MINISTRY OF HEALTHCARE OF UKRAINE
Poltava State Medical University
Department of Internal Medicine №1
Department of Internal Medicine №2

"AGREED"
Guarantor of the academic
and professional program "Medicine"
_____ Igor SKRYPNYK
“_____” _____

"APPROVED "
Chairman of the Academic Council
of the Medical Faculty №1
_____Mykola RIABUSHKO
Minutes as of 29.08.2024 №1

SYLLABUS

INTERNAL MEDICINE

compulsory discipline

academic and professional level	the second (master's) level of higher education
field of knowledge	22 «Healthcare»
specialty	222 «Medicine»
academic qualification	Master of Medicine
professional qualification	Medical Doctor
academic and professional program	222 «Medicine»
mode of study	full-time
course(s) and semester(s) of study of the discipline	VI XI-XII semesters

«**RESOLVED»**
at the meeting of the Department of
Internal Medicine №1, Internal Medicine №2,
Head of the Department
_____H.S. Maslova

Head of the Department
_____I.P. Katerenchuk

Minutes as of 27.08.2024 №1

Poltava 2024

INFORMATION ABOUT LECTURERS WHO DELIVER THE ACADEMIC DISCIPLINE
Department of Internal Medicine №1

Surname, name, patronymic of the lecturer (lecturers), scientific degree, academic title	Maslova Hanna Serhiivna – PhD, associate professor, head of the department Skrypnyk Igor Mykolayovych - Doctor of Medicine, Professor Kulishov Serhiy Kostiantynovych - Doctor of Medicine, Professor Sorokina Svitlana Ivanivna - PhD, associate professor Shaposhnyk Olga Anatoliivna - PhD, associate professor Prykhodko Nataliia Petrivna - PhD, associate professor Lymanets Tetyana Volodymyrivna - PhD, assistant Skrypnyk Roman Igorovych – assistant Ostrovskyi Vladyslav Leonidovych – assistant
Profile of the lecturer (lecturers)	https://int-med-one.pdmu.edu.ua/team
Contact phone	+38 (0532) 56-11-61
E-mail:	vnutrmedicine1.umsa2020@gmail.com
Department page at the website of PSMU	https://int-med-one.pdmu.edu.ua/

Department of Internal Medicine №2

Surname, name, patronymic of the lecturer (lecturers), scientific degree, academic title	Kostrikova Iuliya Anatoliivna - Ph.D. of Medical Sciences, associate professor Myakinkova Lyudmyla Oleksandrivna - Ph.D. of Medical Sciences, docent Mohnachov Oleksandr Volodymyrovych - Ph.D. of Medical Sciences, Assistant Toronchenko Olga Mykolayivna - Ph.D. of Medical Sciences, Assistant
Profile of the lecturer (lecturers)	https://int-med-two.umsa.edu.ua/team
Contact phone	+380505667005
E-mail:	vnutrmed2@gmail.com
Department page at the website of PSMU	https://int-med-two.pdmu.edu.ua/team

MAIN CHARACTERISTICS OF THE ACADEMIC DISCIPLINE

The scope of the academic discipline

Number of credits / hours – 14,5/ 435 of which:
Lectures (hours) – 0
Seminar classes (hours) – 0
Practical classes (hours) – 270
Self-directed work (hours) – 165
Type of control – final module control (FMC)

The policy of discipline

- Regulations on the organization of the educational process at Poltava State Medical University (https://www.umsa.edu.ua/n-process/department-npr/normativni-dokumenti)
  Regulations on academic righteousness of higher education seekers and employees of Poltava State Medical University (**https://www.pdmu.edu.ua/n-process/department-npr/normativni-dokumenti**
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- Rules of procedure for students of Poltava State Medical University
- Regulations on the organization and methods of assessment of educational activities of applicants for higher education at Poltava State Medical University
- Regulations on the organization of independent work of students at Poltava State Medical University
- Regulations on working off missed classes and unsatisfactory grades by applicants for higher education of Poltava State Medical University
- Regulations on the procedure for forming individual educational trajectories by students of Poltava State Medical University (https://www.umsa.edu.ua/fakultets/college/training-work/formuvannya-individualnoyi-osvitnoyi-traektoriyi-zdobuvachami-osviti)
- Regulations on the appeal of the results of the final control of knowledge of applicants for higher education.
- Regulations on the rating of applicants for higher education of Poltava State Medical University

Description of the academic discipline (summary)

Internal medicine is a branch of medicine that deals with the problems of etiology, pathogenesis and clinical manifestations of diseases of internal organs, their diagnosis, non-surgical treatment, prevention and rehabilitation. Module 4. Fundamentals of Internal Medicine (cardiology, rheumatology, nephrology) "covers the study of the main etiological and pathogenetic factors of cardiovascular, musculoskeletal and urinary systems. The basics of clinical examination of the patient, the main symptoms and syndromes of diseases of internal organs and their evaluation, methodological foundations of physical examination of the patient and semiological evaluation of the results of examination of the patient, clinical and diagnostic interpretation of the most important laboratory and instrumental studies in norma and in case of these diseases; basic principles of treatment, prognosis and prevention.

The subject of study of internal medicine is: study of etiology, risk factors, pathogenesis, clinical manifestations, differential diagnosis, basic principles of treatment, primary and secondary prevention of diseases of the cardiovascular, musculoskeletal and urinary systems in the clinic of internal medicine.

Pre-requisites and post-requisites of the discipline (interdisciplinary links)

Pre-requisites

1. is based on the study of the second (master's) level of higher education 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, pathophysiology , virology and immunology, radiology) and integrates with these disciplines;
2. lays the foundation for learning higher education applicants with specialized knowledge and practical clinical professional disciplines;
3. forms the ability to apply knowledge of pathology of internal organs in the process of further training and professional activity in accordance with the principles of evidence-based medicine.

Post-requisites. lays the foundations for the acquisition by students of knowledge in specialized clinical professional and practical disciplines; forms the ability to apply knowledge of pathology of internal organs in the process of further training and professional activity in accordance with the principles of evidence-based medicine.

The purpose and objectives of the discipline:

The purpose of teaching internal medicine is to acquire and deepen the knowledge, skills, abilities and other competencies in internal medicine required in professional activities, which are established on the basis of educational and professional program.

*The main tasks of studying the discipline are***:**

- To do surveys and physical examinations of patients and analyze their results in the clinic of internal medicine.
- To determine the etiological and pathogenetic factors of the most common diseases in the clinic of internal medicine.
- No classify and analyze the typical clinical picture of the most common diseases in the clinic of internal medicine.
- To identify different clinical variants and complications of the most common diseases in the clinic of internal medicine.
- To identify the leading syndromes and symptoms in the clinic of internal medicine.
- To justify and formulate a preliminary diagnosis of the most common diseases in the clinic of internal medicine.
- To make the plan of inspection of the patient, to interpret results of laboratory and instrumental researches at the most widespread diseases in clinic of internal medicine and their complications.
- To carry out differential diagnosis, substantiate and formulate the clinical diagnosis of major diseases in the clinic of internal medicine.
- To determine the tactics of management (recommendations regarding the regime, diet, treatment, rehabilitation measures) of the patient with the most common diseases in the internal medicine clinic.
- To prescribe non-drug and drug treatment, including prognosis-modifying, the most common diseases in the clinic of internal medicine.
- To carry out non-drug and drug primary and secondary prevention of major diseases in the clinic of internal medicine.
- To determine the prognosis and efficiency of patients with major diseases in the clinic of internal medicine.
- To diagnose and provide medical care in emergencies in the internal medicine clinic.
- To apply the basic algorithms of intensive care in emergencies in the clinic of internal medicine.
- To perform medical manipulations.
- To maintain medical records in the internal medicine clinic.
- To demonstrate mastery of moral and deontological principles of a medical professional and the principles of professional subordination.

Competencies and learning outcomes, the formation of which is facilitated by the discipline (integral, general, special, program learning outcomes)

Integral competence	
Ability to solve complex specialized problems and practical problems in professional activities in the field of health care in the specialty "Medicine", or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.	
General competencies	
GC1	Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.
GC2	Ability to apply knowledge in practical situations.

