthmatic status, acute gastrointestinal bleeding, acute renal failure.	**4**
	Total per module	**15**

6. THEMATIC PLAN OF INDEPENDENT WORK

№	Subject name	Number of hours
1.	Preparation for practical classes.	5
2.	Participation in the management of polyclinic appointments	12
3.	Total	**17**

7. LIST OF QUESTIONS FOR THE PREPARATION OF HIGHER EDUCATION ATTENDERS FOR THE FINAL TEST

List of theoretical questions:

1. Epidemiology of hypertension and definition of the concept. Exogenous and endogenous risk factors of hypertension, methods of active detection, classification. Standards of examination of patients and their rehabilitation. Dynamic monitoring of people with risk factors and patients. Effectiveness of measures for primary and secondary prevention of hypertension.

2. Epidemiology and prevention of CHD. CHD risk factors and their correction. Diagnosis and treatment of various clinical forms of coronary artery disease in outpatient settings.
3. Clinical and expert characteristics of cardiovascular diseases.
4. Methods of determining morphological changes and functional disorders in cardiovascular diseases.
5. Indications and contraindications for work with cardiovascular diseases.
6. Criteria for determining disability groups in cardiovascular diseases.
7. Ways of rehabilitation of patients.
8. Epidemiology of bronchial asthma and definition of the concept. Exogenous and endogenous risk factors for BA, active detection methods, classification. Standards of examination of patients and their rehabilitation. Dynamic monitoring of people with risk factors and patients. Effectiveness of measures for primary and secondary prevention of BA.
9. COPD: risk factors, diagnosis, treatment and prevention.
10. Epidemiology and primary prevention of digestive tract diseases.
11. Clinical and expert characteristics of chronic lung diseases. Criteria for determining disability groups. Labor forecast.
12. Helicobacter pylori-associated diseases of the digestive tract: diagnosis, treatment, prevention.
13. Epidemiology of chronic hepatitis and definition of the concept. Exogenous and endogenous risk factors of CH and LC, methods of active detection, classification. Standards of examination of patients and their rehabilitation. Dynamic monitoring of people with risk factors and patients. Effectiveness of measures for primary and secondary prevention of HG.
14. Chronic pancreatitis and diseases of the biliary tract - diagnostic criteria, principles of treatment. MSA in diseases of the gall bladder and pancreas.
15. Exo- and endogenous risk factors for thyroid diseases, diagnosis, prevention, and treatment.

16. Classification, diagnosis, and treatment of diabetes of various types.
17. Algorithms of differential diagnosis of jaundice
18. Algorithms of differential diagnosis in joint syndrome.

List of practical skills for the final control:

1. Conducting a medical appointment at the primary care center under the supervision of a general practitioner - family doctor and issuing: medical passport of the precinct
2. Completion of the profile log of the precinct, the log of the doctor's home calls, and the record sheet of the daily reception of patients.
3. Preparation of the doctor's monthly work plan
4. Issuance of the medical card of an outpatient and epicrisis.
5. Filling out statistical maps for registration of final (specified) diagnoses.
6. Providing medical care to patients at home under the supervision of a general practitioner - a family doctor.
7. Organization of home hospitalization, and necessary additional examinations, consultations at home
8. Provision of medical care in the conditions of the day hospital of the primary care center under the supervision of the doctor of the day hospital

9. Organization of emergency care at home and in the conditions of the primary care center, study of the rules of hospitalization in case of urgent need.
10. Registration of temporary incapacity for work, certificates of temporary incapacity for work
11. Completion of documents when referring a patient to MSE (referral letter) to determine the degree of loss of working capacity
12. Issuance of prescriptions and preparation of prescriptions for free dispensing of medicines
13. Conducting dynamic monitoring of patients and disabled people (recording according to nosologies, carrying out planned examinations of patients, treatment, consultations of narrow specialists)
14. Issuance of a dynamic accounting control card
15. Draw up a route of wellness activities, restorative nutrition, sanatorium-resort selection for various diseases
16. Issuance of certificates for the need for sanatorium-resort treatment and sanatorium-resort cards
17. To improve the interpretation of the results of laboratory-instrumental studies: general blood analysis, biochemical blood analysis, general urinalysis, results of the test according to Zemnytskyi and Nechiporenko, analysis of stool and coprogram, analysis of sputum, analysis of pleural and ascitic fluid, analysis of gastric secretion, bile
18. Evaluation of the results of monitoring the function of external breathing, ECG, Holter ECG monitoring, ABPM, echocardiography, radiography and radiography of the chest, gastrointestinal tract, gall bladder and kidneys, esophagogastroduodenoscopy, colonoscopy.

8. RECOMMENDED LITERATURE

Basic:

1. Family medicine. In 3 books: [textbook for higher medical students. education institutions of IV accreditation level]. Book 2. Symptoms and syndromes in the clinic of internal diseases / edited by O. M. Girinoi, L. M. Pasieshvili; L. S. Babinets, O. M. Barna, S. V. Biletsky, and others. - K.: Medicine, 2016. - 455 p.

2. Organizational aspects of the system of primary health care in Ukraine: a study guide [for medical students. institutions of higher education of the Ministry of Health of Ukraine] / Yu. M. Kazakov, T. A. Tribrat, S. V. Shut, N. I. Chekalina; Ministry of Health of Ukraine, UMSA, Caf. internal propaedeutics medicine with patient care, general practice (family medicine). - Poltava: Techservice, 2018. - 117 p.

Auxiliary:

1. Organization of the work of district therapists and family doctors and preventive therapy. - Sklyaro Family medicine. In 3 books : [textbook for students of higher education. institutions of medicine Universities, Institutes and Acad.]. Book 3. Special part. The multi-specialty of general medical practice / edited by O. M. Girinoi, L. M. Pasieshvili; L. S. Babinets, P. A. Bezditko, S. A. Bondar and others. - K.: Medicine, 2017. - 679 p.
2. Internal diseases: in 2 parts. Part 1. Chapters 1-8: textbook / L.V. Hlushko, S.V. Fedorov, I.M.

Skrypnyk and others. - Kyiv, Medicine., 2019. - 680 p. 3. Internal diseases: in 2 parts. Part 2. Chapters 9-24: textbook / L.V. Hlushko, S.V. Fedorov, I.M. Skrypnyk and others. /– Kyiv, Medicine., 2019. – 584s + 6 books incl.

