

**INTERNATIONAL EUROPEAN UNIVERSITY
EDUCATIONAL AND SCIENTIFIC INSTITUTE
"EUROPEAN MEDICAL SCHOOL"**

APPROVED

Director of ESI"EMS"

Ph.D. Associate Professor

Alexandrina



**COURSE TRAINING PROGRAM
on
MEDICAL PRACTICAL TRAINING
WITH FUNCTIONAL DIAGNOSTICS WORKSHOP**

Degree level	Master
Field of study	22 "Health care"
Specialty	222 "Medicine"

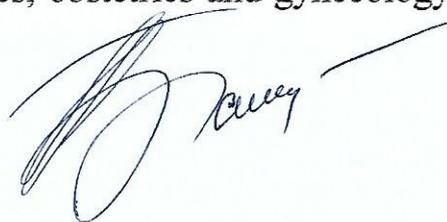
Kyiv - 2022

DEVELOPED AND INTRODUCED: Educational and Scientific Institute "European Medical School", Department of Clinical Disciplines with courses in internal medicine, surgery, pediatrics, obstetrics and gynecology.

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Discussed and approved by the Department of clinical disciplines with courses in internal medicine, surgery, pediatrics, obstetrics and gynecology № 1 from " 23 " 08 2022

Head of the department Babenkov G.D.



Approved at the meeting of the Scientific Council of the ESI"EMS"

№ 1 of " 29 " 08 of 2022

DESCRIPTION OF THE ACADEMIC DISCIPLINE

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the academic discipline		
Credits - 10	Branch knowledge : 22 " Security health »	Full course		
Chapters -2	Specialty 222 "Medicine"	Year preparation		
		5		
The total number of hours is 300 hours	Level higher Education : Master's degree	Semesters		
		9	10	
	Form _ training : daytime	Lectures	-	-
		Practical	90	84
		SRS	60	66
	Type of discipline: mandatory	Type of control:		
	Differential calculation			

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 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. Production medical practice: c. of the family doctor (therapeutic aspect) ;
- Module 2. Production medical practice: c. at. precinct surgeon ;
- Module 3 . Production medical practice: c. at. precinct pediatrician;
- Module 4. Production medical practice in obstetrics. (executive duties doctor 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	
ZK-1	Ability to abstract thinking, analysis and synthesis.
ZK-2	Ability to learn and master modern knowledge.
ZK-3	Ability to apply knowledge in practical situations.
ZK-4	Knowledge and understanding of the subject area and understanding of professional activity.
ZK-5	Ability to adapt and act in a new situation.
ZK-6	Ability to make informed decisions.
ZK-7	Ability to work in a team.

ZK-8	Ability to interpersonal interaction.
ZK-10	Ability to use information and communication technologies.
ZK-11	Ability to search, process and analyze information from various sources.
ZK-12	Determination and persistence in relation to assigned tasks and assumed responsibilities.
Professionals competence (FC)	
FC-1	Ability to collect medical information about the patient and analyze clinical data.
FC-2	Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
FC-3	Ability to establish a preliminary and clinical diagnosis of the disease.
FC-4	The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
FC-5	The ability to determine the nature of nutrition in the treatment and prevention of diseases.
FC-6	Ability to determine the principles and nature of treatment and prevention of diseases.
FC-7	Ability to diagnose emergency conditions.
FC-8	Ability to determine tactics and provide emergency medical care.
FC-10	Ability to perform medical manipulations.
FC-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.
FC-12	Ability to determine driving tactics physiological pregnancy , physiological childbirth and postpartum period _ Skills consulting on issues planning family and choosing a contraceptive method .
FC-13	Ability to conduct sanitary and hygienic and preventive measures _
FC-15	Ability to conduct examinations working capacity .
FC-16	Ability to maintain medical documentation, including electronic forms.
FC-24	Adherence to ethical principles when working with patients and laboratory animals.
FC-25	Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results.
Software the results training (PRN)	
PRN-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.

PRN- 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.
PRN- 4	Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
PRN- 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.
PRN- 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) .
PRN- 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).
PRN- 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.
PRN- 10	Determine the necessary mode 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 existing algorithms and standard schemes.
PRN- 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.
PRN- 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.
PRN- 13	Conduct evaluation and monitoring development of a child , to provide feeding recommendations and features _ food depending from age , organize carrying out preventive vaccinations according to the calendar.

PRN- 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 .
PRN- 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.
PRN- 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 regulatory documents .
PRN- 19	Plan and implement a system of anti- epidemic and preventive measures measures , regarding occurrence and distribution diseases among population _
PRN- 21	Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
PRN- 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.
PRN- 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, organize additional vaccination campaigns , including immunoprophylaxis measures.

Section "Industrial medical practice"

Module 1. Production medical practice: c. of the family doctor (therapeutic aspect) ;
Module 2. Industrial medical practice: c. at. district surgeon;
Module 3. Industrial medical practice: c. at. district pediatrician;
Module 4. Industrial medical practice in obstetrics.

Module 1. Production medical practice: c. of the family doctor (therapeutic aspect)

Description module (abstract)

Industrial medical practice Acting module of a family doctor provides for students of higher education to acquire practical skills according to the educational and professional program 222

"Medicine". It is held at the time when the acquirers higher education of the 5th year of the medical faculty acquired knowledge from the inside of medicine

Practice is carried out as executor duties family doctor (therapist) according to the current one curriculum and program . Production practice (medical) of acquirers higher of V course education in volume professional responsibilities family doctor (therapist) of the polyclinic . Production internal medical practice of medicine Content module 1 .

When passing industrial practice acquirers higher education are obliged to :

- to the beginning passage production practice to receive from manager department of higher production practice educational institution of consultation of term practice , registration documentation etc .;
- in the dean 's office get referral to basic institution for internship ;
- on time arrive at the practice base;
- in full volumes perform all task provided for practice program and instructions her managers on cycles;
- study and strictly follow the safety rules labor , equipment security ;
- perform , acting in the treatment the institution , the rules of the internal labor procedure ;
- be responsible for the assigned work, her the results are on par with full-time employees ;
- keep a practice diary , another the documentation provided for practice program ;
- after the end of the cycle (" Production acting medical practice _ family lkarya ») practice to submit to the head of practice from educational institution written performance report _ everyone tasks provided for program , filled out and signed direct basic manager diary ; • timely pass PMK in practice.

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

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

b) lays down foundations internal study by students medicine and others clinical discipline that _ provides integration teaching with these disciplines and formation skill apply knowledge of occupational diseases in the process further training and in professional activities ;

c) lays down basics of a healthy lifestyle and prevention violation functions in the process labor activities .

Purpose and tasks module:

Goal study " Medical practice acting _ family of the doctor ": consists in fixing practical skills within competencies and outcomes studies defined in educational and professional program preparation specialists in the specialty 222 "Medicine" branch of knowledge 22 " Protection health ": mastery the main ones manipulations and diagnostic methods for making a diagnosis and choosing the right method of treatment ; formation responsibility acquirer higher education as the future specialist for the level own preparation and its improve for training and professional activities .