GC3	Knowledge and understanding of the subject area and understanding of professional activity.
GC4	Ability to adapt and act in a new situation.
GC5	Ability to make informed decisions; work in a team; interpersonal skills.
GC6	Ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language. Ability to use international Greco-Latin terms, abbreviations and clichés in professional oral and written speech.
GC7	Skills in the use of information and communication technologies.
GC8	Definiteness and perseverance in terms of tasks and responsibilities.
GC9	The ability to act socially responsibly and consciously.
Special (professional, subject) competencies	
SC1	Patient interviewing skills.
SC2	Ability to determine the required list of laboratory and instrumental studies and evaluate their results.
SC3	Ability to establish a preliminary and clinical diagnosis of the disease.
SC4	Ability to determine the required mode of work and rest in the treatment of diseases
SC5	Ability to determine the nature of nutrition in the treatment of diseases.
SC6	Ability to determine the principles and nature of disease treatment.
SC7	Ability to diagnose emergencies.
SC8	Ability to determine the tactics of emergency medical care.
SC9	Emergency care skills
SC10	Ability to carry out medical and evacuation measures
SC11	Skills to perform medical manipulations.
SC15	Ability to determine the tactics of management of persons subject to dispensary supervision.
SC16	Ability to conduct an examination of working capacity.
SC17	Ability to keep medical records.

Program learning outcomes, the formation of which contributes to a better study of the discipline as a whole, including Module 1:

PLO1 To know the structure and functions of individual organs and systems and the human body as a whole in the norm, with the development of pathological processes, diseases; to be able to use the acquired knowledge in further training and in the practice of the doctor.

PLO2 To collect data on patient complaints, life history (professional history in particular) in a health care facility and / or at home with the patient, according to the standard survey scheme.

PLO3 Assign and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and / or instrumental). Evaluate information for the purpose of differential diagnosis of diseases (according to list 2), using knowledge about the person, his organs and systems, based on the results of laboratory and instrumental research (according to list 4).

PLO4 Establish a preliminary and clinical diagnosis of the disease (according to list 2) on the basis of leading clinical symptoms or syndromes (according to list 1) by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, laboratory and instrumental examination, conclusions of differential diagnosis, knowledge about a person, his organs and systems, adhering to the relevant ethical and legal norms.

PLO5 To determine the necessary mode of work and rest in the treatment of the disease (according to list 2) in a health care facility, at home of the patient and at the stages of medical evacuation, including in the field, on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO6 To prescribe the necessary medical nutrition in the treatment of the disease (according to list 2), in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO7 To determine the nature of treatment of the disease (conservative, operative) and its principles

(according to list 2) in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO8 To diagnose emergencies and establish a diagnosis (according to list 3) by making an informed decision and assessing the human condition under any circumstances (at home, on the street, in a health care facility), including in emergency situations, in field conditions, in conditions of lack of information and limited time, using standard methods of physical examination and possible anamnesis, knowledge about a person, his organs and systems, adhering to the relevant ethical and legal norms.

PLO9 To determine the tactics of emergency medical care, under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis (list 3) for a limited time with standard schemes.

PLO10 To provide emergency medical care under any circumstances, using knowledge of the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on a diagnosis of emergency (list 3) in a limited time according to certain tactics using standard schemes.

PLO12 To perform medical manipulations (according to list 5) in a health care facility, at home or at work on the basis of a previous clinical diagnosis and / or indicators of the patient's condition, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms, making an informed decision and using standard techniques.

PLO16 To determine the tactics of management of persons subject to dispensary supervision in a health care institution or at the patient's home on the basis of the obtained data on the patient's health, using standard schemes, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms by making an informed decision.

PLO17 To carry out an examination of working capacity by determining the presence and degree of disability, type, degree and duration of disability with the execution of relevant documents in a health care facility on the basis of data on the disease and its course, features of professional activity.

PLO18 Maintain medical records of the patient and the population on the basis of regulatory documents, using standard technology. Prepare reports on personal production activities, using official accounting documents in the standard form.

PLO23 Forming goals and determine the structure of personal activities based on analysis of certain social and personal needs.

PLO24 To adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.

PLO25 To be aware of and guided in their activities by civil rights, freedoms and responsibilities, constantly improving professional and cultural levels.

PLO26 Adhere to the requirements of ethics, bioethics and deontology in their professional activities.

PLO27 To provide the necessary level of personal security (their own and the persons concerned) in the case of typical dangerous situations in the individual field activity.

Upon completion of the study of Module 1, applicants for higher education must

to know: etiology, pathogenesis, clinic, diagnosis, treatment and prevention of major and most common diseases of internal organs

to be able to:

- Conduct surveys and physical examinations of patients with major diseases of the cardiovascular, musculoskeletal systems, connective tissue and urinary system and analyze their results
- To determine the etiological and pathogenetic factors of the most common diseases of the cardiovascular, musculoskeletal system, connective tissue and urinary system.
- To analyze the typical clinical picture of the most common diseases of the cardiovascular, musculoskeletal system, connective tissue and urinary system.
- To identify different clinical variants and complications of the most common diseases of the cardiovascular, musculoskeletal, connective tissue and urinary systems.
- To formulate a preliminary diagnosis of the most common diseases of the cardiovascular, musculoskeletal, connective tissue and urinary systems.

• To make a plan for examination of the patient and analyze the data of laboratory and instrumental examinations in the typical course of the most common diseases of the cardiovascular, musculoskeletal systems, connective tissue, urinary system and their complications.

• To make a differential diagnosis, substantiate and formulate a preliminary diagnosis of the most common diseases of the cardiovascular, musculoskeletal system, connective tissue and urinary system.

• To determine the tactics of management (recommendations for diet, diet, medication, rehabilitation measures) of the patient and prescribe non-drug and drug treatment, including prognostic-modifying, the most common diseases of the cardiovascular, musculoskeletal system, connective tissue, urinary system and their complications.

• To assess the prognosis and performance of the patient with the most common diseases of the cardiovascular, musculoskeletal, connective tissue and urinary system.

• To diagnose and provide medical care in emergencies.

• To carry out primary and secondary prevention of the most common diseases of the cardiovascular, musculoskeletal systems, connective tissue and urinary system.

• To carry out medical manipulations.

• To demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination.

Thematic plan of lectures

Not provided

Thematic plan of practical classes of the discipline Internal Medicine with semantic modules indicating the main issues considered in the practical lesson

Not provided

Thematic plan of practical classes of the discipline Internal Medicine with semantic modules indicating the main issues considered in the practical lesson

№	Topic	Number of hours
	CONTENT MODULE 1 **MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN THE CARDIOLOGICAL CLINIC**	
1.	**Management of a patient with hypertension** The main diseases and conditions accompanied by arterial hypertension: essential and secondary arterial hypertension, in particular, renal (renovascular, renoparenchymal); endocrine (Itsenko-Cushing's syndrome and disease, pheochromocytoma, primary hyperaldosteronism, thyrotoxicosis); aortic coarctation, isolated systolic hypertension, hypertension during pregnancy. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by hypertension. Primary and secondary prevention. Forecast and efficiency.	7
2	**Management of a patient with chronic (recurrent) chest pain** The main diseases and conditions accompanied by chronic chest pain: diseases of the cardiovascular system (ischemic heart disease, in particular, stable angina; stenosis of the aortic orifice, hypertrophic cardiomyopathy, neurocirculatory dystonia); diseases of the digestive system (gastroesophageal reflux disease, cardiospasm, spasm of the esophagus, hernia of the esophageal orifice of the diaphragm, peptic ulcer of the stomach and duodenum); diseases of the musculoskeletal system (osteochondrosis of the thoracic spine); panic attack syndrome. Differential-diagnostic value of clinical manifestations and data of	7

	additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by chronic chest pain. Primary and secondary prevention. Forecast and efficiency.	
3	**Management of a patient with acute chest pain** The main diseases and conditions accompanied by acute chest pain: diseases of the cardiovascular system (acute coronary syndrome, acute pericarditis, acute myocarditis, coronary heart disease, aortitis, aortic dissection, pulmonary embolism); respiratory diseases (pleurisy, pneumothorax); diseases of the musculoskeletal system (myositis, costochondritis); diseases of the nervous system (shingles, intercostal neuralgia). Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by acute chest pain. Primary and secondary prevention. Forecast and efficiency.	7
4	**Management of a patient with cardiac arrhythmias** Differential diagnosis of supraventricular and ventricular arrhythmias, atrial fibrillation and flutter. Tactics of patient management. The main classes of antiarrhythmic drugs, indications for their use, side effects. Electropulse therapy. Non-drug treatments for arrhythmias, including catheter procedures. Primary and secondary prevention. Forecast and efficiency.	7
5	**Management of a patient with impaired cardiac conduction** Violations of sinoatrial conduction, atrioventricular blockade of various degrees, blockade of the legs of the His bundle. Syndrome of weakness of the sinus node. Frederick's syndrome. ECG diagnostics. Tactics of patient management, additional instrumental methods of examination. Pacemaking methods. Primary and secondary prevention, prognosis and efficiency.	7
6	**Management of a patient with shortness of breath** The main diseases and conditions accompanied by shortness of breath: heart failure with preserved and reduced systolic function of the left ventricle, respiratory failure due to impaired bronchial patency and diseases of the lungs and pleura; pulmonary vascular pathology, in particular pulmonary embolism and chest or respiratory muscle disease; anemia; hyperventilation syndrome in neurosis and neurocirculatory dystonia; lesions of the respiratory center in organic diseases of the brain. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by shortness of breath. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with pulmonary hypertension** Major diseases and conditions accompanied by pulmonary hypertension: idiopathic, hereditary, associated with medication or toxins, connective tissue diseases (systemic lupus erythematosus, systemic scleroderma), HIV infection, portal hypertension (cirrhosis of the liver), congenital heart disease Eisenmeger syndrome, acquired heart defects (mitral stenosis); associated with lung disease / hypoxia (chronic obstructive pulmonary disease), diseases that restrict chest movement (Bechterew's disease, kyphosis, kyphoscoliosis); in pulmonary embolism and chronic postthromboembolic pulmonary hypertension. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by pulmonary hypertension. Primary and secondary prevention. Forecast and	7

	efficiency.	
7	**Management of a patient with edema syndrome** The main diseases and conditions accompanied by edema syndrome: local (venous edema: chronic venous insufficiency, venous outflow disorders, deep vein thrombophlebitis; lymphatic edema: inflammatory, obstructive; edema in the musculoskeletal system: arthritis, tendonitis; orthostatic, idiopathic and general edema (nephrotic syndrome, cardiovascular disease with heart failure, liver disease, in particular liver cirrhosis and other hypoproteinemic conditions: exudative enteropathy, malabsorption syndrome, alimentary and cachectic and cachectic diseases; edema caused by medication). Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnosis. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by edema m syndrome. Primary and secondary prevention. Forecast and efficiency.	7
8	**Management of a patient with heart murmur** The main diseases and conditions accompanied by systolic and / or diastolic murmurs in the heart: congenital heart defects (ventricular septal defect, atrial septal defect, open ductus arteriosus, aortic coarctation); acquired heart defects (mitral stenosis, mitral valve insufficiency: organic and relative, mitral valve prolapse, aortic stenosis, aortic valve insufficiency, tricuspid insufficiency: organic and relative), hypertrophic cardiomyopathy, "innocent" systolic age in individuals). Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by shortness of breath. Indications for surgical treatment, Primary and secondary prevention. Forecast and efficiency **Management of a patient with cyanosis.** The main diseases and conditions accompanied by cyanosis: lung and heart diseases, including congenital heart defects in the state of Eisenmenger's syndrome, acquired heart defects (mitral stenosis), heart and respiratory failure and the formation of pathological hemoglobin. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by cyanosis. Primary and secondary prevention. Forecast and efficiency.	7
9	**Management of a patient with chronic heart failure** Right ventricular, left ventricular and biventricular heart failure. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management depending on the genesis, functional class and stage of heart failure. Drug and non-drug, including surgical, treatment, the impact on the prognosis of various treatments. Primary and secondary prevention. Forecast and efficiency.	7
CONTENT MODULE 2 MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN RHEUMATOLOGICAL CLINIC		
10	**Management of a patient with back and limb pain** The main diseases and conditions accompanied by pain in the extremities and back: seronegative spondyloarthropathy (ankylosing spondylitis, reactive arthritis, arthritis with enterocolitis), osteochondrosis of the spine, osteoporosis, dermatomyositis, vamyrositis, polymyositis, diarrhea, diarrhea, polymyositis,	7

	Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by pain in the extremities and back. Primary and secondary prevention. Forecast and efficiency.	
11	**Management of a patient with joint syndrome** The main diseases and conditions accompanied by joint syndrome: rheumatoid arthritis, ankylosing spondylitis, reactive arthritis, gout, systemic lupus erythematosus, systemic scleroderma, dermatomyositis / polymyositis, nodular polyarteritis, acute rheumatic fever. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by joint syndrome. Primary and secondary prevention. Forecast and efficiency.	7
12	**Management of a patient with purpura** The main diseases and conditions accompanied by purpura: hemorrhagic vasculitis, hypersensitive vasculitis, nodular polyarteritis, idiopathic thrombocytopenic purpura, disseminated intravascular coagulation syndrome. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by purpura. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with bleeding** The main diseases and conditions accompanied by bleeding: hemophilia, idiopathic thrombocytopenic purpura, malignant diseases of the hematopoietic system, accompanied by thrombocytopenia. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by hemorrhagic syndrome. Primary and secondary prevention. Forecast and efficiency.	7
13	**Management of a patient with fever** The main diseases and conditions accompanied by prolonged fever: infectious endocarditis, systemic connective tissue diseases, nodular polyarteritis, rheumatoid arthritis, malignant neoplasms, including leukemia, lymphoma, myeloma, lymphogranulomatosis; sepsis, tuberculosis, Crohn's disease, AIDS. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by prolonged fever. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with weight loss** The main diseases and conditions that are accompanied by weight loss: cancer, systemic connective tissue diseases, in particular, systemic lupus erythematosus, dermatomyositis / polymyositis, systemic scleroderma; systemic vasculitis, including nodular polyarteritis; diseases of the digestive tract, lungs, cardiovascular system, alimentary and psychogenic weight loss, etc. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied	7

	by weight loss. Primary and secondary prevention. Forecast and efficiency.	
	CONTENT MODULE 3 **MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN THE GASTROENTEROLOGICAL CLINIC**	
14	**Management of a patient with dysphagia and heartburn** The main diseases and conditions accompanied by dysphagia: esophagitis, including gastroesophageal reflux disease; esophageal cancer, diffuse esophageal spasm, achalasia of the cardia, esophageal diverticula, systemic scleroderma, dysphagia with central and peripheral nervous and muscular systems. The main diseases and conditions accompanied by heartburn: gastroesophageal reflux disease, unexplored dyspepsia, chronic gastritis, peptic ulcer of the stomach and duodenum. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by dysphagia and heartburn. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with dyspepsia** Definition. The main reasons for development. Classification. Functional dyspepsia and its variants: epigastric pain syndrome and postprandial distress syndrome. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment. Primary and secondary prevention. Forecast and efficiency.	7
15	**Management of a patient with abdominal pain** The main diseases and conditions accompanied by chronic abdominal pain: cholecystitis, gallbladder and sphincter dysfunction Oddi, gallstone disease, pancreatitis, chronic gastritis, peptic ulcer of the stomach and duodenum, irritable bowel syndrome, non-irritable bowel syndrome, disease frog". Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by chronic abdominal pain. Indications for surgical treatment. Primary and secondary prevention. Forecast and efficiency.	7
16	**Management of a patient with diarrhea** The main diseases and conditions accompanied by prolonged diarrhea: chronic atrophic gastritis, diseases of the operated stomach, Zollinger-Ellison syndrome, irritable bowel syndrome, Crohn's disease, syndrome of excessive bacterial growth in the small intestine, celiac disease, food sickness chronic pancreatitis, diabetic enteropathy, amyloidosis, acquired immunodeficiency syndrome. The role of intolerance of food components, enzymopathies and immune factors. Malabsorption and maldigestion syndromes. Secretory, exudative, dysmotor and functional diarrhea. The main coprological syndromes. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by diarrhea. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with constipation** The main diseases and conditions accompanied by constipation: irritable bowel syndrome, bowel cancer, anorectal diseases, hypothyroidism, neurogenic and	7