3. Perederii V.G. Basics of internal medicine: [textbook for university students. honey. education institutions of IV accreditation level]. Volume 2: Diseases of the circulatory system. Rheumatic diseases. Kidney disease. General questions of internal medicine / V.G. Perederii, S. M. Tkach. - Vinnytsia: New Book, 2009. - 781 p.
4. Modern classifications and standards of treatment of common diseases of internal organs / Ed. Yu.M. Mostovoy – 13th ed., add. - and processing. Vinnytsia: SE "State Cartographic Factory", 2020. - 582 p.
5. Denesyuk V.I., Denesyuk O.V. Internal Medicine. Textbook for students of institutions of higher medical education of III-IV levels of accreditation and doctors of postgraduate education based on the recommendations of evidence-based medicine/Ed. V.M. KovalenkoK.: MORION; 2019.-980 p.
6. Zharinov O.Y. Fundamentals of electrocardiography (third edition, revised and supplemented) / O.Y. Zharinov, V.O. Kuts - Lviv. : MS, 2017. – 240 p.
7. I.P. Katerenchuk Clinical assessment, diagnostic and prognostic value of laboratory test results: Training manual. Rheumatology. - Medknyga, 2018.-176p.
8. Katerenchuk I.P. Clinical interpretation and diagnostic value of laboratory indicators in general medical practice: Training manual. - Medical book, 2018.-224 p.
9. Order of the Ministry of Health of Ukraine dated March 2, 2016 No. 152 "On the approval and implementation of medical-technological documents on the standardization of medical care for stable coronary heart disease." Unified clinical protocol of emergency, primary, secondary (specialized) and tertiary (highly specialized) medical care "Stable ischemic heart disease".
10. Order of the Ministry of Health of Ukraine dated July 2, 2014 No. 455 "On the approval and implementation of medical and technological documents on the standardization of medical care for acute coronary syndrome with ST segment elevation" Unified clinical protocol of emergency, primary, secondary (specialized) and tertiary (highly specialized) medical assistance and medical rehabilitation "Acute coronary syndrome with ST segment elevation".
11. Order of the Ministry of Health of Ukraine dated 03.03.2016 No. 164 "On the approval and implementation of medical and technological documents on the standardization of medical care for acute coronary syndrome without ST segment elevation" Unified clinical protocol of emergency, primary, secondary (specialized) and tertiary (highly specialized) medical assistance and medical rehabilitation "Acute coronary syndrome without ST segment elevation".
12. Order of the Ministry of Health of Ukraine dated February 11, 2016 No. 89 "On the approval and implementation of medical-technological documents on the standardization of medical care for patients with stage V chronic kidney disease using hemodialysis or peritoneal dialysis."
13. Order of the Ministry of Health of Ukraine dated April 11, 2014 No. 263 "On the approval and implementation of medical-technological documents on the standardization of medical care for rheumatoid arthritis." Unified clinical protocol of primary, secondary (specialized), tertiary (highly specialized) medical care and medical rehabilitation "Rheumatoid arthritis".
14. Order of the Ministry of Health of Ukraine dated 11.05.2011 No. 280/44 "On approval of the standard and unified clinical protocols for the provision of medical care in the specialty "Nephrology".
15. Order of the Ministry of Health of Ukraine dated 13.06.2016 No. 564 "On the approval and implementation of medical-technological documents on the standardization of medical care in the prevention of cardiovascular diseases." Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care "Prevention of cardiovascular diseases".
16. Order of the Ministry of Health of Ukraine dated 15.06.2016 No. 597 "On the approval and implementation of medical-technological documents on the standardization of medical care for atrial fibrillation". Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care "Atrial fibrillation".
17. Order of the Ministry of Health of Ukraine dated 15.06.2016 No. 597 "On the approval and

implementation of medical-technological documents on the standardization of medical care for atrial fibrillation". Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care "Atrial fibrillation".
18. Order of the Ministry of Health of Ukraine dated June 21, 2016 No. 614 "On the approval and implementation of medical-technological documents on the standardization of medical care for pulmonary hypertension." Unified clinical protocol of emergency, primary, secondary (specialized) and tertiary (highly specialized) medical care "Pulmonary hypertension in adults".
19. Order of the Ministry of Health of Ukraine dated May 24, 2012 No. 384 "On the approval and implementation of medical-technological documents on the standardization of medical care for hypertension." Unified clinical protocol of primary, emergency and secondary (specialized) medical care "Hypertension".
20. Svyntsytsky A.S. Diagnosis and treatment of rheumatic diseases: Study guide. - Medical book, 2017.- 372 p.
21. Cardiovascular diseases. Classification, standards of diagnosis and treatment // Edited by academician V.M. Kovalenko, professor M.I. Lutai, professor Y. M. Sirenko, professor O. S. Sychov. // Kyiv. - 2016. - 188 p.
22. Cardiovascular diseases. Classification, standards of diagnosis and treatment / All-Ukrainian. assoc. cardiologists; Under the editorship V. M. Kovalenko [and others]. - 3rd ed., revised. and added
- Kyiv: Morion, 2018. - 223 p. : ill, tab.

9. ELECTRONIC RESOURCES

1. https://www.eular.org/eular_imaging_library_portal.cfm# http://www.rheumatologyclinic.ca/imagebank/#close https://images.rheumatology.org/bp/#/
2. http://www.oxfordmedicaleducation.com/ecgs/ecg-examples/
3. https://litfl.com/top-100/ecg/
4. http://learn.escardio.org/lp/eacvi_echo_elearningcourse/knowledge/078833a3-cafb-
5. 4506-b264-11e4e3d968f7/0/curriculumSubTopics https://www.123sonography.com/ultrasound-courses https://www.asecho.org/rising-star-hub/echo-images/ http://inephrology.kiev.ua/ http://phc.org.ua/
6. http://mtd.dec.gov.ua/images/dodatki/2014_455_GKS/2014_455%20YKPMD_GKS.pd f www.WebCardio.org
7. https://professional.heart.org/professional/GuidelinesStatements/UCM_316885_Guideli nes- Statements.jsp - AMERICAN HEART SSOCIATION PROFESSIONAL MEMBERSHIP
8. https://www.escardio.org - The European Society of Cardiology https://www.rheumatology.org - The American College of Rheumatology https://www.asn-online.org/ - The American Society of Nephrology

10. MODULE 2. INDUSTRIAL MEDICAL PRACTICE: ACTING DISTRICT SURGEON

Description of the module (abstract)

Module 2 .acting district surgeon, studies surgical assistance to patients in the conditions of a polyclinic, which has always been considered the leading link of public health care. In polyclinic institutions, up to 85% of patients start and finish treatment. A sick person does not isolate himself from the social environment in which his life takes place. But polyclinic service has its own peculiarities. Such features that shape the nature of the doctor's work include: a strict time limit for working with the patient, a limited opportunity to correct inaccuracies in the doctor's decision, and the use of modern diagnostic and treatment methods is not always available. The working conditions formulate the requirements for the personality of the doctor-surgeon of the polyclinic. Mastering the material of the module will provide an opportunity to gain practical skills and develop professional skills in the diagnosis and treatment of surgical diseases.

Prerequisites and postrequisites (interdisciplinary connections):

Studying module 2. Acting district surgeon is based on the knowledge obtained by higher education students

during the mastery of such fundamental theoretical and clinical disciplines as: "Human Anatomy", "Histology, Cytology, and Embryology", "Physiology", "Pathomorphology", "Pathophysiology", "Pharmacology", "Propaedeutics of internal medicine", "Clinical anatomy and operative surgery", "Radiology", "Internal medicine, including clinical pharmacology, clinical immunology, and allergology, occupational diseases", "Endocrinology", "Obstetrics and gynecology", "Traumatology and orthopedics", "General surgery", "Anesthesiology and intensive care", "Urology", etc. These interactions form the ability to apply knowledge in the process of a doctor's professional activity.

Goal and tasks:

The goal of studying module 2. acting district surgeon are: consolidation in practice of knowledge and skills obtained during the study of clinical and theoretical disciplines, improvement and deepening of practical skills obtained during practical classes at surgical departments, determination of tactics of conservative and surgical treatment, rehabilitation of patients after operations.

The main tasks of studying module 2. acting district surgeon is: familiarization with the organization of providing outpatient surgical care, conducting anti-epidemic work in the polyclinic, acquiring and consolidating the skills of sanitary and educational work, forming professional skills and abilities in providing medical care for surgical diseases in the conditions of the polyclinic, mastering basic surgical manipulations, principles of surgical interventions in outpatient settings and rehabilitation of patients.