The main ones practice tasks are consolidation knowledge and skills acquired during study _ basic clinical and theoretical discipline (examination of the patient, establishment clinical diagnosis , appointment treatment) and further improvement practical skills , familiarization with the organization

medical matters and conditions work doctor in the family department polyclinics , as well as fixing skills sanitary and educational work _

As a result study educational disciplines getter higher education should **be able to** :

- conduct survey and physical examination patients and analysis their results ; - to plan schemes examination of a specific patient depending from features clinical I will run disease ;
- analyze the results basic laboratory and instrumental methods research ;
- determine leading pathological symptoms and syndromes at the most common diseases ;
- conduct differential diagnostics and put previous diagnosis most common diseases ;
- interpret general principles treatment , rehabilitation and prevention most common therapeutic diseases ;
- to master methods of diagnosis and provision urgent pre - hospital assistance stage ;
- master necessary medical manipulations ;
- get acquainted from driving medical documentation in the primary care center or polyclinics ;
- master the moral and deontological principles of medicine specialist and professional principles subordination

Production practice involves :

- study acquirers higher education organizational structures of the primary care center or polyclinic and individual her subdivisions , as well as documentation of the Ministry of Health of Ukraine , which regulates her work;
- participation in the outpatient polyclinic sick and healthy adults family by doctors and specialist doctors , mastery skills driving necessary documentation outpatient polyclinic doctors institutions ;
- mastering the rules of conduct dynamic observation of sick and healthy individuals _ groups , opportunities granting medical assistance in day and home conditions inpatient ;
- participation in formation basic principles of a healthy lifestyle of prevention the most common diseases among population ;
- knowledge basic manifestations , factors risk , principles treatment basic most common diseases for the purpose of them prevention , early detection and timely granting necessary help _

Thematic plan of lectures .

Not provided educational plan .

Thematic plan of practical classes :

No s/p	Topic name	Number of hours
1	Principles organizations granting planned and urgent assistance in outpatient clinics conditions _ Reception patients _ Carrying out survey and physical examination patients _ Filling medical outpatient card . Definition volume additional research , evaluation their results . Installation previous diagnosis . Determination of further tactics treatment , rehabilitation , prevention . Labor forecast.	4
2	Work in the office functional diagnostics : assessment functions external breathing , ECG, echocardiography , phonocardiography , radiography and fluoroscopy bodies chest cell , gastrointestinal tract, bile bladder and kidneys , esophagogastroduodenoscopy , colonoscopy .	4
3	Work in physiotherapy office : participation in electrotherapy direct current, pulse currents of low and sound frequency , high frequency electrotherapy , magnetotherapy , aeroionotherapy , ultrasound therapy , heat and hydrotherapy procedures etc. _	4
4	Work in the office urgent help polyclinics : examination of the patient, definition syndromes and availability urgent states _ Participation in the provision urgent assistance in emergency rooms situations : acute cardiac failure , hypertensive crisis, paroxysmal violation heart rhythm, thromboembolism pulmonary arteries , asthmatic status, acute gastrointestinal bleeding , acute renal insufficiency .	4
	Total per module	16

Thematic plan of independent work

o	Topic name	Number of hours
1.	Preparation for practical classes.	5
2.	Participation in polyclinic reception	10
3.	Together	15

List theoretical questions for preparation acquirers higher education up to the written level control:

1. Epidemiology hypertensive diseases and definitions concept _ Exogenous and endogenous factors risk hypertensive diseases , methods of active detection , classification . Standards examination patients and their rehabilitation . Dynamic observation of people with factors risk and sick . Efficiency primary and secondary measures _ prevention hypertensive diseases _
2. Epidemiology and prevention of CHD. Factors CHD risk and their correction . Diagnosis and treatment different clinical forms of coronary artery disease in outpatients conditions _
3. Clinical and expert characteristics of cardiovascular diseases _
4. Methods definition morphological changes and functional cardiovascular disorders _ diseases _
5. Indications and contraindications for work with cardiovascular diseases diseases _
6. Criteria definition groups disabilities in cardiovascular diseases diseases _
7. Ways of rehabilitation patients _
8. Epidemiology bronchial _ asthma and definition concept _ Exogenous and endogenous factors AD risk , methods of active detection , classification . Standards examination patients and their rehabilitation . Dynamic observation of people with factors risk and sick . Efficiency primary and secondary measures _ BA prevention .
9. COPD: factors risk , diagnosis , treatment and prevention .
10. Epidemiology and primary prevention diseases of the alimentary canal.
11. Clinical and expert characteristics of chronic diseases lungs _ Criteria definition groups disability . Labor forecast.
12. Helicobacter pylori-associated diseases of the digestive tract: diagnosis , treatment , prevention .
13. Epidemiology chronic hepatitis and definition concept _ Exogenous and endogenous factors CG and CP risk , methods of active detection , classification . Standards examination patients and their rehabilitation . Dynamic observation of people with factors risk and sick . Efficiency primary and secondary measures _ prevention of HG.
14. Chronic pancreatitis and diseases biliary ways - criteria diagnostics , principles treatment _ MSE in diseases bile bladder and pancreas glands _
15. Exo - and endogenous factors risk occurrence diseases thyroid glands , diagnosis , prevention , treatment .
16. Classification , diagnosis and treatment sugar diabetes different types _
17. Algorithms differential diagnostics jaundice
18. Algorithms differential diagnostics for articular syndrome _

List practical skills for final control :

1. Carrying out medicinal reception in cents Primary care center under the supervision of a doctor general practice - family practice doctor and registration of : medical passport of the precinct
2. Design profile log of the station , call log doctor record sheet home daily reception patients _
3. Design monthly work plan doctor
4. Design medical maps of outpatients and epicrisis .
5. Filling statistical maps for registration final (specified) diagnoses .

6. Granting medical help sick home under the supervision of a doctor general practice - family practice doctor _
7. Carrying out organizations home inpatient and necessary additional examinations , consultations at home conditions
8. Granting medical assistance in the conditions of the day hospital of the primary care center under the supervision of the doctor of the day hospital
9. Carrying out organizations urgent help at home and in the conditions of the primary care center, studying the rules of hospitalization in urgent need.
10. Design temporary disability , certificates about temporary incapacity
11. Design documents when referring a patient to MSE (cover letter) for determination degree losses working capacity
12. Extract recipes and design recipes for free issues medicines
13. Conducting dynamic observation sick and disabled people (accounting according to nosologies , conducting planned reviews patients , treatment , consultations narrow specialists)
14. Design control cards dynamic accounting
15. Make a health route measures , restorative food , sanatorium resort selection at different diseases
16. Design a certificate for the need for sanatorium-resort treatment and sanatorium - resort cards
17. Improve interpretation laboratory -instrumental results research : general analysis blood , biochemical analysis blood , general analysis urine , results tests according to Zemnytskyi and Nechiporenko, stool analysis and co- programs , analysis sputum , analysis pleural and ascitic liquid , analysis stomach secretions , bile
18. Rating results reaching functions external breathing , ECG, Holter ECG monitoring, DMAT, echocardiography , radiography and fluoroscopy bodies chest cell , gastrointestinal tract, bile bladder and kidneys , esophagogastroduodenoscopy , colonoscopy .

Recommended reading :

Basic :

1. Family medicine. In 3 books: [textbook for students higher med. teach _ IV level institutions accreditation]. Book 2. Symptoms and syndromes in the clinic internal diseases / edited by O. M. Girinoy , L. M. Pasieshvili ; L. S. Babinets , O. M. Barna, S. V. Biletsky , and others . - K.: Medicine, 2016. - 455 p.
2. Organizational aspects systems primary medical and sanitary assistance in Ukraine : educational manual [for medical students institutions higher Ministry of Education of Ukraine] / Yu. M. Kazakov, T. A. Tribat , 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 :

3. Organization work precincts therapists and family doctors and preventive therapy _ - Glass Family medicine. In 3 books : [textbook for students higher teach _ institutions of medicine Universities , Institutes and Acad.]. Book 3. Special part _ Polyprofylity general of medical practice / edited by O. M. Girinoy , L. M. Pasieshvili ; L. S. Babinets , P. A. Bezditko , S. A. Bondar and others . - K.: Medicine, 2017. - 679 p.