	psychogenic disorders, eating disorders, situational and iatrogenic constipation. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by constipation. Primary and secondary prevention. Forecast and efficiency.	
17	**Management of a patient with jaundice** Major diseases and conditions accompanied by jaundice: chronic hepatitis, cirrhosis and liver cancer, hemolytic anemia, gallstone disease, pancreatic cancer, vater nipple cancer, benign hyperbilirubinemia. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by jaundice. Primary and secondary prevention. Forecast and efficiency.	7
18	**Management of a patient with hepatomegaly and hepatolienal syndrome** The main diseases and conditions accompanied by hepatomegaly and hepatolienal syndrome: diseases of the parenchyma and vessels of the liver, including chronic hepatitis, cirrhosis and liver cancer, hepatic vein thrombosis; diseases of the blood and blood-forming organs, in particular, leukemia, lymphogranulomatosis, erythremia; right ventricular heart failure, including with constrictive pericarditis; accumulation diseases, in particular, hemachromatosis, etc. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by hepatomegaly and hepatolienal syndrome. Indications for surgical treatment. Primary and secondary prevention. Forecast and efficiency.	7
19	**Management of a patient with portal hypertension and ascites** The main diseases and conditions that lead to the development of portal hypertension and ascites: cirrhosis and liver tumors, right ventricular heart failure, including in constrictive pericarditis, hepatic vein thrombosis, thrombosis of the portal vein or its branches and thrombosis, stenosis, obliteration of the inferior vena cava at or above the hepatic veins, etc. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by portal hypertension and ascites. Indications for endoscopic and surgical treatment (bypass surgery, liver transplantation). Primary and secondary prevention. Forecast and efficiency.	7
CONTENT MODULE 4 MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN PULMONOLOGICAL CLINIC		
20	**Management of a patient with pulmonary infiltrate** The main diseases and conditions accompanied by pulmonary infiltrate: pneumonia, infiltrative pulmonary tuberculosis, eosinophilic pulmonary infiltrate, pulmonary infarction, lung cancer, benign lung tumors, pulmonary sarcoidosis, focal pneumosclerosis. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by pulmonary infiltrate. Primary and secondary prevention. Forecast and efficiency.	7

21	**Management of a patient with a chronic cough** The main diseases and conditions accompanied by cough: chronic obstructive pulmonary disease, bronchial asthma, pulmonary tuberculosis, bronchiectasis, malignant tumors of the lungs and bronchi, pneumoconiosis, left ventricular heart failure, gastroesophageal reflux disease and syndrome. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by cough. Primary and secondary prevention. Forecast and efficiency. **Management of a patient with hemoptysis** The main diseases and conditions accompanied by hemoptysis: malignant tumors of the bronchi and lungs, pulmonary tuberculosis, pneumonia, bronchiectasis, lung abscess, mitral stenosis, pulmonary infarction and more. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by hemoptysis. Primary and secondary prevention. Forecast and efficiency.	7
22	**Management of a patient with bronchoobstructive syndrome** The main diseases and conditions accompanied by bronchoobstructive syndrome: chronic obstructive pulmonary disease, bronchial asthma, tumors of the trachea, bronchi and mediastinum. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by broncho-obstructive syndrome. Primary and secondary prevention. Forecast and efficiency.	7
23	**Management of a patient with pleural effusion** The main diseases and conditions accompanied by pleural effusion: pneumonia, pulmonary tuberculosis, malignant tumors of the lungs and pleura, heart failure, acute pancreatitis, liver cirrhosis, nephrotic syndrome, systemic connective tissue diseases, chest injuries. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by pleural effusion. Indications for pleural puncture, possible complications. Primary and secondary prevention. Forecast and efficiency	7
CONTENT MODULE 5 MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN THE HEMATOLOGICAL CLINIC		
24	**Management of a patient with anemia** Differential diagnosis in posthemorrhagic, iron deficiency, B12-deficient, aplastic, hemolytic anemia. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment. Indications, contraindications, methods and possible complications of transfusion of blood components and blood substitutes. Primary and secondary prevention. Forecast and efficiency.	7
25	**Management of a patient with lymphadenopathy** The main diseases and conditions accompanied by lymphadenopathy: Hodgkin's and non-Hodgkin's malignant lymphomas, acute and chronic lymphoid and	7

	myeloid leukemias, infectious mononucleosis, reactive lymphadenitis, tuberculosis, sarcoidosis, metastatic disease, systemic lesions, systemic lesions, systemic lesions. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by lymphadenopathy. Primary and secondary prevention. Forecast and efficiency.	
26	**Management of a patient with leukocytosis and leukopenia** The main diseases and conditions accompanied by leukocytosis: lymphomas, acute and chronic lymphoid and myeloid leukemias, infectious mononucleosis, reactive lymphadenitis, sarcoidosis, metastatic lesions, sepsis and leukopenia: systemic leukemia, intestinal anemia, B12-deficiency. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by leukocytosis. Primary and secondary prevention. Forecast and efficiency.	7
CONTENT MODULE 6 MANAGEMENT OF PATIENTS WITH MAIN SYMPTOMS AND SYNDROMES IN THE NEPHROLOGICAL CLINIC		
27	**Management of a patient with chronic kidney disease** The concept and classification of chronic kidney disease. Etiological factors. Pathogenesis of lesions of organs and systems, their clinical manifestations. Diagnostic value of laboratory and instrumental research methods. Tactics of patient management, differentiated non-drug and drug treatment at different stages. Renal replacement therapy: hemodialysis, kidney transplantation. Indications and contraindications, possible complications. Primary and secondary prevention. Forecast and efficiency.	7
28	**Management of a patient with urinary syndrome** The main diseases and conditions accompanied by urinary syndrome: acute and chronic glomerulonephritis, tubulointerstitial kidney disease, pyelonephritis, cystitis, urethritis, urolithiasis, diabetic nephropathy, renal infarction, renal tuberculosis, hemorrhoids, hypernephroma. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by urinary syndrome. Primary and secondary prevention. Forecast and efficiency.	7
29	**Management of a patient with nephrotic syndrome** The main diseases and conditions accompanied by nephrotic syndrome: acute and chronic glomerulonephritis, renal amyloidosis, diabetic nephropathy, myeloma. Differential-diagnostic value of clinical manifestations and data of additional laboratory and instrumental research methods. Algorithm of differential diagnostics. Tactics of patient management. Non-drug and drug treatment of major diseases accompanied by nephrotic syndrome. Primary and secondary prevention. Forecast and efficiency.	7
CONTENT MODULE 7 EMERGENCY CONDITIONS IN THE INTERNAL MEDICINE CLINIC		
30	**Tactics for circulatory and respiratory arrest** Standards of emergency diagnostics and emergency care at the pre-hospital and hospital stages. Algorithms for cardiopulmonary resuscitation. Medical support. Long-term life support and tactics of further management of patients.	6