11. THEMATIC PLAN OF PRACTICAL LESSONS

№	Subject name	Hours
1.	Principles of organizing surgical care in outpatient settings. Medical ethics and deontology. Question. Normative documents of the Ministry of Health of Ukraine, which regulate the work of a district surgeon. Concepts and rules of compliance with the principles of ethics and deontology in the work of a district surgeon.	3
2.	Issues of examination of vital activity and working capacity of surgical patients Question. Rules for issuing letters of temporary disability. Contingents of surgical patients subject to dispensary supervision. Completion of necessary documents at MSEC.	4

3.	**Purulent diseases of the skin and soft tissues. Clinic, diagnosis, treatment. Tetanus** Question. Furuncle. Carbuncle. Abscess Phlegmon. Erysipelas. Erysipeloid. Hidradenitis. Anaerobic clostridial and non-clostridial infection: necrotizing cellulitis fasciitis. Clinic, diagnosis, treatment. Empiric and targeted antibiotic therapy. Antibiotic resistance and ways prevention of its development. Tetanus, rules of active-passive immunization.	3
4.	**Acute surgical diseases of the abdominal and thoracic cavity. Clinic, diagnosis, treatment.** Question. Definition of acute abdomen. Differential diagnosis of acute diseases of abdominal organs. Spontaneous pneumothorax, acute and chronic lung abscess, lung gangrene, acute and chronic pleural empyema. Clinic, diagnosis, treatment tactics. Indications and technique of pleural puncture.	4
5.	**Injuries to abdominal organs, chest cavity, and musculoskeletal system. Diagnosis, treatment tactics.** Question. Hemoperitoneum in trauma: clinic, diagnosis, treatment tactics. FAST protocol. Emergency care for victims with abdominal injuries. Research methods for thoracic organs damage. Rib fractures, floating rib fractures. Pneumothorax, hemothorax, clinic, diagnosis, treatment, emergency care. Transport immobilization for limb fractures.	4
	Total	18

12. INDEPENDENT WORK

№ i/o	Subject name	Number of hours
Elaboration of topics that are not included in the classroom lesson plan:		
1.	New technologies in surgery. Modern methods of diagnosis and treatment.	4
2.	Obstructive jaundice. Causes of occurrence. Differential diagnostic tactics. Modern approaches to treatment.	5
3.	Obliterating diseases of the arteries.	4
4.	Varicose veins of lower limbs.	4
	Total:	**17**

13. LIST OF QUESTIONS FOR THE FINAL CONTROL

Theoretical questions:

1. Furuncle. Carbuncle. Hidradenitis. Clinic, diagnosis, treatment.
2. Abscess. Phlegmon. Clinic, diagnosis, treatment.
3. Panaritius. Erysipeloid. Clinic, diagnosis, treatment.
4. Erysipelas. Clinic, diagnosis, treatment.
5. Anaerobic clostridial and non-clostridial infection. Necrotic cellulitis. Necrotizing fasciitis. Gas gangrene. Clinic, diagnosis, treatment.
6. Clinical and laboratory signs of systemic inflammatory response syndrome, factors

7. Types of abdominal pain. Definition of acute abdomen.
8. Objective examination of patients with acute abdominal pain.
9. Differential diagnosis of acute diseases of the abdominal organs according to the nature of pain.
10. Treatment tactics for acute appendicitis, acute cholecystitis, acute pancreatitis, peritonitis, and acute intestinal obstruction.
11. Special instrumental methods of examination of the esophagus and stomach.
12. Types of jaundice, and causes of occurrence. Differential diagnosis of jaundice.
13. Instrumental examination methods for diseases of the liver and biliary tract (ultrasound, CT, MRI, Endoscopic retrograde cholangiopancreatography).
14. Treatment tactics for obstructive jaundice of non-tumor and tumor genesis.
15. The main etiological factors of bleeding from the upper and lower parts of the gastrointestinal tract.
16. Clinical signs of bleeding from the upper and lower gastrointestinal tract.
17. Classification of injuries of abdominal organs, clinic, diagnosis.
18. Abdominal injury. Urgent diagnosis and FAST protocol.
19. Acute and chronic lung abscess. Clinic, diagnosis, treatment.
20. Spontaneous pneumothorax, bullous disease. Clinic, diagnosis, treatment.
21. Lung gangrene, etiology, pathogenesis. Clinic, diagnosis, treatment.
22. Acute and chronic pleural empyema, etiology, pathogenesis.
23. Classification of chest injuries.
24. Urgent diagnosis of thoracic organs injuries.
25. Rib fractures, floating rib fractures. Clinic, diagnosis, treatment.
26. Pneumothorax. Clinic, diagnosis, treatment. Emergency care for open and tense pneumothorax
27. Hemothorax. Clinic, diagnosis, treatment.
28. Etiology and pathogenesis of obliterating atherosclerosis and endarteritis. Clinic, diagnosis, treatment.
29. Etiology, pathogenesis, clinic, and diagnosis of varicose veins of the lower extremities.
30. Thrombophlebitis of the lower extremities. Clinic, diagnosis, treatment.
31. Phlebothrombosis of the veins of the lower extremities. Clinic, diagnosis, treatment.
32. Stages of primary surgical treatment of wounds. Types of surgical sutures.

List of practical skills for the final control.

1. Physical examination of patients.
2. Determination of key clinical and anamnestic signs of acute surgical pathology.
3. Interpretation of the results of laboratory and instrumental research methods.
4. Grounding and formulation of the preliminary diagnosis.
5. Puncture of the pleural cavity with tension pneumothorax.
6. Applying an occlusive dressing in case of an open pneumothorax.
7. Novocaine blockade for rib fractures.
8. Fixation of the chest wall with floating rib fractures.
9. Ways to temporarily stop external bleeding.
10. Local anesthesia.
11. Work in the dressing room: performing dressings, opening abscesses, primary surgical treatment of wounds, applying and removing sutures, etc.
12. Definition of indications, types and methods of tetanus prevention.
13. Emergency care for burns and frostbite.
14. Artificial respiration and indirect heart massage.
15. Issuance of medical documentation. Filling out an outpatient card, temporary disability sheet, referral letter to MSEC, etc.
16. Techniques for palpation of the mammary gland.

17. Methodology of digital examination of the rectum.
18. Method of palpation of the thyroid gland.

16. RECOMMENDED LITERATURE

Basic**.**

1. Zhdan V. M. Ambulatorna surgery : a guide for doctors general practice / V. M. Zhdan, M. V. Tkachenko, M. I. Kravtsiv ; Ministry of Health of Ukraine , UMSA. – Poltava: ASMI, 2018. – 204 p.

2. Surgery . In 2 volumes: textbook [for students higher med. teach _ institutions]. T. 1 / edited by : P. G. Kondratenko, V. I. Rusyna; S. O. Boyko, O. O. Boldizhar , P. O. Boldizhar [and others]. – Vinnytsia : New book, 2019. – 702 p. 19

3. Surgery . In 2 volumes: textbook [for students higher med. teach _ institutions]. T. 2 / edited by : P. G. Kondratenko, V. I. Rusyna; S. O. Boyko, O. O. Boldizhar , P. O. Boldizhar [and others]. – Vinnytsia : New book, 2019. – 702 p

14. Auxiliary.

4. General surgery : [textbook for students higher teach _ institutions of the Ministry of Health of Ukraine] / edited by Ya. S. Bereznytskyi , M. P. Zakharash , V. G. Mishalov [and others]. – Vinnytsia : Nova Kniga, 2018. – 342 p.

5. Surgery : Textbook / S.V., Malik, V.P. Field , M.V. Trofimov , V.D. Sheiko, etc .; under the editorship S.V., Malika - PP "New Book". – Vinnytsia , 2020. – 440 p.

6. Surgery : textbook in two volumes [for students who teach _ in higher med. teach _ institutions and postgraduate institutions . of education of the Ministry of Health of Ukraine under special " Medical business" and " Nursing business"]. Volume 2: Special surgery / R. O. Sabadyshyn , V. O. Ryzhkovskyi , O. V. Markovych [and others]. – Vinnytsia : Nova Kniga, 2018. – 588 p.