4. Internal diseases : in 2 parts . Part 1. Sections 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. Sections 9-24 : textbook / L.V. Hlushko, S.V. Fedorov, I.M. Skrypnyk and others . /- Kyiv , Medicine., 2019. – 584 p. + 6 books incl .
5. Perederii V.G. Foundations internal of medicine : [textbook for students higher _ honey. teach _ IV level institutions accreditation] . T. 2: Diseases systems blood circulation Rheumatic diseases _ Disease kidney _ general question internal of medicine / V.G. Perederii , S. M. Tkach. - Vinnytsia : New book, 2009. - 781 p.
6. Modern classifications and standards treatment spread out diseases internal organs / Under the editorship of Yu.M. Mostovoy – 13th ed., add. - and processing . Vinnytsia : State-owned enterprise cartographic factory", 2020. - 582 p.
7. Denesyuk V.I., Denesyuk O.V. Internal medicine. Textbook for students institutions higher medical III-IV levels of education accreditation and doctors postgraduate education on the basis of recommendations proof of medicine / Under the editorship of V.M. KovalenkoK .: MORION; 2019.-980 p.
8. Zharinov O.Y. Foundations electrocardiography (third edition , revised and supplemented) / O.Y. Zharinov , V.O. Kuts . - Lviv . : MS, 2017. – 240 p.
9. I.P. Katerenchuk Clinical assessment , diagnostic and prognostic value results laboratory studies : Educational guide . Rheumatology.- _ Medical book , 2018.-176 p.
10. I.P. Katerenchuk Clinical interpretation and diagnostic value laboratory indicators in the general hospital practice : Educational guide . - Medical book , 2018.-224 p.
11. Order of the Ministry of Health of Ukraine dated 02.03.2016 No. 152 "On approval and implementation of medical and technological documents with standardization medical help with stable ischemic the disease hearts ". Unified clinical protocol of emergency , primary , secondary (specialized) and tertiary (highly specialized) medical assistance " [Stable ischemic heart disease](#) " .
12. Order of the Ministry of Health of Ukraine dated 02.07.2014 No. 455 "On approval and implementation of medical and technological documents with standardization medical of assistance in acute coronary syndrome with ST segment elevation" Unified clinical protocol of emergency , primary , secondary (specialized) and tertiary (highly specialized) medical aid and medical rehabilitation « Acute ST segment elevation coronary syndrome " .
13. Order of the Ministry of Health of Ukraine dated 03.03.2016 No. 164 "On approval and implementation of medical and technological documents with standardization medical of assistance in acute coronary syndrome without ST segment elevation " Unified clinical protocol of emergency , primary , secondary (specialized) and tertiary (highly specialized) medical aid and medical rehabilitation « Acute coronary syndrome without ST segment elevation" .
14. Order [Ministry of Health of Ukraine dated 11.02.2016 No. 89](#) "On approval and implementation of medical and technological documents with standardization medical help patients with stage V chronic kidney disease from application hemodialysis or peritoneal dialysis " .
15. Order of the Ministry of Health of Ukraine dated 04.11.2014 No. 263 "On approval and implementation of medical and technological documents with standardization medical help with rheumatoid arthritis ". Unified clinical protocol of primary , secondary (specialized) , tertiary (highly specialized) medical aid and medical " Rheumatoid arthritis" rehabilitation .

16. Order of the Ministry of Health of Ukraine dated 11.05.2011 No. 280/44 "On approval of the standard and unified clinical protocols granting medical help with specialty " Nephrology ".
17. Order [Ministry of Health of Ukraine dated 13.06.2016 No. 564](#) "On approval and implementation of medical and technological documents with standardization medical assistance in part prevention cardiovascular diseases ". [Unified clinical protocol primary , secondary \(specialized \) and tertiary \(highly specialized \) medical assistance " Prevention cardiovascular diseases " .](#)
18. [Order of the Ministry of Health of Ukraine dated 15.06.2016 No. 597](#) "On approval and implementation of medical and technological documents with standardization medical help with fibrillation atrium ". [Unified clinical protocol of primary , secondary \(specialized \) and tertiary \(highly specialized \) medical help « Fibrillation atrium " .](#)
19. [Order of the Ministry of Health of Ukraine dated 15.06.2016 No. 597](#) "On approval and implementation of medical and technological documents with standardization medical help with fibrillation atrium ". [Unified clinical protocol of primary care , secondary \(specialized \) and tertiary \(highly specialized \) medical help « Fibrillation atrium " .](#)
20. [Order of the Ministry of Health of Ukraine dated 21.06.2016 No. 614](#) "On approval and implementation of medical and technological documents with standardization medical help with pneumonia hypertension ". [Unified clinical protocol of emergency , primary , secondary \(specialized \) and tertiary \(highly specialized \) medical assistance " Legenev hypertension in adults " .](#)
21. Order of the Ministry of Health of Ukraine dated 05/24/2012 No. 384 "On approval and implementation of medical and technological documents with standardization medical help with arterial hypertension ". Unified clinical protocol of primary , emergency and secondary (specialized) medical care of assistance " Arterial hypertension ".
22. Svyntsytsky A.S. Diagnosis and treatment rheumatic diseases : Educational guide . - Medical book , 2017.-372 p.
23. Cardiovascular disease _ Classification , standards diagnosis and treatment // Edited by academician V.M. Kovalenko , professor M.I. Lutai , professor Y. M. Sirenko , professor O.S. Sychova . // Kyiv . - 2016. - 188 p.
24. Cardiovascular disease _ Classification , standards diagnostics and treatment / Vseukr . assoc . cardiologists ; Under the editorship V. M. Kovalenko [and others]. - 3rd ed., revised . and added _ – Kii in : Morion , 2018. – 223 p. : il , tab.

16. Electronic resource

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-4506-b264-11e4e3d968f7/0/curriculumSubTopics <https://www.123sonography.com/ultrasound-courses> <https://www.asecho.org/rising-star-hub/echo-images/http://inephrology.kiev.u/http://phc.org.u/>
6. http://mtd.dec.gov.ua/images/dodatki/2014_455_GKS/2014_455%20YKPMG_GKS.pdf www.WebCardio.org
7. https://professional.heart.org/professional/GuidelinesStatements/UCM_316885_Guidelines-Statements.jsp - AMERICAN HEART ASSOCIATION 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

Module 2. Production medical practice: c. at. precinct a surgeon

Description module (abstract)

Module 2. Acting _ precinct surgeon , studies surgical help patients in conditions polyclinic , which is always was considered the leading link of protection health population _ In polyclinic institutions up to 85% of patients start and finish treatment _ A sick person does not isolate himself from social the environment in which flowing her life _ But the polyclinic service has your features _ To such features that form the nature of work doctor , worth it carry : tough time limit that _ _ released to work with the patient , limited possibility adjust inaccuracies accepted decision a doctor , not always available using modern methods diagnostics and treatment . Conditions labor formulate personality requirements _ surgeon polyclinics . Assimilation module material will provide possibility get practical skills and form professional skill of diagnostics and treatment surgical diseases _

Prerequisites and postrequisites (interdisciplinary connections) :

Studying module 2. c. at. of a district surgeon is based on the knowledge acquired by students of higher education during the mastering 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.