	Curation of a patient with short-term loss of consciousness (syncope) Criteria for diagnosis, differential diagnosis and treatment. Tactics of management of patients depending on the reason (cardiogenic: in particular, at structural pathology - valvular heart defects, including stenosis of the mouth of the aorta, hypertrophic cardiomyopathy, pericarditis / tamponade of the heart, valve prosthesis dysfunction, aortic dissection, high pulmonary arterial hypertension, pulmonary artery, arrhythmogenic: paroxysmal cardiac arrhythmias, sinus node dysfunction, high-grade atrioventricular block, artificial pacemaker dysfunction, reflex, including vasovagal, situational, with irritation of the carotid sinus and due to orthostasis. The role of instrumental and laboratory methods of examination. Recommendations for prevention.	
31	**Curation of a patient with a hypertensive crisis** Criteria for the diagnosis of uncomplicated and complicated hypertensive crises. Standards of emergency treatment at the pre-hospital and hospital stages, depending on the type of crisis and the nature of the target organs. Crisis prevention.	6
32	**Curation of a patient with acute coronary syndrome** Criteria for diagnosis, differential diagnosis and standards of emergency treatment at the prehospital and hospital stages. Tactics of patient management depending on the variant of acute coronary syndrome. Therapy that improves the prognosis. Primary and secondary prevention	6
33	**Curation of a patient with shock** Criteria for diagnosis, differential diagnosis and emergency treatment at the prehospital and hospital stages depending on the cause: hypovolemic, cardiogenic, obstructive, redistributive, in particular, anaphylactic, septic shocks. Further management of patients. Conditions caused by allergic reactions of the immediate type (anaphylactic shock, laryngeal edema, Quincke's edema): criteria for diagnosis, standards of emergency treatment at the prehospital and hospital stages. Secondary prevention	6
34	**Curation of a patient with a coma** Criteria for diagnosis, differential diagnosis and treatment. Determining the cause, tactics of treatment depending on the etiology (coma, which are caused by primary lesions of the central nervous system, in particular, cerebrovascular disorders, meningitis; primarily due to loss of electrolytes, water; associated with impaired gas exchange, including hypoxic toxic: uremic, hepatic, alcoholic, respiratory failure, endocrine diseases, in particular, diabetes, etc.). Recommendations for prevention.	6
35	**Curation of a patient with paroxysmal heart rhythm disorders** High-grade ventricular arrhythmias, supraventricular (including WPW syndrome) and ventricular paroxysmal tachycardia, persistent atrial fibrillation and atrial flutter. Standards of diagnosis, differential diagnosis and emergency treatment at the prehospital and hospital stages. Tactics of treatment depending on the type of cardiac arrhythmia and the state of hemodynamics. Electropulse therapy and pacing. Recommendations for prevention.	6
36	**Curation of a patient with pulmonary embolism** Criteria for diagnosis, differential diagnosis and standards of emergency treatment of pulmonary embolism. Treatment tactics depending on the severity. Primary and secondary prevention.	6
37	**Curation of a patient with acute respiratory failure** Acute respiratory failure (in particular, ventilation, pulmonary, due to violations of ventilation-perfusion ratios): criteria for diagnosis, differential diagnosis, standards of emergency treatment in the prehospital and hospital stages, depending on the cause and severity. Recommendations for prevention.	6
38	**Curation of a patient with melena and hematemesis**	6

	Criteria for diagnosis, differential diagnosis and treatment. Tactics of patients depending on the cause (varicose veins of the esophagus, gastric erosion, peptic ulcer of the stomach and duodenum, malignant tumors, nonspecific ulcerative colitis, hemorrhagic vasculitis) and severity. The role of endoscopic, instrumental and laboratory methods of examination. Conservative treatment, indications for blood transfusion. Indications for endoscopic hemostasis or urgent surgical treatment. Primary and secondary prevention.	
39	**Curation of a patient with oligoanuria** Standards of diagnosis and management of patients. Tactics of management of patients depending on the reason (prerenal, renal, postrenal). The role of instrumental and laboratory methods of examination. Conservative treatment, indications for hemodialysis. Recommendations for prevention	6
40	**Final modular control**	7,0
	Total	270

Individual work

№	Topic	Number of hours
1.	**Preparation for practical work on topics - theoretical training and optimization of practical skills**	40
2.	**Preparation for laboratory work**	-
3.	**Writing a case history**	-
4.	**Preparation of a test, essay, and getting ready for ongoing assessments**	4
5.	**Preparation for final module assessment**	4
6.	**Preparation for an exam**	-
7.	**Studying topics not covered in the scheduled classroom sessions (list):**	
	Preparation for a practical lesson on the topic "Management a patient with arterial hypertension". Improvement of the method of recording and interpreting the ECG, measuring blood pressure and interpreting the data on the topic. Improvement of interpretation of data from laboratory methods (creatinine of blood, glomerular filtration rate, blood electrolytes).	3
	Preparation for a practical lesson on the topic "Management a patient with chronic chest pain". Improving the interpretation of ECG and the results of a test with metered physical activity on the topic. Improvement of the interpretation of the results of laboratory test methods (lipid blood spectrum).	3
	Preparation for a practical lesson on the subject "Management a patient with acute chest pain ". Improving the interpretation of the ECG on the topic. Improvement of the interpretation of the data of the X-ray examination of the chest organs on the topic. Improvement of the interpretation of the results of laboratory examination methods (biochemical markers of myocardial necrosis, coagulogram, D-dimer).	3
	Preparation for a practical lesson on the topic "Management a patient with heart rhythm disorders". Improvement of ECG interpretation in case of violations of heart rhythm on the subject. Improved interpretation of data from laboratory research methods (coagulogram).	3
	Preparation for a practical lesson on the topic "Management a patient with impaired cardiac conduction".	3

	Improvement of ECG interpretation in case of violations of cardiac conduction on the topic.	
	Preparation for a practical lesson on the topic "Management a patient with shortness of breath. Management a patient with pulmonary hypertension". Improvement of the interpretation of data doppler-echocardiography by theme.	3
	Preparation for a practical lesson on the topic "Management a patient with edematous syndrome". Improvement of the interpretation of data Doppler-echocardiography by theme. Improving the interpretation of data from laboratory research methods (total bilirubin and its fractions, total protein and fractions thereof, blood transaminases, creatinine, glomerular filtration rate).	3
	Preparation for a practical lesson on the topic "Management a patient with heart murmurs. Management a patient with cyanosis". Improvement of the interpretation of the data of the x-ray examination of the chest cavity on the subject. Improved echo-CG data interpretation on the topic. Improvement of interpretation of data of laboratory methods of investigation (gases of arterial and venous blood). Improvement of the interpretation of data Doppler-echocardiography by theme.	3
	Preparation for a practical lesson on the topic "Management a patient with chronic heart failure". Improvement of the interpretation of data Doppler-echocardiography by theme. Improvement of interpretation of the results of laboratory research methods (ascitic fluid analysis, coagulogram, blood creatinine, glomerular filtration rate, electrolytes of blood, concentration of natriuretic peptide in the blood).	3
	Preparation for a practical lesson on the topic "Management a patient with back pain and limbs". Improvement of the interpretation of the data of the X-ray examination of the spine, chest and sacroillectric compounds on the topic. Improvement of the interpretation of the results of laboratory research methods (immune status, HLA-B27, and KFK).	3
	Preparation for a practical lesson on the topic "Management a patient with joint syndrome". Improvement of the interpretation of data from the radiological study of joints on the topic. Improvement of the interpretation of the results of laboratory methods of research (analysis of synovial fluid, general blood test, astrophase blood parameters, uric acid, RF, anti-CSF, ANA, ds-DNA).	3
	Prepared for a practical lesson on the topic "Management a patient with purpura. Management a patient with bleeding". Improvement of the interpretation of the general analysis of blood and coagulogram. Improving the interpretation of data from laboratory research methods (general blood test, coagulogram, PANCA, CANCA).	3
	Preparation for a practical lesson on the topic "Management a patient with a fever. Management a patient with weight loss". Improvement of the interpretation of X-ray examination of the chest organs, ultrasound examination of the abdominal cavity on the topic. Improving the interpretation of data from laboratory research methods	3