Informational resources :

Coursera
Lectures by world-class professors and reinforced through interactive exercises.coursera.org
CSurgeries
Library of surgical procedures created by surgeons for surgeons.csurgeries.com
DNA Tube
Videos, animations, and slideshows from scientific studies, lectures, and seminars.dnatube.com
EyeTube
High quality ophthalmic surgical videos and panel discussions.eyetube.net
Free Medical Videos
Archive of popular and engaging medical videos from around the Internet.freemedicalvideos.com
FutureLearn: Healthcare and Medicine
Offers a diverse selection of courses from leading European universities.futurelearn.com -
Geeky Medics

Free videos, revision notes, OSCE guides, and MCQs for medical students.geekymedics.com

GrepMed

Community-sourced medical image and video repository.grepmed.com

HealthTalk.org

Videos of patients sharing real life experiences with various health conditions.healthtalk.org

Khan Academy

Academic videos and lectures on medicine and the healthcare system.khanacademy.org

Mayo Clinic Videos

Surgical procedure videos and interviews with Mayo Clinic doctors, sorted by specialty.medprofvideos.mayoclinic.org

MedicalVideos.com

Library of medical videos covering everything from anesthesia to vascular x-ray imaging.medicalvideos.com

Medscape Video

Expert interviews and perspectives as well as procedure videos.medscape.com

MEDtube

Education platform offering thousands of videos for healthcare professionals.medtube.net

MIT Open CourseWare

Lectures and course materials for students, teachers, and self-learners.ocw.mit.edu

OnlineMedEd

70+ hours of whiteboard lessons covering 250+ topics across 19 specialties. onlinemeded.org

PBS: Health Videos

Free videos from your favorite PBS programs, including NOVA and Frontline.pbs.org

TED Health

Fascinating presentations by the world's leading thinkers and doers.ted.com

The Doctor's Channel

Short and to-the-point video clips on the latest medical news, ideas, and information.thedoctorschannel.com

VuMedi

Physician only site providing thousands of videos from leading institutions. vumedi.com

WebSurg

European site created by surgeons for surgeons, in order to help with surgical training.websurg.com

15. MODULE 3. INDUSTRIAL MEDICAL PRACTICE ACTING DISTRICT PEDIATRICIAN

Module description (abstract)

The industrial medical practice of acting district pediatrician is based on the knowledge obtained during the study of the disciplines "Propaedeutics of Pediatrics", "Pediatrics", continues the study of the main diseases in children, and the improvement of practical skills used in the practical activities of a pediatrician. The study of the discipline is based on modern principles of evidence-based medicine and standards accepted in international clinical practice.

Prerequisites and postrequisites (interdisciplinary connections)

Module 3 The fulfillment of the duties of a district pediatrician is based on the preliminary study by students of human anatomy, biological and bioorganic chemistry, microbiology, virology and immunology, and pharmacology and is integrated with these disciplines, as well as on the study by students of propaedeutic and clinical disciplines of the medical profile: propaedeutics of pediatrics, pediatrics with neonatology and pediatric infectious diseases and integrates with these disciplines.

The knowledge gained while studying the modules will be used in further professional activities.

16. THEMATIC PLAN OF PRACTICAL LESSONS

№ i/o	Subject name	Number of hours
	Module 3. Industrial medical practice acting district pediatrician	**25**
1	Conducting examinations of healthy and sick children.	3
2	Evaluation of clinical data (general analysis of blood, urine, feces) and biochemical research of patients (blood protein content and its fractions, acute phase indicators, blood urea and creatinine, electrolytes, glucose, blood bilirubin and its fractions, coagulogram, blood lipid profile), microbiological examination of biological fluids and secretions, polymerase chain reaction, enzyme immunoassay, general analysis of sternal punctate and cerebrospinal fluid.	4
3	Evaluation of the data of instrumental research methods: X-ray examination of the organs of the chest, abdominal cavity, joints, CT of the central nervous system, X-ray contrast angiography, ECG, echocardiography, ultrasound of the abdominal cavity.	3
4	Knowledge of the timing of preventive vaccinations. Indications and contraindications for vaccination.	4
5	Justification and formulation of clinical diagnosis.	3
6	Interpretation of the general principles of treatment, primary and secondary prevention for the main children's diseases in outpatient settings.	4
7	Help with emergency conditions in children (convulsive and hyperthermic syndromes, collapse, pulmonary edema, bronchospasm, asthmatic status, acute heart failure, infectious-toxic shock, acute renal failure, acute liver failure, acute adrenal insufficiency, complications of vaccination and drug therapy: urticaria, Quincke's edema, anaphylactic shock, ketoacidotic coma, hypoglycemic coma, bleeding, etc.)	4

17. INDEPENDENT WORK

№ i/o	The content of independent training	Number of hours
Module 3. Acting district pediatrician		
1	The structure and organization of the work of the children's polyclinic. 1. Structure of the pediatric ward. 2. Documentation of the district pediatrician. 3. Participation in the preparation of basic documents in the work of the district pediatrician. 4. Diagnosis and treatment of the main children's diseases in outpatient settings. 5. Indications for planned and urgent hospitalization of children in outpatient practice.	5

2	Participation in polyclinic reception. 1. Assessment of the child's physical and neuropsychological development. 2. Assessment of the child's health. 3. Compilation of a healthy child's diet. 4. Participation in the implementation of preventive measures and examination of children with diseases of various body systems. 5. Methods of hardening young children and children who are often sick. 6. Participation in the system of patronage for children. 7. Implementation of sanitary and educational work. 8. Psychological and linguistic contact with healthy and sick children, building reliable relationships with the parents of a sick child. 9. Participation in providing emergency care to children at the pre-hospital stage. 10. Participation in the vaccination of children in the polyclinic. 11. Participation in providing emergency care to children with post-vaccination complications.	12
	Total	17

18. INDIVIDUAL TASKS

Preparation and holding of conversations with sick children and their parents:

- The role of vitamin D for the body of a young child,
- Advantages of natural feeding,
- Hardening of a young child,
- Anemia in children: what parents should know
- Diabetes in children,
- The problem of childhood obesity.

19. LIST OF QUESTIONS FOR THE FINAL CONTROL

List of theoretical questions

a. Principles of organization of providing medical care to children in outpatient settings.
b. Clinic, laboratory-instrumental diagnostics and tactics of treatment of the main children's diseases in outpatient conditions.
c. Principles of organization of vaccine prevention of infectious diseases in Ukraine.
d. System of dispensary supervision of healthy and sick children.
e. Application of the principles of ethics and deontology in pediatrics.

List of practical skills in the discipline

1. Conduct surveys and physical examinations of patients and analysis of their results
2. to plan examination schemes for a specific patient depending on the features of the clinical course of the disease.
3. Analyze the results of basic laboratory and instrumental research methods.
4. To determine the leading pathological symptoms and syndromes in the most common diseases.
5. Conduct differential diagnostics and make a preliminary diagnosis of the most common diseases.
6. Interpret the general principles of treatment, rehabilitation and prevention of the most common diseases in children.

7. Master the methods of diagnosis and providing emergency care at the pre-hospital stage.
8. Master the necessary medical manipulations.
9. Familiarize yourself with keeping medical records in the polyclinic.
10. To master the moral and deontological principles of a medical specialist and the principles of professional subordination.

20. RECOMMENDED LITERATURE

Basic:

1. Pediatrics: [textbook for higher medical students of educational institutions of the IV level of accreditation]/ed. O.V. Tyazhka; O. V. Tyazhka, N. G. Horovenko, S. O. Kramarev [and others]; Ministry of Health of Ukraine, National honey. University named after O.O. Bogomoletsa. - Ed. 5th, ex. and additional – Vinnytsia: Nova Kniga, 2018. – 1150 p
2. Nelson's Fundamentals of Pediatrics: Translation of the 8th English Edition: in 2 volumes / Karen J. Marcdante, Robert M. Kligman. – Kyiv, VSV "Medicine", 2019. – Volume 1. - 377 p. - Volume 2. - 425 p.
3. Neonatology. In 3 volumes: textbook. T. 1/ed. T. K. Znamenskaya; T. K. Znamenska, Yu. G. Antipkin, M. L. Aryaev [and others]; National Academy of Sciences of Ukraine, Institute of Pediatrics, Obstetrics and Gynecology named after O. M. Lukyanova, Assoc. neonatologists of Ukraine. - Lviv: T.V. Marchenko Publisher, 2020. - 407 p.

Additional:

1. Clinical examination of the child: teaching. manual for students of higher education. institutions/O.V. Katilov,
2. D. V. Dmitriev, K. Yu. Dmitrieva, S. Yu. Makarov. - Vinnytsia: New Book, 2017. - 518 p.
3. Algorithms for performing manipulations in neonatology. Tutorial. Pokhilko V.I., Tsvirenko S.M., Chernyavska Yu.I. - Myrhorod Publishing House LLC, 2019. - 107 p.