Purpose and tasks :

The purpose of studying module 2. c. at. precinct a surgeon is: consolidation in practice knowledge and skills which _ obtained during study clinical and theoretical discipline , improvement and deepening practical acquired skills _ during practical classes at surgical departments , determination of conservative and surgical tactics treatment , rehabilitation patients after operations .

The main ones tasks study of module 2. c. at. precinct a surgeon are: familiarization with the organization granting ambulatory surgical assistance , conducting anti-epidemic work in the polyclinic , acquisition and consolidation skills sanitary and educational work , formation professional skills and abilities of granting medical surgical assistance _ diseases in conditions polyclinics , mastery basic surgical manipulations , surgical principles interventions in outpatients conditions and rehabilitation patients _

Thematic plan of practical classes Module 2. c. at. precinct a surgeon

No	The subject of the lesson	hours
1.	Principles organizations granting surgical assistance in outpatient clinics conditions _ Medical ethics and deontology . <i>Questions</i> . Normative documents of the Ministry of Health of Ukraine , which regulate the work of the precinct a surgeon Concepts and rules of compliance principles ethics and deontology in work precinct a surgeon	4
2.	Question examinations vitality and working capacity surgical patients _ <i>Questions</i> . Registration rules letters temporary losses working capacity . Contingents surgical patients who _ are subject to dispensary supervision . Design necessary documents on MSEK.	4
3.	Purulent disease skin and soft tissues. Clinic , diagnosis , treatment . Tetanus . <i>Questions</i> . Furuncle. Carbuncle. Abscess . Phlegmon. Besykha . Erysipeloid . Hidradenitis . Anaerobic clostridial and non- clostridial infection : necrotic cellulite fasciitis _ Clinic , diagnosis , treatment . Empirical and purposeful antibiotic therapy . Antibiotic resistance and ways of prevention her development _ Pravets , active- passive rules immunization .	4
4.	sharp surgical disease bodies abdominal and thoracic cavity _ Clinic , diagnosis , treatment . <i>Questions</i> . Definition sharp stomach Differential diagnosis sharp diseases bodies abdominal cavity _ Spontaneous pneumothorax, acute and chronic abscess lung , lung gangrene , acute and chronic empyema pleura _ Clinic , diagnosis , treatment tactics . Indications and technique implementation puncture pleural cavity _	4
5.	Injuries bodies abdominal , thoracic cavity and musculoskeletal device _ Diagnosis , treatment tactics . <i>Questions</i> . Hemoperitoneum in trauma : clinic , diagnosis , treatment tactics. FAST protocol . Urgent help victims with abdominal injuries. Methods research in the case of OGK damage . Rib fractures, floating rib fractures. Pneumothorax, hemothorax, clinic , diagnosis , treatment , urgent help _ Transport immobilization for limb fractures .	4
	Total :	20

Independent work

No n/p	Topic	Number of hours
1.	Elaboration of topics that are not included to the plan classroom classes.	
	1. New ones technologies in surgery . Modern methods diagnostics and treatment .	3 4
	2. Obturational jaundice _ Causes of occurrence . Differential diagnostic tactics. Modern approaches to treatment .	4 4
	3. Obliterating disease arteries _	4
	4. Varicose veins expansion of the lower veins limbs _	
	Together:	15

List theoretical questions to the final control .

1. Furuncle. Carbuncle. Hidradenitis . Clinic , diagnosis , treatment .
2. Abscess . Phlegmon. Clinic , diagnosis , treatment .
3. Panaritius . Erysipeloid . Clinic , diagnosis , treatment .
4. Besykha . Clinic , diagnosis , treatment .
5. Anaerobic clostridial and non- clostridial infection _ Necrotic cellulite _ Necrotic fasciitis _ Gas gangrene. Clinic , diagnosis , treatment .
6. Clinical and laboratory signs of systemic syndrome inflammatory answers , factors that _ spry
7. Types of abdominal pain . Definition sharp stomach
8. Objective examination patients with acute stomach pain . _
9. Differential diagnosis sharp diseases bodies abdominal cavity according to the nature of the pain.
10. Tactics of treatment acute appendicitis, acute cholecystitis, acute pancreatitis, peritonitis , acute intestinal obstructions .
11. Special instrumental methods examination esophagus and stomach .
12. Kinds jaundice , causes of occurrence . Differential diagnosis jaundice _
13. Instrumental methods examination for diseases liver and bile ducts ways (ultrasound, CT, MRI, ERPHG).
14. Treatment tactics for obturation jaundice non-tumor and tumor genesis _
15. The main ones etiological factors bleeding from upper and lower departments of the gastrointestinal tract.
16. Clinical signs bleeding from upper and lower departments of the gastrointestinal tract.
17. Classification injuries bodies abdominal cavities , clinic , diagnostics .
18. Abdominal injury. Urgent diagnostics and FAST protocol.
19. Acute and chronic abscess lungs _ Clinic , diagnosis , treatment .
20. Spontaneous pneumothorax, bullous disease. Clinic , diagnosis , treatment .
21. Lung gangrene , etiology , pathogenesis. Clinic , diagnosis , treatment .
22. Acute and chronic empyema pleura , etiology , pathogenesis.
23. Classification injuries bodies chest cages _

24. Urgent diagnosis of OGK injuries .
25. Rib fractures, floating rib fractures. Clinic , diagnosis , treatment .
26. Pneumothorax. Clinic , diagnosis , treatment . Urgent help with 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 veins limbs _
30. Thrombophlebitis lower ones limbs _ Clinic , diagnosis , treatment .
31. Phlebothrombosis of lower veins limbs _ Clinic , diagnosis , treatment .
32. Stages carrying out primary surgical wound treatment species surgical seams _

List practical skills to final control .

1. Carrying out physical examination patients _
2. Definition key clinical and anamnestic signs sharp surgical pathologies .
3. Interpretation results laboratory and instrumental methods of research .
4. Justification and wording previous diagnosis .
5. Puncture pleural cavity under tension pneumothorax .
6. Imposition occlusal bandages when open pneumothorax .
7. Novocaine blockade for rib fractures.
8. Fixation chest walls with floating rib fractures.
9. Methods temporary stops external bleeding _
10. Carrying out local anesthesia .
11. Work in dressing room : performance dressing , opening abscesses , primary surgical treatment of wounds, application and removal seams , etc. _
12. Definition indications , types and methods carrying out prevention tetanus _
13. Urgent help with burns and frostbite .
14. Artificial respiration and indirect massage hearts _
15. Design medical documentation . Filling ambulatory cards , a temporary sheet losses ability to work , reference letter to MSEK , etc.
16. Conducting method palpation dairy glands _
17. Methodology of finger research rectum _
18. Palpation technique thyroid glands _

Recommended literature .

1. 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.

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.