	(general blood test, general urine analysis, bacteriological blood cultures, ANA, ds-DNA,).	
	Preparation for a practical lesson on the topic "Management a patient with dysphagia and heartburn. Management a patient with dyspepsia". Improving the interpretation of endoscopic digestive tract data (EPGDS) on the topic. Improvement of the interpretation of the data of the examination of the secretory function of the stomach (daily pH monitoring). Improvement of the interpretation of the data of the examination of the secretory function of the stomach (topographic express pH-metry).	3
	Preparation for a practical lesson on the topic "Management a patient with abdominal pain". Improvement of the data interpretation of the endoscopic examination of the digestive tract (EPGDS, colonoscopy) on the topic. Improvement of the interpretation of the results of biochemical blood studies (total protein of blood and its fractions, blood transaminases, total bilirubin and its fractions, alkaline phosphatase, alpha amylase, GGTP).	3
	Preparation for a practical lesson on the topic "Management a patient with diarrhea. Management a patient with constipation". Improving the interpretation of endoscopic digestive tract data (colonoscopy) on the topic. Improvement of the interpretation of the results of respiratory tests (with 13C-urea, 13C triglycerides, 13C-starch, 13C-lactose and a hydrogen test with glucose and lactulose). Improving the interpretation of fecal elastase-1 data.	3
	Preparation for a practical lesson on the topic "Management a patient with jaundice". Improved interpretation of data of multi-momental duodenal sensing and microscopic and biochemical examination of bile. Improvement of interpretation of data of ultrasound examination of liver, gallbladder and biliary tract on the topic.	3
	Preparation for a practical lesson on the topic "Management a patient with hepatomegaly and hepatolienal syndrome". Improvement of the interpretation of the results of biochemical blood tests (total bilirubin and its fractions, albumin, blood transaminases, total protein of blood and its fractions, alkaline phosphatase, alpha amylase, GGTP). Improvement of the interpretation of ultrasound data of the abdominal organs on the topic.	3
	Preparation for a practical training on the topic "Management a patient with portal hypertension and ascites". Improving the interpretation of endoscopic digestive tract data (EFGDS) on the topic.	3
	Preparation for a practical lesson on the topic "Management a patient with pulmonary infiltrates". Improvement of the interpretation of data from the X-ray examination of the chest cavity in two precections on the topic. Improvement of data interpretation of laboratory research methods (general and microbiological studies of sputum).	3
	Preparation for a practical lesson on the topic "Management a patient with chronic cough. Management a patient with hemoptysis". Improvement of the interpretation of the data of the x-ray examination of the chest cavity on the subject. Improving the interpretation of data from laboratory research methods (coagulogram and D-dimer). Improvement of interpretation of spirographic data, data of provocative	3

	tests with bronchodilators on the topic.	
	Preparation for a practical lesson on the topic "Management a patient with a bronchoobstructive syndrome". Improvement of interpretation of spirographic data, data of provocative tests with bronchodilators on the topic.	3
	Preparation for a practical lesson on the topic "Management a patient with pleural effusion". Improvement of the interpretation of the data of the x-ray examination of the chest cavity on the subject. Improvement of interpretation of data of laboratory methods of research (biochemical, cytological, microbiological analysis of pleural fluid).	3
	Preparation for a practical training on the topic "Management a patient with anemia" Improving of the method of determining the blood group. Improving of the technique of transfusion of blood components and blood substitutes. Improvement of the interpretation of the general analysis of blood, puncture of the bone marrow and trepanobiopsia. Improvement of the interpretation of indicators of iron metabolism in whey serum.	3
	Preparation for practical training on topic "Management a patient with lymphadenopathy". Improvement of the interpretation of the general analysis of blood, punctate of the bone marrow. Improvement of interpretation of data of cytological study of biopsy of lymph node.	3
	Preparation for a practical lesson on the topic "Management a patient with leukocytosis and leukopenia". Improvement of the interpretation of the general analysis of blood, punctate of the bone marrow.	3
	Preparation for a practical lesson on the topic "Management a patient with chronic kidney disease". Improvement of the interpretation of the results of laboratory research methods (general blood test, general urine analysis, electrolytes, urea, creatinine, velocity of glomerular filtration).	3
	Preparation for a practical lesson on the topic "Management a patient with urinary syndrome". Improvement of the interpretation of the data of radiological investigations of the organs of the urinary system on the topic. Improvement of the interpretation of the results of laboratory research methods (general urine analysis, urine analysis for Nechyporenko and Zimnytsky, microbiological study of urine, creatinine, velocity of glomerular filtration, urea, uric acid in blood).	3
	Preparation for a practical lesson on topic "Management a patient with a nephrotic syndrome". Improvement of the interpretation of the results of laboratory research methods (general blood test, general urine analysis, daily proteinuria, cholesterol, total protein with protein fractions, creatinine, velocity of glomerular filtration).	3
	Preparation for a practical lesson on the theme "Tactics for circulatory and respiratory arrest. Curation of a patient with short-term loss of consciousness (syncope)". Improvement of the algorithm of mechanical ventilation and indirect cardiac massage during the stopping of blood circulation and respiration.	3

	Improvement of interpretation of data of laboratory methods of research (general analysis of blood, blood glucose, ALT, AST, creatinine, GFR, common bilirubin with fractions, electrolytes, coagulograms, gases of arterial and venous blood and indicators of the acid-base state of blood). Improving the methodology of ECG interpretation on the topic. Improvement of arterial pressure measurement and interpretation of data.	
	Preparation for a practical lesson on the theme "Curation of a patient with a hypertensive crisis". Improving the interpretation of Echo-CG data on the topic. Improvement of Arterial Pressure Measurement and Interpretation of Data.	3
	Preparation for a practical training on the topic "Curation of a patient with acute coronary syndrome". Improvement of the method of registration and interpretation of ECG on the topic.Improvement of interpretation of data of laboratory methods of research (biochemical markers of myocardial necrosis).	3
	Preparation for a practical training on the topic "Curation of a patient with shock". Improvement of the method of blood pressure measurement**,** registration and interpretation of ECG and Echo-CG on the topic.	3
	Preparation for a practical training on the topic "Curation of a patient with a coma". Improving the interpretation of Echo-CG data and X-ray examination of the chest cavity on the topic. Improvement of interpretation of data of laboratory methods of research (general analysis of blood, blood glucose, ALT, AST, creatinine, common bilirubin with fractions, electrolytes, coagulograms, gases of arterial and venous blood and indicators of the acid-base state of blood).	3
	Preparation for a practical lesson on the theme " Curation of a patient with paroxysmal heart rhythm disorders". Improvement of the method of registration and interpretation of ECG and echocardiogram on the topic.	3
	Preparation for a practical lesson on the topic "Curation of a patient with pulmonary embolism". Improvement of the method of registration and interpretation of ECG and Echo-CG on the topic.	3
	Preparation for a practical lesson on the topic "Curation of a patient with acute respiratory failure". Improving the interpretation of external respiratory function data. Improvement of the interpretation of the x-ray data of the chest cavity on the subject. Improvement of the interpretation of laboratory data (gases of arterial and venous blood and indicators of the acid-base state of blood). Improving the interpretation of Echo-CG data and X-ray examination of the chest cavity on the topic. Improving the interpretation of data from laboratory research methods (coagulograms, gases of arterial and venous blood, and indicators of the acid-base state of the blood).	3
	Preparation for a practical lesson on the theme "Curation of a patient with melena and hemathemisis". Improving the interpretation of FGDS data, colonoscopy on the topic. Improvement of the method of determining the blood group and carrying out the transfusion of blood components and blood substitutes.	3
	Preparation for a practical lesson on the topic "Curation of a patient with oligoanuria".	3

	Improvement of the technique of catheterization of the bladder with a soft catheter.	
Total		165

Individual tasks:

- Report at clinical conferences of departments
- Report an essay on practical class
- Report of the patient's medical history in a practical lesson
- Writing abstracts, articles

The list of theoretical questions for preparation of students for the final modular control