Information resources:

Orders of the Ministry of Health http://www.moz.gov.ua/ua/portal/
Association of Neonatologists of Ukraine https://neonatology.org.ua/association/about Ukrainian Academy of Pediatric Specialties https://www.uaps.org.ua/
Ministry of Health of Ukraine https://moz.gov.ua/ World Health Organization https://www.who.int/
American Academy of Pediatrics https://www.aap.org/en-us/Pages/Default.aspx

21. MODULE 4. INDUSTRIAL MEDICAL PRACTICE IN OBSTETRICS. (ACTING DOCTOR OF THE MATERNITY DEPARTMENT)

Interdisciplinary connections: obstetrics and gynecology as an educational discipline is based on the knowledge obtained by students of higher education while studying: medical biology; human anatomy; physiology; pathophysiology; histology, cytology and embryology; microbiology, virology and immunology; pharmacology; internal medicine, including endocrinology, medical genetics; of general surgery and integrates with these disciplines.

The knowledge, skills and abilities acquired during the study of the educational discipline "Obstetrics and Gynecology" can be used by students of higher education after completing the study of this discipline during industrial practice.

1. Goal:

The goal of medical practice in midwifery is:
acquisition of knowledge of physiological and pathological obstetrics, mastering the general principles

of pregnancy, childbirth, and the postpartum period, the ability to analyze the obstetric situation, use basic and additional research methods, demonstrating the skills and abilities outlined in the educational and professional training program for specialists in the specialty 222 "Medicine ".
The main tasks during practice in midwifery are:
• teaching the structure and principles of work of the maternity hospital, the main indicators of the work of the obstetric hospital;
• conducting an objective examination of a pregnant woman, a woman in labor, a woman in labor;
• assessment of the severity of pathological conditions during pregnancy, childbirth, and the postpartum period;
• provision of first aid for obstetric pathology.
• carrying out medical manipulations and procedures

22. THEMATIC PLAN OF PRACTICAL LESSONS

№ i/o	Subject name	Number of hours
Module 4. Industrial medical practice in obstetrics. (acting doctor of the maternity ward)		
Content module 1. Principles of organization of medical care for pregnant women, women in labor and women in labor in Ukraine. Basic duties and professional actions of a doctor in the maternity ward.		
1.	The structure of the department and organizational activities of the doctor of the maternity ward	3
2.	Diagnosis of early and late pregnancy. Methods of examining a pregnant woman. Definition of standard examination of pregnant women and women in labor.	4
3	Management of physiological labor (determination of the onset of labor, clinical course of labor, management of labor) and postpartum period (clinic and management).	3
Content module 2. Clinical, laboratory-instrumental diagnostics and tactics of treatment of complications of pregnancy, childbirth, postpartum period in the conditions of an obstetric hospital.		
4.	Peculiarities of providing obstetric care during childbirth and the postpartum period (multiple pregnancy, fetal distress, abnormalities of the contractile activity of the uterus).	4
5.	Provision of emergency medical care in obstetrics (obstetric bleeding, preeclampsia, eclampsia, birth trauma of mother and fetus).	4

6.	Principles of ethics and deontology in the practice of a maternity ward doctor.	3
7.	Final control of modules 1-4.	4
Total:		**25**

23. INDEPENDENT WORK

The main types of independent work of students of higher education during industrial medical practice in midwifery are:

• extracurricular preparation for practical classes and final control;

• mastering the practical skills of a doctor; - work in the department of pathology of pregnant women and in the delivery department.

Module 4. Industrial medical practice in midwifery		
1.	Preparation for practical classes	6
2.	Work in the department of pathology of pregnant women and in the maternity ward to learn and practice practical skills	6
3.	Preparation for the final control	4
In total from module 4		**16**

24. MODULE 4. INDUSTRIAL MEDICAL PRACTICE IN OBSTETRICS (ACTING DOCTOR OF THE MATERNITY DEPARTMENT)

• physiology of pregnancy, methods of examination of pregnant women; the course of physiological and pathological pregnancy, childbirth and the postpartum period;

• modern standards of care for urgent obstetric pathology;

• the course of pregnancy, childbirth and the postpartum period in women with extragenital pathology;

• operative interventions in obstetrics;

• postpartum septic diseases;

• principles of pregnancy and childbirth in women with HIV;

• know modern methods of contraception in the postpartum period;

• anatomical and physiological features of the newborn period, the concept of breastfeeding. Advantages of mother and child staying together.

25. LIST OF PRACTICAL SKILLS TO BE LEARNED BY A HIGHER EDUCATION ACQUIRENT WHILE STUDYING THE MODULE

Module 4. Industrial medical practice in obstetrics.

(acting doctor of the maternity ward)

1. Collection of anamnesis from a pregnant woman, a woman in labor and a woman giving birth.
2. External obstetric examination of pregnant women, measurement of the size of the pelvis, determination of the true conjugate.
3. Determination of the term of pregnancy (according to the anamnesis and objective research), determination of the estimated term of childbirth.
4. Determination of the gestational age of the fetus and its weight.
5. Peculiarities of conducting physiological childbirth.

6. Peculiarities of providing obstetric care during childbirth and the postpartum period.
7. Determination of the condition of the newborn according to the Apgar scale. Evaluation of the condition of the fetus.
8. The primary toilet of a newborn.
9. Completion of medical documentation in obstetrics.
10. Internal obstetric examination in full-term, late pregnancy and premature birth.
11. Compilation of a scheme for medication correction of birth defects.
12. Evaluation of results of amnioscopy, amniocentesis, interpretation of CTG, ultrasound.
13. Providing assistance in emergency situations in obstetrics: eclampsia, obstetric bleeding, postpartum septic complications.

26. RECOMMENDED LITERATURE:

Basic:

1. Obstetrics and gynecology: in 4 volumes: national textbook/ Col. author; under the editorship Acad. A44 National Academy of Sciences of Ukraine, prof. V.M. Zaporozhian. - vol. 1 Obstetrics/ V.M.
2. Zaporozhian, V.K. Chaika, L.B. Markin and others; under the editorship Acad. NAMA of Ukraine, prof. V.M. Confused – K.: VSV "Medicine", 2013. – 1032 p. + 4 s. 2. Obstetrics and gynecology: in 2 books. Book 1. Obstetrics: a textbook / V.I.
3. Hryshchenko, M.O. Shcherbina, B.M. Ventskivskyi et al. — 4th edition, K.. Medicine, 2020. - 424 p.
4. Modern approaches to childbirth and the postpartum period in pathological pregnancy. Ed. Gromova A.M. , L.A. Nesterenko, Poltava, 2016.

Auxiliary:

1. Under the editorship of V.M. Zaporozhian Obstetrics and gynecology.: in 4 vols. T.1: Obstetrics: textbook. 2013, K.: Medicine, Ukrainian
2. Zaporozhian V.M. Obstetrics and gynecology.: textbook. In 2 parts, 2000, K.: Health, Ukrainian.
3. Gromova A.M. etc. Obstetrics and gynecology, a textbook for stomatologists. f-tu 2002, P.:
4. Divosvit, Ukrainian.
5. Current issues of pathological obstetrics in test tasks: teaching.
6. guide. for students honey. f-tiv VMNH III-IV yr. a., intern doctors / [I. V. Kalinovska, O. M. Yuzko, K. M. Lisova, etc.] ; Ministry of Health Care of Ukraine, VDNS of Ukraine "Bukovyn. State Medical University", Department of obstetrics and gynecology. - Chernivtsi: BSMU, 2019. - 109 p. : illustration
7. Neonatology / edited by V.M. Confused - 2nd edition. - K.: Medicine, 2018. - 928 p.

27. SECTION "PRACTICUM OF FUNCTIONAL DIAGNOSTICS"

The goal of the section: Students' assimilation of theoretical knowledge and the formation of skills and practical skills in determining the diagnostic capabilities of functional research methods in internal medicine, indications, and contraindications, methods of conducting, interpretation algorithms of the obtained results with further interpretation of the nature and severity of organ function disorders of patients at various stages of the disease, forming an idea of the relationship between the detected instrumental changes and the pathogenesis and clinical manifestations of the disease.