2. Auxiliary .

4. General surgery : [textbook for students higher teach _ institutions of the Ministry of Health of Ukraine] / edited by Ya. S. Berezhnyskyi , 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. Ryzhkovskiyi , 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 procedural 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

MODULE 3 . Production medical practice in at. precinct pediatrician

Description module (abstract)

Acting industrial medical practice of a 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. Study disciplines is based on modern principles of evidence medicine and standards accepted in the international clinical practice _

Prerequisites and postrequisites (interdisciplinary connections)

Module 3 Execution responsibilities precinct pediatrician is based on the previous one studies acquirers education anatomy human , biological and bioorganic chemistry , microbiology , virology and immunology , pharmacology and integrates with these disciplines , as well as on study acquirers education propaedeutic and clinical discipline medical profile : propaedeutics of pediatrics, pediatrics with neonatology and children's infectious diseases and integrates with them disciplines . Knowledge , which obtained during study modules will be used later _ professional activities .

Thematic plan of practical classes

No./ _	Topic name	How many hours?
	Module 3. Production acting medical practice _ precinct pediatrician	2 8
1	Carrying out examination healthy and sick children _	4
2	Rating data clinical (general analysis blood , urine , feces), and biochemical research patients (content squirrel blood and its fractions , acute phase	4
	indicators , urea and creatinine blood , electrolytes , glucose, bilirubin blood and its fractions , coagulogram , lipid profile blood) , microbiological research biological fluids and secretions , polymerase chain reactions , immunoenzymatic analysis , general analysis of sternal punctate and spinal cord liquid _	

3	Rating data instrumented methods research : X-ray examination bodies chest cage , abdominal cavity , joints , CT scan of the central nervous system, x-ray contrast angiography , ECG, echocardiography , ultrasound of organs abdominal cavity _	4
4	Knowledge terms carrying out preventive vaccinations _ Indications and contraindications for vaccination .	4
5	Justification and wording clinical diagnosis .	4
6	Treatment general principles treatment , primary and secondary prevention in the main children's diseases in outpatient clinics conditions _	4
7	Help with emergency conditions in children (convulsive and hyperthermic syndromes, collapse , pulmonary edema , bronchospasm, asthmatic status, acute cardiac insufficiency , infectious-toxic shock, acute renal deficiency , acute hepatic deficiency , acute adrenal gland insufficiency , aggravation vaccination and medicinal therapy : urticaria , Quincke 's edema , anaphylactic shock; ketoacidotic coma, hypoglycemic coma, bleeding , etc.)	4

Independent work

No./ _	Content independent preparation	How many th hours
Module 3. Acting _ precinct pediatrician		
1	Structure and organization work precincts children's polyclinics . 1. The structure of pediatric precincts _ 2. Documentation precinct pediatrician _ 3. Participation in the design basic documents at work precinct pediatrician _ 4. Diagnosis and treatment basic children's diseases in outpatient clinics conditions _ 5. Indications for planned and urgent hospitalization children in the outpatient clinic practice _	5

2	Participation in management polyclinic reception _ 1. Rating physical and neuropsychological development child _ 2. Health assessment _ child _ 3. Drafting diet food healthy child _ 4. Participation in the implementation preventive measures and dispensation children from diseases different body systems . 5. Hardening method children early age and children who are often sick . 6. Participation in the system of patronage for children . 7. Carrying out sanitary and educational work _ 8. Psychological and linguistic contact with healthy and sick children , construction the faithful relationship with parents sick child _ 9. Participation in the provision urgent help children in the hospital stage _ 10. Participation in the implementation vaccinations children in the conditions polyclinics . 11. Participation in the provision urgent help children with post- vaccination complications .	10
	Together	15

Individual task

Preparation and implementation conversation from sick children and their parents :

- The role of vitamin D for the body child early age ,
- Advantages of natural feeding ,
- Hardening child early age ,
- Anemia in children : what parents should know
- Sugar diabetes in children _
- Children's problem obesity _

List theoretical questions to the final control

1. Principles organizations granting medical help children in outpatient clinics conditions _
2. Clinic , laboratory -instrumental diagnosis and treatment tactics basic children's diseases in outpatient clinics conditions _
3. Principles organizations vaccine prevention of infectious diseases in Ukraine .
4. System of dispensary supervision of healthy and sick people by children
5. Application principles ethics and deontology in pediatrics .

List practical discipline skills _

1. Conduct _ survey and physical examination patients and analysis their results
2. to plan schemes examination of a specific patient depending from features clinical I will run disease _
3. And nalize the results basic laboratory and instrumental methods research .
4. To determine leading pathological symptoms and syndromes at the most common diseases _
5. Conduct _ differential diagnostics and put previous diagnosis most common diseases _

6. Treat _ general principles treatment , rehabilitation and prevention most common diseases in children .
7. To have methods of diagnosis and provision urgent pre - hospital assistance stage _
8. To own necessary medical manipulations .
9. To get to know each other from driving medical documentation in the polyclinic .
10. To possess the moral and deontological principles of medicine specialist and professional principles subordination .

Recommended reading

Basic :

1. Pediatrics : [assistant for students higher med. teach _ IV level institutions accreditation]/edited by O.V.
2. Heavy ; O. V. Tyazhka, N. G. Horovenko, S. O. Kramarev [and others]; Ministry of Health of Ukraine , National honey. University named after O.O. Bogomolets . -Kind. 5th, ex . and additional – Vinnytsia : Nova Kniga, 2018. – 1150 p
3. Foundations Pediatrics according to Nelson: translation of the 8th English edition : in 2 volumes / Karen J. Marcante , Robert M. Kligman . - Kyiv , VSV "Medicine", 2019. - Volume 1. - 377 p. - Volume 2. - 425 p.
4. 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 : Publisher T. V. Marchenko, 2020. - 407 p.

Additional :

5. Clinical examination child : teach _ help _ for students higher teach _ institutions /O.V. Katilov ,
6. D. V. Dmitriev , K. Yu. Dmitrieva , S. Yu. Makarov. - Vinnytsia : New Book, 2017. - 518 p.
7. Algorithms implementation manipulations in neonatology . Educational guide . Pokhilko V.I., Tsvirenko S.M., Chernyavska Yu.I. - Myrhorod Publishing House , 2019 . - 107 p.

Informational resource :

Orders of the Ministry of Health <http://www.maybe.gov.ua/ua/portal/>
 Association neonatologists of Ukraine <https://neonatology.org.ua/association/about>
 Ukrainian Academy Pediatric specialties <https://www.oops.org.ua/>
 Ministry protection health of Ukraine <https://moz.gov.ua/>
 World organization protection health <https://www.who.int/>
 American academy pediatricians <https://www.aap.org/en-us/Pages/Default.aspx>

Module 4. Production medical practice in obstetrics. (executive duties doctor maternity department)

Interdisciplinary connections : obstetrics and gynecology as educational discipline is based on the knowledge received acquirers higher of education at studies : medical biologists ; anatomy human ; physiology ; pathophysiology ; histology , cytology and embryology ; microbiology , virology

and immunology ; pharmacology ; internal medicine , including endocrinology , medical genetics; general surgery and integrates with them disciplines .

Acquired knowledge , skills and abilities _ _ while studying _ educational disciplines "Obstetrics and gynecology " can be used the acquirer of ami higher education after end study given disciplines while passing _ production practice.

1. Purpose :

The purpose of the medical practices in *obstetrics* are:

acquisition knowledge of physiological and pathological obstetrics, assimilation general principles driving pregnancy , childbirth and postpartum period , skill analyze obstetric situation , to use basic and additional methods research , demonstrate worked out skills and abilities that are outlined educational and professional program preparation specialists in specialty 222 "Medicine".