- Management of a patient with hypertension: algorithms and standards of diagnosis and treatment.
- Management of a patient with chest pain: algorithms and standards of diagnosis and treatment.
- Management of a patient with cardiac arrhythmias: algorithms and standards of diagnosis and treatment.
- Management of a patient with cardiac conduction disorders: algorithms and standards of diagnosis and treatment.
- Management of a patient with shortness of breath: algorithms and standards of diagnosis and treatment.
- Management of a patient with edema syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with pulmonary hypertension: algorithms and standards of diagnosis and treatment.
- Management of a patient with heart murmur: algorithms and standards of diagnosis and treatment.
- Management of a patient with chronic heart failure: algorithms and standards of diagnosis and treatment.
- Management of a patient with back and limb pain: algorithms and standards of diagnosis and treatment.
- Management of a patient with joint syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with purpura: algorithms and standards of diagnosis and treatment.
- Management of a patient with fever: algorithms and standards of diagnosis and treatment.
- Management of a patient with weight loss: algorithms and standards of diagnosis and treatment.
- Management of a patient with dysphagia and heartburn: algorithms and standards of diagnosis and treatment.
- Management of a patient with dyspepsia: algorithms and standards of diagnosis and treatment.
- Management of a patient with abdominal pain: algorithms and standards of diagnosis and treatment.
- Management of a patient with diarrhea: algorithms and standards of diagnosis and treatment.
- Management of a patient with constipation: algorithms and standards of diagnosis and treatment.
- Management of a patient with jaundice: algorithms and standards of diagnosis and treatment.
- Management of a patient with hepatomegaly and hepatolienal syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with portal hypertension and ascites: algorithms and standards of diagnosis and treatment.
- Management of a patient with pulmonary infiltrate: algorithms and standards of diagnosis and treatment.
- Management of a patient with chronic cough: algorithms and standards of diagnosis and treatment.
- Management of a patient with bronchoobstructive syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with cyanosis: algorithms and standards of diagnosis and treatment.
- Management of a patient with hemoptysis: algorithms and standards of diagnosis and treatment.

- Management of a patient with pleural effusion: algorithms and standards of diagnosis and treatment.
- Management of a patient with anemia: algorithms and standards and treatment.
- Management of a patient with bleeding: algorithms and standards of diagnosis and treatment.
- Management of a patient with lymphadenopathy and leukocytosis: algorithms and standards of diagnosis and treatment.
- Management of a patient with leukocytosis: algorithms and standards of diagnosis and treatment.
- Management of a patient with arterial hypertension syndrome: algorithm for diagnosis and treatment of Itsenko-Cushing's syndrome and disease, diabetes mellitus, acromegaly.
- Management of a patient with urinary syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with nephrotic syndrome: algorithms and standards of diagnosis and treatment.
- Management of a patient with chronic kidney disease: algorithms and standards of diagnosis and treatment.
- Tactics for circulatory and respiratory arrest.
- Standards for diagnosis and emergency treatment of patients with hypertensive crisis in the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with acute coronary syndrome in the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with pulmonary embolism at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with acute heart failure in the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with shock in the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with paroxysmal heart rhythm disorders at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with acute respiratory failure in the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with melena and hematemesis at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with oligoanuria at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with short-term loss of consciousness (syncope) at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with confused consciousness at the prehospital and hospital stages.
- Standards for diagnosis and emergency treatment of patients with coma in the prehospital and hospital stages.
- Protocols for diagnosis and treatment of patients with hypoglycemic coma in the prehospital and hospital stages.
- Protocols for diagnosis and treatment of patients with ketoacidotic coma in the prehospital and hospital stages.
- Protocols for diagnosis and treatment of patients with thyrotoxic crisis in the prehospital and hospital stages.
- Protocols for diagnosis and treatment of patients with addisonic crisis at the prehospital and hospital stages.

LIST OF PRACTICAL WORKS AND TASKS FOR SFA

Work with the patient

- To collect complaints, history of disease, history of life.

- To collect information on the general condition of the patient (consciousness constitution) and to evaluate the appearance (examination of the skin, subcutaneous fat layer, palpation of lymph nodes, thyroid and mammary glands), to examine the state of the musculoskeletal system, joints.
- To examine the respiratory organs (chest examination, chest palpation, percussion and lung auscultation)).
- To examine the cardiovascular system (examination and palpation of the heart and blood vessels, percussion of the heart and auscultation of the heart and blood vessels).
- To examine the digestive organs (examination, percussion, superficial and deep palpation).
- To examine the urinary system (examination of the lumbar region, palpation of the kidneys).

- To make a probable (preliminary) diagnosis of the disease (List 1).
- To prescribe and justify laboratory and / or instrumental examination of a patient with diseases (List 1).
- To interpret the results of laboratory and instrumental research (List 2)
  To carry out differential diagnosis of diseases (List 1).
- To make a clinical diagnosis of the disease (List 1).
- To determine the necessary regime and diet of a patient with diseases (List 1).
- To determine the principles and nature of treatment (conservative, operative) of diseases (List1).
- To diagnose and to provide assistance in emergencies (List 3)
- To perform medical manipulations (List 4)
- To determine the tactics of secondary prevention of patients subject to dispensary supervision.
- To keep medical records of the patient.

List 1 (Syndromes and Symptoms)

1. ANEMIA (acute and chronic posthemorrhagic anemia, iron deficiency, B12-deficiency, folate deficiency, aplastic, hemolytic).
2. ARTERIAL HYPERTENSION (essential arterial hypertension, secondary arterial hypertension: renal - renovascular, renoparenchymatous; endocrine - Itsenko-Cushing's syndrome and disease, pheochromocytoma, primary hyperaldosterotonicosis, aperaldosterotoniconism,
3. ASCITIS (cirrhosis and liver tumors, right ventricular heart failure, including constrictive pericarditis, hepatic vein thrombosis, portal vein thrombosis or its branches, thrombosis, stenosis, obliteration of the inferior vena cava at or above the hepatic veins, etc.).
4. CHEST PAIN (acute coronary syndrome, angina pectoris, stenosis of the aortic orifice, hypertrophic cardiomyopathy, mitral valve prolapse, coronary artery disease, myocarditis, acute pericarditis, aortic dissection, aortic dissection, pleurisy , spasm of the esophagus, hernia of the esophageal orifice of the diaphragm, peptic ulcer of the stomach and duodenum, osteochondrosis of the thoracic spine, shingles, myositis, costochondritis, intercostal neuralgia, neurocirculatory dystonia, and syndrome.
5. ABDOMINAL PAIN (cholecystitis, gallbladder and sphincter dysfunction Oddi, gallstones, pancreatitis, chronic gastritis, peptic ulcer of the stomach and duodenum, irritable bowel syndrome, celiac disease, celiac disease and other enteropases) »).
6. LIMBS AND BACK PAIN (ankylosing spondylitis, osteoarthritis, osteochondrosis of the spine, osteoporosis, dermatomyositis / polymyositis, neuropathy, in particular, vasculitis and diabetes).
7. BRONCHOBSTRUCTIVE SYNDROME (chronic obstructive pulmonary disease, bronchial asthma, tumors of the trachea, bronchi and mediastinum).
8. EFFUSION INTO THE PLEURAL CAVITY (tuberculosis, pneumonia, malignant tumors of the pleura and lungs, heart failure, acute pancreatitis, liver cirrhosis, nephrotic syndrome, chest injuries, hypothyroidism, systemic connective tissue diseases).
9. HEMORRHAGIC SYNDROME (hemorrhagic vasculitis, nodular polyarteritis, hypersensitive vasculitis, hemophilia, idiopathic thrombocytopenic purpura, disseminated intravascular coagulation syndrome, malignant diseases of the hematopoietic system or accompanied).
10. HEPATOMEGALIA AND HEPATOLIENAL SYNDROME (acute and chronic hepatitis, cirrhosis and liver cancer, hepatic vein thrombosis, leukemia, lymphogranulomatosis, erythremia, right ventricular failure, in particular in constrictive pericarditis).
11. DYSPEPSY (gastroesophageal reflux disease, gastric cancer, chronic gastritis, peptic ulcer of the stomach and duodenum, chronic pancreatitis, pancreatic cancer, toxic goiter, diabetes, hypo- and hyperthyroidism).
12. DYSPHAGIA (esophagitis, including gastroesophageal reflux disease, esophageal cancer, diffuse esophageal spasm, achalasia of the cardia, esophageal diverticula, dysphagia with central and peripheral nervous system and muscular system, systemic scleroderma).
13. JAUNDICE (acute and chronic hepatitis, cirrhosis and liver cancer, hemolytic anemia, gallstone disease, pancreatic cancer, vater nipple cancer, benign hyperbilirubinemia, malaria, leptospirosis, yersiniosis).
14. SHORTNESS OF BREATH (in heart failure with preserved and reduced systolic function of the left ventricle; respiratory failure due to impaired bronchial patency and diseases of the lungs and pleura, including pneumonia, tuberculosis and pneumothorax; pulmonary vascular pathology, including thromboembolism and pulmonary artery disease) muscles, hyperventilation syndrome in neurosis and neurocirculatory dystonia, lesions of the respiratory center in organic diseases of the brain, anemia, botulism).
15. COUGH (chronic obstructive pulmonary disease, bronchial asthma, pulmonary tuberculosis, bronchiectasis, pneumonia, pneumoconiosis, malignant tumors of the lungs and bronchi, left ventricular heart failure, postnasal drip syndrome, gastroesophageal reflux disease).
16. HEMOPTYSIS (pulmonary tuberculosis, malignant tumors of the bronchi and lungs, pneumonia, bronchiectasis, lung abscess, mitral stenosis, pulmonary infarction).
17. PULMONARY INFILTRATE (pneumonia, infiltrative pulmonary tuberculosis, eosinophilic pulmonary infiltrate, heart attack and lung cancer, benign lung tumors, pulmonary sarcoidosis, focal pneumosclerosis)