28. INDICATIVE STRUCTURE "PRACTICUM OF FUNCTIONAL DIAGNOSTICS"

Subject name	Practical classes	IWS
Topic 1: Methods of functional diagnostics in pulmonology Structure and functions of the respiratory system. Basic methods of functional diagnosis of diseases of the respiratory system, interpretation of their results (spirography; pneumotachometry; peak flowmetry; "flow-volume" curve of forced exhalation. Indications and contraindications for carrying out, method of execution, interpretation of results.	**4**	**3**
Topic 2: Bronchospasmolytic and provocative tests: indications and contraindications for conducting; method of execution; interpretation of results. The concept of bodyplethysmography: indications and contraindications for conducting, method of execution, interpretation of results. Assessment of bronchial resistance and gas analysis of exhaled air: indications and contraindications for conducting, method of execution, interpretation of results.	**5**	**3**
Topic 3: Methods of functional diagnostics in gastroenterology Structure and functions of the digestive system. Basic methods of functional diagnosis of diseases of the digestive system, interpretation of results (pH-metry, breathing tests, video capsule endoscopy, electrogastroenterography, endoradioprobing). Indications and contraindications for carrying out, method of execution, interpretation of results.	**4**	**3**
Topic 4: Gastrocardiomonitoring, gastrointestinal manometry. Oral glucose tolerance test, iron absorption test: indications and contraindications for conducting, method of execution, interpretation of results.	**4**	**3**
Topic 5: Electrophysiological methods of examination: electrocardiographic method of examination. normal ECG. The main properties of the heart (automaticity; conduction; excitability, contractility and refractoriness). Electrocardiographic leads (standard; reinforced; chest). Methodology of ECG registration. Electrophysiological basics of ECG. Characteristics of the ECG are normal (teeth, intervals, segments). Determination of the electrical axis of the heart. Electrocardiogram analysis.	**4**	**3**
Topic 6: ECG with hypertrophy of different parts of the heart. Signs of left and right atrial hypertrophy. Signs of left and right ventricular hypertrophy, combined ventricular hypertrophy. Overload of the ventricles. ECG changes in pulmonary embolism and acute pulmonary heart disease, chronic pulmonary heart disease, acquired heart defects, hypertension, cardiomyopathy.	**5**	**4**
Topic 7: ECG with heart rhythm disturbances ECG with heart rhythm disturbances: SA-node automaticity disturbances, ectopic (heterotopic) rhythms caused by the predominance of ectopic center automatisms, ectopic (heterotopic) cycles and rhythms mainly associated with automaticity disturbances (extrasystole, paroxysmal tachycardia, atrial flutter, atrial fibrillation, ventricular flutter and fibrillation).	**4**	**4**

Topic 8: ECG in cardiac conduction disturbances. ECG in cardiac conduction disturbances (sinoatrial blockade; intraatrial blockade; atrioventricular blockades of the I-III leads; Morganhi-Adams-Stokes syndrome; Frederic's syndrome; blockades of the legs and branches of the bundle of His; syndromes of premature ventricular excitation). ECG with an implanted pacemaker: graph of IVF depending on the type of implanted device.	**5**	**5**
Topic 9: ECG during myocardial infarction. Electrophysiological equivalents of ischemia, damage and necrosis of the heart muscle on the ECG. ECG in myocardial infarction with Q wave. ECG in myocardial infarction without Q wave. ECG diagnosis of myocardial infarction localization. ECG diagnosis of the stage of myocardial infarction. ECG diagnosis of myocardial infarction complications.	**4**	**4**
Topic 10: Electrophysiological examination methods: electromyography, electroencephalography. Neurophysiological foundations of the electromyography method, the mechanism of electromyogram formation, the main indications and contraindications for the examination, normal and pathological characteristics of EMG when lead by surface electrodes, electromyographic data in the main types of damage to the neuromuscular apparatus (muscle fiber damage, nerve ulcer transmission, damage to peripheral nerve trunks). Neurophysiological foundations of the electroencephalography method, main indications, and contraindications for the examination, normal EEG of a healthy adult, pathological types of activity of an adult, EEG changes in the cycle of wakefulness - sleep, features of EEG in the main diseases of the central nervous system (epilepsy, tumors and inflammatory diseases of the brain, vascular diseases, brain injury).	**5**	**5**
Topic 11: Daily blood pressure monitoring (ABPM) Research methodology, main indications and contraindications for examination, and interpretation of the obtained results. Advantages and disadvantages of oscillometric and auscultatory methods of blood pressure measurement. The role of ABPM in the diagnosis of arterial hypertension. Analysis of ABPM results: Average indicators of SBP, DBP, average blood pressure; Maximum and minimum blood pressure readings at different times of the day; Time index of hypertension (IH); Area index of hypertension; BP variability; Degree of nocturnal lowering of BP (circadian profile of BP); The degree and speed of morning blood pressure increase; Arterial stiffness index; Circadian heart rate index.	**4**	**4**
Topic 12: Holter ECG monitoring: research methodology, main indications and contraindications for the examination, main stages of analysis of Holter monitoring records, normal indicators of Holter monitoring, interpretation of Holter ECG monitoring results.	**5**	**5**
Topic 13: Echocardiography (EchoCG). Transthoracic echocardiography: standard positions, anatomical norms in echocardiography, indicators of LV systolic and diastolic function. Tissue dopplerography. Through esophageal echocardiography, stress - echocardiography. Basics of the methods, diagnostic value, indications and contraindications for conducting, interpretation of results.	**4**	**4**

Topic 14: Echocardiography in the diagnosis of heart diseases: ischemic heart disease, arterial hypertension, myocarditis, pericarditis, congenital and acquired heart valve defects, aortic diseases. Visualization capabilities, analysis of received data.	**4**	**5**
Topic 15: Densitometry: physiological basis of the method, research methodology, main indications and contraindications for examination, interpretation of results.	**4**	**4**
Topic 16: Polysomnography: the basics of the method, the research methodology, the main indications and contraindications for the examination, the use of polysomnography for the diagnosis of obstructive sleep apnea syndrome (OSAS) in adults.	**4**	**5**
Topic 17: Thermography: physical basis of the method, physiological basis of thermoregulation, research methodology, main indications and contraindications for examination, characteristics of thermograms of the human body, interpretation of the obtained results in diseases of internal organs.	**4**	**4**
Topic 18. Practice-oriented differentiated assessment	**4**	**5**
Total hours:	**77**	**73**

29. THEMATIC PLAN OF PRACTICAL LESSONS

Topic 1. Methods of functional diagnostics in pulmonology.
"Methods of functional diagnostics in pulmonology" Structure and functions of the respiratory system. Basic methods of functional diagnosis of diseases of the respiratory system, interpretation of their results (spirography; pneumotachometry; peak flowmetry; "flow-volume" curve of forced exhalation. Indications and contraindications for carrying out, method of execution, interpretation of results. The study of this topic involves work in the office of functional diagnostics, analysis of spirographs and their discussion.
Topic 2. Bronchospasmolytic and provocative tests in pulmonology
"Bronchospasmolytic and provocative tests in pulmonology". Indications and contraindications for conducting; method of execution; interpretation of results. The concept of bodyplethysmography: indications and contraindications for conducting, method of execution, interpretation of results. Assessment of bronchial resistance and gas analysis of exhaled air: indications and contraindications for conducting, method of execution, interpretation of results. The study of this topic involves work in the office of functional diagnostics.
Topic 3. Methods of functional diagnostics in gastroenterology.

"Methods of functional diagnostics in gastroenterology"

Structure and functions of the digestive system. Basic methods of functional diagnosis of diseases of the digestive system, interpretation of results (pH-metry, breathing tests, video capsule endoscopy, electrogastroenterography, endoradioprobing). Indications and contraindications for carrying out, method of execution, interpretation of results. The study of this topic involves work in the office of functional diagnostics.

Topic 4. "Gastrocardiomonitoring, manometry of the gastrointestinal tract. Oral glucose tolerance test, iron absorption test.

"Gastrocardiomonitoring, manometry of the gastrointestinal tract. Oral glucose tolerance test, iron absorption test.