The main ones tasks during practice _ _ from obstetrics is:

- lambing structure and principles work maternity of the house, the main indicators work obstetrician inpatient ;
- carrying out objective examination pregnant , giving birth , giving birth ;
- assessment difficulty pathological became during pregnancy _ during childbirth and postpartum period ;
- granting the first medical assistance with obstetrics pathologies .
- carrying out medical manipulations and procedures

Thematic plan of practical classes

No n/p	Topic name	Number of hours
Module 4. Production medical practice in obstetrics. (executive duties doctor maternity department)		
Content module 1. Principles organizations granting medical help pregnant women , women in labor and women in labor in Ukraine . The main ones duties and professional actions doctor maternity branch _		
1.	Structure and organizational measures of work doctor maternity branch _	3
2.	Diagnostics early and late terms pregnancy _ Methods examination pregnant _ Definition of a standard examination pregnant women , those who have given birth and those who have given birth .	4
3	Conducting physiological childbirth (determination of the beginning of childbirth , clinical course childbirth , management childbirth) and postpartum period (clinic and management) .	4
Content module 2. Clinical , laboratory - instrumental diagnosis and treatment tactics complications pregnancy , childbirth , postpartum period in conditions obstetrician inpatient _		
4.	Features granting obstetric assistance in childbirth and postpartum period (multiparous pregnancy , fetal distress , abnormalities abbreviated uterine activity) .	4

5.	Granting urgent medical assistance in obstetrics (obstetric bleeding , preeclampsia , eclampsia , birth trauma of mother and fetus).	4
6.	Principles ethics and deontology in practice doctor maternity branch _	3
7.	Final control of modules 1-4 .	4

7. Independent work

The main types of independent work acquirers higher of education while passing _ production medical practices in **obstetrics** are:

- extra-auditory preparation for practical classes and final control ;
- mastery practical skills doctor ; – work in the department pathologies pregnant women and in labor departments _

Module 4. Production medical practice in obstetrics		
1.	Preparation for practical classes	5
2.	Work in the department pathologies pregnant women and in labor departments for assimilation and practice practical skills	6
3 .	Preparation for the final control	4
All from module 4		15

List theoretical questions for preparation for the final control

Module 4. Production medical practice in obstetrics. (executive duties doctor 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 granting emergency assistance _ obstetric pathologies ;
- course pregnancy , childbirth and postpartum period in women with extragenital pathology ;
- operational intervention in obstetrics ;
- postpartum septic disease ;
- principles driving pregnancy and childbirth in women with HIV;
- know modern methods contraception in the postpartum period period ;
- anatomical and physiological features period newborns, the concept of breastfeeding . Benefits compatible stay mother and child .

List practical skills which _ has learn getter higher education during study module.

Module 4. Production medical practice in obstetrics.
(executive duties doctor maternity department)

1. Collection of anamnesis from a pregnant woman , a woman in labor and a woman giving birth .
2. External obstetric examination pregnant women , measurement pelvis size , definition real conjugates _
3. Establishing the term of pregnancy (according to the anamnesis and objective research) , definition expected delivery date .
4. Definition gestational the age of the fetus and its masses _
5. Features driving physiological gave birth
6. Features granting obstetric assistance in childbirth and postpartum period _
7. Determination of the state of the newborn according to the Apgar scale . Evaluation of the condition of the fetus.
8. The primary toilet of a newborn .
9. Design medical documentation in obstetrics .
10. Internal obstetric research at full- term , post-term pregnancy pregnancy and premature birth.
11. Drafting schemes medicinal corrections anomaly maternity activities .
12. Rating results amnioscopy , amniocentesis , CTG interpretation , ultrasound.
13. Granting assistance in emergency situations in obstetrics : eclampsia , obstetrics bleeding , postpartum septic complications .

Recommended Books:

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. Zaporozhana .- 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. She is pregnant . – 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. Ventskiivskiyi et al . — 4th edition , K.. Medicine , 2020.-424 p.
4. Modern management approaches _ childbirth and postpartum during the pathological period I will run pregnancy _ Ed. Gromova A.M. , L.A. Nesterenko, Poltava, 2016.

Auxiliary :

5. Under the editorship of V.M. Zaporozhana Obstetrics and gynecology .: in 4 vols. T.1: Obstetrics: textbook . 2013, K.: Medicine, Ukrainian
6. Zaporozhian V.M. Obstetrics and gynecology : textbook . In 2 parts, 2000, K.: Health , Ukrainian.
7. Gromova A.M. etc. _ _ Obstetrics and gynecology , a textbook for stomatologists . f-tu 2002, P.:
8. Divosvit , Ukrainian
9. Current question of pathological obstetrics in the test tasks : teaching _
10. help _ for students honey. F- tivs of VMNH III-IV year, intern doctors / [I. V. Kalinovska , O. M. Yuzko , K. M. Lisova and others .] ; Ministry of security health of Ukraine , VDNS of Ukraine " Bukovyn State Medical University", Faculty obstetrics and gynecology . - Chernivtsi : BSMU, 2019. - 109 p. : ill .
11. Neonatology / edited by V.M. She is pregnant . - 2nd edition. - K.: Medicine, 2018. - 928 p.

Section "Functional diagnostics workshop"

The purpose 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.

1. Indicative structure of the "Functional Diagnostics Workshop"

Lesson topics:	Practical classes	SRS
<p>Topic 1 : Methods functional diagnostics in pulmonology Structure and functions respiratory systems . The main ones methods functional diagnostics diseases respiratory systems , interpretation their results (spirometry ; pneumotachometry ; peak flowmetry ; " flow-volume " curve of forced exhalation _ Indications and contraindications for carrying out , method of execution , interpretation results .</p>	5	3
<p>Topic 2 : Bronchospasmolytic and provocative tests : indications and contraindications for carrying out ; method performance ; interpretation results . The concept of body plethysmography : indications and contraindications for conducting , method of execution , interpretation results . Rating bronchial resistance and gas analysis air that _ exhales : indications and contraindications for carrying out , method of execution , interpretation results .</p>	5	3
<p>Topic 3 : Methods functional diagnostics in gastroenterology Structure and functions May systems . The main ones methods functional diagnostics diseases systems digestion , interpretation results (pH - metry , breathing tests, videocapsule endoscopy , electrogastroenterography , endoradioprobing). Indications and contraindications for carrying out , method of execution , interpretation results .</p>	5	3
<p>Topic 4 : Gastrocardiomonitoring , manometry of the gastrointestinal tract. Oral glucose tolerance test, determination test absorption iron : indications and contraindications for carrying out , method of execution , interpretation results .</p>	5	3
<p>Topic 5 : Electrophysiological methods examination : electrocardiographic method of examination . ECG is normal . The main ones properties heart (automaticity; conduction ; excitability , contractility and refractoriness) . Electrocardiographic leads (standard ; reinforced ; chest) . Methodology of ECG registration . Electrophysiological ECG basics . Characteristics of the ECG are normal (waves , intervals , segments) . Definition electric axis hearts _ Analysis electrocardiograms .</p>	5	3
<p>Topic 6 : ECG with hypertrophy different departments hearts _ Signs hypertrophy left and right atrium . Signs hypertrophy left and right ventricles , combined hypertrophy ventricles . Overload ventricles . ECG changes during embolism pulmonary artery and acute pulmonary heart , chronic pulmonary hearts , acquired defects heart , hypertensive disease , cardiomyopathy .</p>	5	3