Indications and contraindications for carrying out, method of execution, interpretation of results. The study of this topic involves work in the office of functional diagnostics.

Theme 5. Electrophysiological methods of examination: electrocardiographic method of examination. normal ECG.

"Electrophysiological examination methods: electrocardiographic examination method. The ECG is normal."

The main properties of the heart (automaticity; conduction; excitability, contractility and refractoriness). Electrocardiographic leads (standard; reinforced; chest). Methodology of ECG registration. Electrophysiological basics of ECG. Characteristics of the ECG are normal (teeth, intervals, segments). Determination of the electrical axis of the heart. Electrocardiogram analysis.

The study of this topic involves work in the office of functional diagnostics.

Topic 6. ECG with hypertrophy of different parts of the heart.

"ECG in hypertrophy of different parts of the heart".

Signs of left and right atrial hypertrophy. Signs of left and right ventricular hypertrophy, combined ventricular hypertrophy. Overload of the ventricles. ECG changes in pulmonary embolism and acute pulmonary heart disease, chronic pulmonary heart disease, acquired heart defects, hypertension, cardiomyopathy.

The study of this topic involves work in the office of functional diagnostics.

Topic 7. ECG in case of heart rhythm disturbances.

"ECG in heart rhythm disorders"

ECG in the case of heart rhythm disorders: SA-node automaticity disorders, ectopic (heterotopic) rhythms due to the predominance of ectopic center automaticity, ectopic (heterotopic) cycles and rhythms, mainly associated with automaticity disorders (extrasystole, paroxysmal tachycardia, atrial flutter, atrial fibrillation , ventricular flutter and fibrillation).

The study of this topic involves work in the office of functional diagnostics.

Topic 8. ECG in case of cardiac conduction disturbances

"ECG in violation of the conduction of the heart"

ECG in the case of heart conduction disorders (sinoatrial block; intraatrial block; atrioventricular blocks of the I-III leads; Morganhi-Adams-Stokes syndrome; Frederic's syndrome; blocks of the legs and branches of the bundle of His; syndromes of premature ventricular excitation). ECG with an implanted pacemaker: graph of IVF depending on the type of implanted device.

The study of this topic involves work in the office of functional diagnostics.

Topic 9. ECG during myocardial infarction

"ECG during myocardial infarction"
Electrophysiological equivalents of ischemia, damage and necrosis of the heart muscle on the ECG. ECG in myocardial infarction with Q wave. ECG in myocardial infarction without Q wave. ECG diagnosis of myocardial infarction localization. ECG diagnosis of the stage of myocardial infarction. ECG diagnosis of myocardial infarction complications. The study of this topic involves work in the office of functional diagnostics.

Topic 10. Other electrophysiological examination methods: electromyography, electroencephalography

"Other electrophysiological examination methods: Electromyography, electroencephalography"
Electromyography: the neurophysiological basis of the method, the mechanism of electromyogram formation, the main indications and contraindications for conducting the examination, normal and pathological characteristics of EMG when lead by surface electrodes, electromyographic data in the main types of damage to the neuromuscular apparatus (muscle fiber damage, nerve muscle transmission, damage to peripheral nerve trunks). Electroencephalography: neurophysiological basis of the method, main indications and contraindications for the examination, normal EEG of a healthy adult, pathological types of activity of an adult, EEG changes in the cycle of wakefulness - sleep, features of EEG in the main diseases of the central nervous system (epilepsy, tumors and inflammatory diseases of the brain , vascular diseases, brain injury).
The study of this topic involves work in the office of functional diagnostics, the office of electromyography, electroencephalography

Topic 11 Daily blood pressure monitoring (ABPM)

"Daily blood pressure monitoring (ABPM)"
Research methodology, main indications and contraindications for examination, interpretation of the obtained results. Advantages and disadvantages of oscillometric and auscultatory methods of blood pressure measurement. The role of ABPM in the diagnosis of arterial hypertension. Analysis of ABPM results: Average indicators of SBP, DBP, average blood pressure; Maximum and minimum blood pressure readings at different times of the day; Time index of hypertension (IH); Area index of hypertension; BP variability; Degree of nocturnal lowering of BP (circadian profile of BP); The degree and speed of morning blood pressure increase; Arterial stiffness index; Circadian heart rate index. The study of this topic involves work in the office of functional diagnostics, selection of ABPM results.

Topic 12. Holter ECG monitoring

"Holter ECG monitoring". Research methodology, main indications and contraindications for examination, main stages of analysis of Holter monitoring records, normal indicators of Holter monitoring, interpretation of results of Holter ECG monitoring.
The study of this topic involves work in the office of functional diagnostics. Selection of 24-hour ECG recording results, their interpretation and discussion

Topic 13. Method of Echocardiography (EchoCG)

Echocardiography (EchoCG). Transthoracic echocardiography: standard positions, anatomical norms in echocardiography, indicators of LV systolic and diastolic function. Tissue dopplerography. Through esophageal echocardiography, stress - echocardiography. Basics of the methods, diagnostic value, indications and contraindications for conducting, interpretation of results. The study of this topic involves working in the office of functional diagnostics. To master the skills of performing and reading the results of examinations.
Topic 14 Echocardiography in the diagnosis of heart diseases
"Echocardiography in the diagnosis of heart diseases": ischemic heart disease, arterial hypertension, myocarditis, pericarditis, congenital and acquired heart valve defects, aortic diseases. Visualization capabilities, analysis of received data. The study of this topic involves work in the office of functional diagnostics. Master the skills of performing and reading survey results.
Topic 15. Densitometry method.
"Method of densitometry". Physiological basis of the method, research methodology, main indications and contraindications for examination, interpretation of results The study of this topic involves work in the office of functional diagnostics. Master the skills of performing and reading survey results.
Topic 16. Method of polysomnography.
"Polysomnography method". The basics of the method, the research methodology, the main indications and contraindications for the examination, the use of polysomnographic research for the diagnosis of obstructive sleep apnea syndrome (OSAS) in adults. The study of this topic involves work in the office of functional diagnostics. Master the skills of performing and reading survey results.
Topic 17. Method of thermography.
"Thermography method". Physical basis of the method, physiological basis of thermoregulation, research methodology, main indications and contraindications for examination, characteristics of thermograms of the human body, interpretation of the obtained results in diseases of internal organs. The study of this topic involves work in the office of functional diagnostics. Master the skills of performing and reading survey results.
Topic 18. Practice-oriented differentiated assessment

30. TYPES OF INDEPENDENT WORK OF STUDENTS

Types of IWS	Number of hours	Types of control
Preparation for practical classes	40	Current control, credit

Performing individual work: performing and interpreting the results of instrumental research in accordance with the topics of the workshop	29	Credit
Preparation for the final control	4	differentiate test
Total	**73**	

31. RECOMMENDED LITERATURE FOR THE SECTION "PRACTICUM OF FUNCTIONAL DIAGNOSTICS"

Basic literature :

1. Perederii V. G. Basics of internal medicine: textbook. T. 2. Diseases of the circulatory system. Rheumatic diseases. Kidney disease.

General questions of internal medicine / V. G. Perederii, S. M. Tkach.

- Vinnytsia: Nova Kniga, 2018. - 784 p.

2. Perederii V. G. Basics of internal medicine: textbook. T. 3. Differential diagnosis and management of patients in the clinic of internal medicine. Acute and urgent conditions in the clinic of internal medicine / V.G. Perederii, S.M. Weaver. - Vinnytsia: New Book, 2018
3. Perederii V.G., Tkach S.M. Basics of internal medicine. Textbook. Volume 1. Diseases of the respiratory system, diseases of the digestive system, diseases of the blood system and hematopoietic organs, diseases of the endocrine system. – Vinnytsia: New Book, 2009 – 640p.
4. Internal diseases: in 2 parts. Part 1. Chapters 1-8: textbook / L.V. Hlushko, S.V. Fedorov, I.M. Skrypnyk and others. - 2019. - Edition "Medicine" - 680 p.
5. Internal diseases: in 2 parts. Part 2. Chapters 9-24: textbook / L.V. Hlushko, S.V. Fedorov, I.M. Skrypnyk and others. - 2019. - Edition "Medicine" - 584 p.

Auxiliary literature

1. Svintsitsky A. S. Diagnostic methods in the clinic of internal medicine: teaching.

manual for intern doctors and medical students. Ist. of higher of education / A. S. Svintsitskyi. Kyiv: Medicine, 2019. - 1007 p.

Information resources:

7. https://empendium.com/ua/

8 . Ukrainian portal of functional diagnostics. Access mode: https://fd.org.ua/

Official evidence-based, practically-oriented medical information contained in the publications:

1. AMA (American Medical Association) https://www.ama-assn.org/
2. American Academy of Family Physicians http://www.aafp.org/home.html
3. American Academy of Pediatrics Policy (AAP Policy) Clinical Practice Guidelines https://www.aap.org
4. American College of Cardiology http://www.acc.org/
5. American College of Emergensy Physicians https://www.acep.org/
6. American Heart Association http://news.heart.org/
7. BMJ Clinical Evidence http://clinicalevidence.bmj.com
8. Brain Trauma Foundation (BTF) https://www.braintrauma.org/http://www.trauma.org/
9. Eastern Association for the Surgery of Trauma https://www.east.org/
10. European Pediatric Association, the Union of National European Pediatric Societies and Associations (EPA/UNEPSA) http://www.epa-unepsa.org/
11. European Society of Cardiology http://www.escardio.org/

12. http://www.mozdocs.kiev.ua
13. Medscape from WebMD http://www.medscape.com
14. Medscape from WebMD http://www.medscape.com
15. National Comprehensive Cancer Network https://www.nccn.org/
16. National Guideline Clearinghouse https://www.guideline.gov/
17. National Institute for Health and Clinical Excellence (NICE) https://www.nice.org.uk/ 18. Royal College of Physicians https://www.rcplondon.ac.uk/
19. The Association of the Scientific Medical Societies in Germany http://www.awmf.org 20. The Cochrane Collaboration The Cochrane Library
21. The European Society for Emergency Medicine https://www.eusem.org/
22. The Finnish Medical Society Duodecim https://www.duodecim.fi/
23. The French National Authority for Health http://www.has-sante.fr/
24. The National Association of Emergency Medical Technicians (NAEMT) http://www.naemt.org/
25. The National Association of State EMS https://www.nasemso.org/
26. The National Health and Medical Research Council (NHMRC) https://www.nhmrc.gov.au
27. Up To Date http://www.uptodate.com Western Trauma Association https://westerntrauma.org/

32. TEACHING METHODS

According to the sources of knowledge, teaching methods are used: verbal - story, explanation, lecture, instruction; visual - demonstration, illustration; practical - practical work, problem solving. According to the nature of the logic of knowledge, methods are used: analytical, synthetic, analytical-synthetic, inductive, deductive. According to the level of independent mental activity, the following methods are used: problem-based, searching, research.

1. Verbal methods: conversation;
2. Visual methods: illustration, demonstration, demonstration at the patient's bedside;
3. Practical methods: performing practical work and solving situational tasks to develop skills and abilities; simulation training.
4. Students' independent work on understanding and assimilation of new material
5. Use of control and training computer programs
6. Innovative teaching methods: Case-based learning (Learning through the analysis of a clinical case, situation); brainstorming; educational discussion; educational debate; role play; team-based learning; think-pair-share.

The types of training classes according to the curriculum are: practical classes; independent work of students.

Control methods

Current control is carried out on the basis of control of theoretical knowledge, practical skills, and abilities.

Forms of current control are oral survey (frontal, individual, combined), interview; practical verification of the formed professional skills (carried out based on the results of solving clinical cases, working with medical documentation, performing practical skills, working at the patient's bedside); test control ("open" and "closed" test tasks).

Current control is mandatory. During the evaluation of mastering each topic from all disciplines of the curriculum for the current educational activity, the student is given grades on a 4-point (traditional scale) taking into account the approved evaluation criteria for the discipline. All types of work provided by the curriculum are taken into account. The student must receive a grade in each topic. The teacher conducts a survey of each student in the group at each lesson and assigns a grade in the journal of attendance and student success according to the traditional scale ("5", "4", "3", "2").

When evaluating the student's current educational activity, 20% of the grade is the student's independent work, which takes into account the knowledge of the topic of independent study and the performance of work in the notebook.

The final (summary) control is carried out:

• in the form of a written test, which includes test tasks, theoretical questions

• control of practical skills (solving clinical cases, defense of medical history, assessment of the correctness of practical skills - practical-oriented exam.

According to the specifics of professional training, preference is given to test and practically oriented control.

The form of final control of study success.

The final control of the discipline is carried out on the basis of control of theoretical knowledge, practical skills and abilities.

Differential assessment is a form of final control of the student's assimilation of theoretical and practical material from the academic discipline.

Scheme of calculation and distribution of points received by students.

The maximum number of points for a discipline is 200 points. The ratio between the results of the evaluation of the current educational activity and the final control of knowledge is 60% and 40%.

The study of the discipline ends with a final control in the form of a differential assessment.

Only those students who do not have academic debt (all missed classes have been completed) and whose average score for the current educational activity in the academic discipline is at least "3" are admitted to the differential credit.

The maximum number of points that a student can score for the current educational activity for admission to the exam is 120 points and is defined as the sum of the arithmetic average of all grades received in the semester.

The minimum number of points that a student must score for the current educational activity for admission to the exam is 72 points. Recalculation of the average grade for the current academic performance (on a 120-point scale) in the table. 1.

Table 1.
Recalculation of the average grade for the current academic performance in a multi-point scale for disciplines ending with an exam

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	120	4.29	103	3.58	86
4.96	119	4.25	102	3.54	85
4.92	118	4.21	101	3.50	84
4.87	117	4.17	100	3.46	83
4.83	116	4.12	99	3.42	82
4.79	115	4.08	98	3.37	81
4.75	114	4.04	97	3.33	80
4.71	113	4.00	96	3.29	79
4.67	112	3.96	95	3.25	78
4.62	111	3.92	94	3.21	77
4.58	110	3.87	93	3.17	76
4.54	109	3.83	92	3.12	75
4.50	108	3.79	91	3.08	74
4.46	107	3.75	90	3.04	73

4.42	106	3.71	89	3	72
4.37	105	3.67	88	Less than 3	Not enough
4.33	104	3.62	87		

The maximum number of points that a student can score when taking the exam is 80 (the minimum number is at least 50).

The grade for the discipline is determined comprehensively, as the sum of points for the current educational activity and points for the exam.

From the allocated 120 points for the current educational activity, 4 to 12 additional points are allocated for the assessment of individual independent work of higher education applicants, according to the work curriculum. Encouragement points are added to the final grade for the discipline at the end of its study.

Points from the discipline for students who have successfully completed the program are converted into the national scale and the ECTS system (Table 2).

Table 2

Evaluation scale: national and ECTS

The sum of points for all types of educational activities	ECTS grade	Grade according to the national scale	
		for the exam, differentiate test	for credit
180-200	A	excellent	credited
160-179	B	good	
150-159	C		
130-149	D	satisfactorily	
120-129	E		
50-119	FX	unsatisfactory with the possibility of retaking	Not credited with the possibility of retaking
0-49	F	unsatisfactory with mandatory repeated study of the discipline	Not credited with mandatory repeated study of the discipline

33. METHODOLOGICAL PROVISION

1. Methodical developments of lectures.

2. Methodical guidelines for the independent work of higher education students during preparation for practical classes and during classes.
3. Methodological guidelines for the independent work of higher education applicants for the study of topics submitted for independent study.
4. Methodological recommendations on the organization of production practice.
5. List of recommended literature.
6. Multimedia presentations.
7. Materials for monitoring the knowledge, abilities and skills of higher education applicants in:
- tests of different difficulty levels;
- tests from the license exam bank "KROK - 2";
- situational tasks;
- computer control programs.
8. Video films.
9. Clinical tests.