<p>Topic 7 : ECG in case of heart rhythm disturbances</p> <p>ECG in case of heart rhythm disturbances : violation of automaticity of the CA node , ectopic (heterotopic) rhythms due to the predominance of ectopic automatism centers , ectopic (heterotopic) cycles and rhythms , mostly associated with a violation of automatism (extrasystole , paroxysmal tachycardia , fluttering atrial fibrillation _ atrial flutter and fibrillation _ ventricles).</p>	5	4
<p>Topic 8 : ECG in violation conductivity hearts . ECG in violation functions conductivity hearts (sinoatrial blockade; intraatrial blockade; atrioventricular blockades of the I-III degree ; Morgagni -Adams-Stokes syndrome ; Frederick 's cider ; blockades legs and branches of a bundle of His ; syndromes premature excitation ventricles). ECG when implanted cardiac pacemakers : schedule of IVF in dependence from the type of implant the device</p>	5	4
<p>Topic 9 : ECG during heart attack myocardium . Electrophysiological equivalents ischemia , damage and necrosis of the heart muscle on the ECG. ECG during heart attack myocardium with Q wave . ECG during heart attack myocardium without a Q wave . ECG diagnostics localization heart attack myocardium _ ECG - diagnosis stage heart attack myocardium _ ECG diagnosis complications heart attack myocardium _</p>	5	4
<p>Topic 10 : Electrophysiological methods examination : electromyography , electroencephalography . Neurophysiological basics of electromyography method , mechanism formation electromyograms , basic indications and contraindications for conducting examination , normal and pathological characteristics of EMG during abduction superficial electrodes , electromyographic data for the main types of lesions neuromuscular device (damage muscle fiber, violation neuromuscular transmission , damage peripheral nervous trunks). Neurophysiological basics of the electroencephalography method , basic indications and contraindications for conducting examination , normal EEG of an adult healthy human , pathological species activity adult person , EEG changes in the cycle wakefulness - sleep, EEG features in the main ones diseases central nervous system (epilepsy , tumors and inflammatory disease brain , vascular disease , craniocerebral injury).</p>	5	4
<p>Topic 11 : Daily monitoring arterial pressure (DMAT)</p> <p>Conducting method research , basic indications and contraindications for conducting examination , interpretation received results . Advantages and disadvantages oscillometric and auscultatory methods measurement arterial pressure _ The role of DMAT in diagnostics arterial hypertension . Analysis DMAT results : Average indicators of SBP, DBP, average blood pressure; Maximum and minimum blood pressure indicators are different periods days ; Time index of hypertension (ICH); Index square hypertension ; BP variability ; Degree nocturnal decrease in blood pressure (circadian JSC profile); Degree and speed morning blood pressure increase ; Index rigidity arteries ; Circadian index frequency cardiac abbreviations _</p>	5	4
<p>Topic 12 : Holterivske ECG monitoring : method of conducting research , basic indications and contraindications for conducting examination , basic stages analysis records Holterovsky monitoring , normal Indicators Holterovsky monitoring , interpretation received results Holterovsky ECG monitoring .</p>	5	4

Topic 13 : Echocardiography (EchoCG). Transthoracic echocardiography : standard positions , anatomical standards in echocardiography , indicators systolic and diastolic functions of the left ventricle. Fabric dopplerography . Through the esophagus echocardiography , stress - echocardiography . Foundations methods , diagnostic value , indications and contraindications for carrying out , interpretation results .	4	4
Topic 14 : Echocardiography in diagnostics diseases heart : ischemic diseases heart , arterial hypertension , myocarditis , pericarditis , congenital and acquired flaws valves heart , diseases aorta _ Opportunities visualization , analysis received data .	4	4
Topic 15 : Densitometry : physiological basics of the method, method of implementation research , basic indications and contraindications for conducting examination , interpretation results .	4	4
Topic 16 : Polysomnography : basics of the method, methods of conducting research , basic indications and contraindications for conducting examination , use polysomnographic study for the diagnosis of obstructive sleep apnea syndrome (OSAS) in adults .	4	4
Topic 17 : Thermography : physical the basis of the method, physiological foundations thermoregulation , method of implementation research , basic indications and contraindications for conducting examination , characteristics of thermograms bodies human , interpretation received results in diseases internal organs .	4	4
Topic 18 . Practically oriented differentiated test	4	4
Hours in general:	84	66

1. Thematic plan of practical classes

Topic 1. Methods functional diagnostics in pulmonology .
« Methods functional diagnostics in pulmonology » Structure and functions respiratory systems . The main ones methods functional diagnostics diseases respiratory systems , interpretation their results (spirometry ; pneumotachometry ; peak flowmetry ; " flow-volume " curve of forced exhalation _ Indications and contraindications for carrying out , method of execution , interpretation results . Study this topic involves work in the office functional diagnostics , analysis spirometrys and their discussion _
Topic 2. Bronchospasmolytic and provocative tests in pulmonology
Bronchospasmolytic and provocative _ samples in pulmonology ". Indications and contraindications for conducting ; method performance ; interpretation results . The concept of body plethysmography : indications and contraindications for conducting , method of execution , interpretation results . Rating bronchial resistance and gas analysis air that _ exhales : indications and contraindications for carrying out , method of execution , interpretation results . Study this topic involves work in the office functional diagnostics .

Topic 3. Methods functional diagnostics in gastroenterology .

" Methods functional diagnostics in gastroenterology »

Structure and functions May systems . The main ones methods functional diagnostics diseases systems digestion , interpretation results (pH - metry , breathing tests, videocapsule endoscopy , electrogastroenterography , endoradioprobing). Indications and contraindications for carrying out , method of execution , interpretation results . Study this topic involves work in _ office functional diagnostics .

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

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

Indications and contraindications for carrying out , method of execution , interpretation results .

Study this topic involves work in _ office functional diagnostics .

Topic 5. Electrophysiological methods examination : electrocardiographic method of examination . ECG is normal .

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

The main ones properties heart (automaticity; conduction ; excitability , contractility and refractoriness).

Electrocardiographic leads (standard ; reinforced ; chest). Methodology of ECG registration .

Electrophysiological ECG basics . Characteristics of the ECG are normal (waves , intervals , segments).

Definition electric axis hearts _ Analysis electrocardiograms .

Study this topic involves work in _ office functional diagnostics .

Topic 6 . ECG with hypertrophy different departments hearts _

"ECG in hypertrophy different departments hearts " .

Signs hypertrophy left and right atrium . Signs hypertrophy left and right ventricles , combined hypertrophy ventricles . Overload ventricles . ECG changes during embolism pulmonary artery and acute pulmonary heart , chronic pulmonary hearts , acquired defects heart , hypertensive disease , cardiomyopathy .

Study this topic involves work in _ office functional diagnostics .

Topic 7. ECG in case of heart rhythm disturbance .

"ECG in heart rhythm disorders "

ECG with heart rhythm disturbances : SA- node automatism disturbances , ectopic

(heterotopic) rhythms , determined the predominance of ectopic automatism centers , ectopic (heterotopic

) cycles and rhythms , mostly associated with a violation of automatism (extrasystole , paroxysmal tachycardia , fluttering atrial fibrillation _ atrial flutter and fibrillation _ ventricles).

Study this topic involves work in _ office functional diagnostics .

Topic 8 . ECG in violation conductivity hearts

"ECG in violation conductivity hearts »

ECG in the case of heart conduction disorders (sino-atrial blockade ; intraatrial blockade; atrioventricular

blockades of the I-III leads ; Morgana -Adams-Stokes syndrome; Frederic's syndrome; blockades of the legs and branches of the bundle of His ; syndromes of premature ventricular excitation). ECG when implanted cardiac pacemakers : schedule of IVF in dependence from the type of implant the device
Study this topic involves work in _ office functional diagnostics .

Topic 9. ECG during heart attack myocardium

"ECG in heart attack myocardium »
Electrophysiological equivalents ischemia , damage and necrosis of the heart muscle on the ECG. ECG during heart attack myocardium with Q wave . ECG during heart attack myocardium without a Q wave . ECG diagnosis localization heart attack myocardium _ ECG - diagnostics stage heart attack myocardium _ ECG diagnostics complications heart attack myocardium _ Study this topic involves work in _ office functional diagnostics .

Topic 10. Others electrophysiological methods examination : 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 monitoring arterial pressure (DMAT)

" Daily monitoring arterial pressure (DMAT)"
Conducting method research , basic indications and contraindications for conducting examination , interpretation received results . Advantages and disadvantages oscillometric and auscultatory methods measurement arterial pressure _ The role of DMAT in diagnostics arterial hypertension . Analysis DMAT results : Average indicators of SBP, DBP, average blood pressure; Maximum and minimum blood pressure indicators are different periods days ; Time index of hypertension (ICH); Index square hypertension ; BP variability ; Degree nocturnal decrease in blood pressure (circadian JSC profile); Degree and speed morning blood pressure increase ; Index rigidity arteries ; Circadian index frequency cardiac abbreviations _
Study this topic provides work in office functional diagnostics , selection DMAT results .

Topic 12 . Holterivske ECG monitoring

Holterivske _ ECG monitoring ". Conducting method research , basic indications and contraindications for conducting examination , basic stages analysis records Holterovsky monitoring , normal Indicators Holterovsky monitoring ,
interpretation received results Holterovsky ECG monitoring .
Study this topic involves work in _ office functional diagnostics . Selection results of 24 hours ECG recording , their interpretation and discussion

Topic 13. Method of Echocardiography (Echocardiography)

Echocardiography (EchoCG). Transthoracic echocardiography : standard positions , anatomical standards in echocardiography , indicators systolic and diastolic functions of the left ventricle. Fabric dopplerography . Through the esophagus echocardiography , stress - echocardiography . Foundations methods , diagnostic value , indications and contraindications for carrying out , interpretation results . Study this topic involves work in office functional diagnostics. Master performance skills and reading results examinations .

Topic 14 Echocardiography in diagnostics diseases hearts

" Echocardiography in the diagnosis of heart diseases": ischemic heart disease, arterial hypertension, myocarditis , pericarditis , congenital and acquired heart valve defects, aortic diseases. Opportunities visualization , analysis received data .
Study this topic involves work in _ office functional diagnostics . Master performance skills and reading results examinations .

Topic 15. Densitometry method .

"Method of densitometry ". Physiological basics of the method, method of implementation research , basic indications and contraindications for conducting examination , interpretation results
Study this topic involves work in _ office functional diagnostics . Master skills performance reading results examinations .

Topic 16. Method of polysomnography .

Polysomnography method ". Basics of the method, method of implementation research , basic indications and contraindications for conducting examination , use polysomnographic study for the diagnosis of obstructive sleep apnea syndrome (OSAS) in adults .
Study this topic involves work in _ office functional diagnostics . Master performance skills and reading results examinations .

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.
Study this topic involves work in _ office functional diagnostics . Master skills performing and reading results examinations .

Topic 18. Practice -oriented differentiated test

TYPES OF STUDENTS' INDEPENDENT WORK

Types of SRS	Number of hours	Types of control
Preparation for practical classes	34	Current control, settlement
Performing individual work: performing and interpreting the results of instrumental research in accordance with the topics of the workshop	28	Test
Preparation for the final control	4	Dif. Balance
In total	66	

Recommended literature for the section "Functional diagnostics workshop"

The main one literature :

- 1 . Perederii V. G. Osnovy internal of medicine : textbook . T. 2. Diseases systems blood circulation Rheumatic diseases _ Disease kidney _ general question internal of medicine / V. G. Perederii , S. M. Tkach. - Vinnytsia : Nova Kniga, 2018. - 784 p.
- 2 . Perederii V. G. Osnovy internal of medicine : textbook . T. 3. Differential diagnosis and management patients in the clinic internal of medicine Acute and urgent conditions in the clinic internal of medicine / V.G. Perederii , S.M. Weaver. - Vinnytsia : New Book, 2018
- 3 . Perederii V.G., Tkach S.M. Foundations internal of medicine Textbook . Volume 1. Diseases bodies breathing , disease bodies digestion , disease systems blood and blood products organs , diseases endocrine systems . – Vinnytsia : New Book, 2009 – 640 p.
- 4 . Internal diseases : in 2 parts . Part 1. Sections 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. Sections 9-24 : textbook /L.V. Hlushko, S.V. Fedorov, I.M. Skrypnyk and others . - 2019. - Edition "Medicine" - 584 p.

Auxiliary literature

- 6 . Svintsitsky A. S. Methods diagnostics in the clinic internal of medicine : education help _ for intern doctors and medical students . app . higher _ of education / A. S. Svintsitskyi . Kyiv : Medicine, 2019. - 1007 p.

Informational resource :

- 7 . <https://empendium.com/ua/>
- 8 . Ukrainian functional portal diagnostics . Access mode: <https://fd.org.ua/>

Official evidential , practically oriented medical the information they contain Edition :

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 Emergency 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/>

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 educational 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 theoretical knowledge, practical skills and abilities.

Forms of current control are: *in the dream 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 assessment assimilation of every topic of all discipline curriculum for the current one educational activities are presented to the student assessment on a 4-point (traditional scale) taking into account approved criteria evaluation of the discipline . Are taken into account all species works provided for educational program . The student has get assessment for each topic. The teacher conducts a survey of each student in the group at each lesson and exhibits assessment in the journal accounting visits and success students 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 theoretical control 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		

Maximum quantity points as much as possible recruit a student when composing exam is 80 (min number - not less than 50).

Discipline assessment _ is defined comprehensively as the sum of points for the current one educational activities 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 with disciplines for students , which successfully performed program are converted into the national scale and ECTS system (Table 2).

Table 2
Scale assessment : national and ECTS

Total pointsfor all specieseducational activity	Rating ECTS	Rating by national scale	
		for exam , difzalik	for offset
180-200	A	perfectly	counted
160-179	B	okay	
150-159	C		
130-149	D	satisfactorily	
120-129	E		
50-119	FX	unsatisfactorily with with vehemence re assembly	not counted with possibility rearrangement
0-49	F	unsatisfactorily with mandatory repeated study disciplines	not counted with mandatoryrepeated study disciplines

Methodical software

1. Methodical developments lectures _
2. Methodical instructions for independent work acquirers higher education during preparation for the practical lesson and in the lesson .
- 3 . Methodical instructions for independent work acquirers higher education for by studying topics assigned to the individual processing _
4. Methodical recommendations from the organization carrying out production practice.
5. List of recommended literature .
- 6 . Multimedia presentations .
- 7 . Materials for control knowledge , abilities and skills acquirers higher Education :
 - tests of different levels difficulties ;
 - tests from the license bank "Step - 2" exams ;
 - situational tasks ;
 - computer controlling programs .
- 8 . Video films .
- 9 . Clinical analyses .