18. LYMPHADENOPATHY (tuberculosis, sarcoidosis, infectious mononucleosis, systemic connective tissue diseases, metastatic lesions, acute and chronic lymphoid and myeloid leukemias, Hodgkin's disease, non-Hodgkin's malignant lymphomas, reactive lymphadenitis).
19. FEVER (rheumatoid arthritis, infectious endocarditis, malignant neoplasms, including leukemia, lymphoma, myeloma, lymphogranulomatosis, sepsis, tuberculosis, systemic connective tissue diseases, nodular polyarteritis, purulent chorocyngitis, ablansitis, ablansitis, ablansitis, ablansitis, ablangitis, ablansitis, ablansitis, ablangitis, ablangitis, ablansitis, ablongitis).
20. SWELLING SYNDROME (venous edema: chronic venous insufficiency, venous outflow disorders, deep vein thrombophlebitis; lymphatic edema: inflammatory, obstructive; fatty, orthostatic and idiopathic; in musculoskeletal system nephritis; with the development of heart failure, liver disease, in particular cirrhosis of the liver and other hypoproteinemic conditions: exudative enteropathy, malabsorption syndrome, alimentary and cachectic edema; edema due to medication and endocrine diseases: hypothyroidism).
21. UNCONSCIOUSNESS (cardiogenic causes: in particular, in structural pathology - valvular heart disease, including stenosis of the mouth of the aorta, hypertrophic cardiomyopathy, pericarditis / tamponade of the heart, dysfunction of the prosthetic valve, aortic dissection, pulmonary arterial hypertension, hypertensive hypertension; paroxysmal cardiac arrhythmias, sinus node dysfunction, high-grade atrioventricular block, artificial pacemaker dysfunction, reflex, including vasovagal, situational, carotid sinus irritation and orthostatic hypotension).
22. NEPHROTIC SYNDROME (acute and chronic glomerulonephritis, renal amyloidosis, diabetic nephropathy, myeloma).
23. OLIGO- and ANURIA (prerenal, renal, postrenal).
24. HEARTBURN (gastroesophageal reflux disease, chronic gastritis, unexamined dyspepsia, peptic ulcer of the stomach and duodenum).
25. PORTAL HYPERTENSION (chronic viral hepatitis, cirrhosis and liver tumors, right ventricular heart failure, including constrictive pericardium, thrombosis of the hepatic veins, thrombosis of the portal vein or its branches, thrombosis, stenosis, obliteration of the inferior vena cava , etc.).
26. HEART RHYTHM DISORDERS (extrasystole, atrial fibrillation and flutter, paroxysmal tachycardia).
27. URINARY SYNDROME (acute and chronic glomerulonephritis, urolithiasis, tubulointerstitial kidney disease, pyelonephritis, diabetic nephropathy, renal infarction, renal tuberculosis, hypernephroma, cystitis, urethritis, hemorrhoids).
28. JOINT SYNDROME (rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, reactive arthritis, gout, systemic lupus erythematosus, systemic scleroderma, acute rheumatic fever).
29. WEIGHT LOSS (cancer, systemic lupus erythematosus, nodular polyarteritis, diseases of the digestive tract, lungs, including tuberculosis, cardiovascular system, alimentary and psychogenic weight loss, HIV infection).
30. LONG-TERM DIARRHEA SYNDROME (chronic atrophic gastritis, operated gastric disease, Zollinger-Ellison syndrome, Crohn's disease, nonspecific ulcerative colitis, celiac disease, Whipple's disease, syndrome of excessive bacterial growth in diarrheal bacterial growth amyloidosis, acquired immunodeficiency syndrome).
31. DIFFUSE AND LOCAL CYANOSIS (lung and heart involvement, including congenital heart defects in Eisenmenger syndrome and acquired heart defects - mitral stenosis, tricuspid valve insufficiency, heart and respiratory failure and in the formation of pathological hemo.
32. GASTROINTESTINAL BLEEDING (varicose veins of the esophagus, gastric erosions, peptic ulcer and other ulcers of the stomach and duodenum, malignant tumors, nonspecific ulcerative colitis, hemorrhagic vasculitis, hemorrhoids).
33. HEART MURMURS (congenital heart defects: ventricular septal defect, atrial septal defect, open ductus arteriosus, aortic coarctation; acquired heart defects: mitral stenosis, mitral valve insufficiency (organic and relative), mitral valve prolapse, aortic valve prolapse, ano , hypertrophic cardiomyopathy, tricuspid valve insufficiency (organic and relative), "innocent" systolic murmur in young people).
34. Diagnose Emergencies (List 3)
35. Determine the tactics of emergency medical care (List 3)

36. Provide emergency medical care (List 3)
37. Perform medical manipulations (List 5)

List 2 (diseases)
Diseases of the cardiovascular system

1. 1. Essential arterial hypertension (hypertension)
2. Secondary (symptomatic) hypertension:
3. - renal (renovascular, renoparenchymatous);
4. - endocrine (Itsenko-Cushing's syndrome and disease, pheochromocytoma, primary hyperaldosteronism, thyrotoxicosis);
5. - coarctation of the aorta;
6. - isolated systolic arterial hypertension;
7. - hypertension during pregnancy;
8. Neurocirculatory dystonia
9. Atherosclerosis
10. Chronic forms of coronary heart disease
11. Acute coronary syndrome (unstable angina, acute myocardial infarction)
12. Pericarditis
13. Pulmonary heart
14. Acquired heart defects: mitral, aortic and tricuspid valves, combined mitral and aortic defects
15. Congenital heart defects: atrial, ventricular septal defect, open ductus arteriosus, aortic coarctation
16. Infectious endocarditis
17. Myocarditis and cardiomyopathy
18. Pulmonary artery thromboembolism
19. Cardiac arrhythmias
20. Impaired conduction of the heart
21. Heart failure

Respiratory diseases

1. Chronic obstructive pulmonary disease
2. Bronchial asthma
3. Pneumonia
4. Pleurisy
5. Infectious and destructive lung diseases
6. Respiratory failure

Diseases of the digestive system

1. Chronic esophagitis and gastroesophageal reflux disease
2. Functional disorders of the stomach, gallbladder, biliary tract and intestines
3. Chronic gastritis and duodenitis
4. Peptic ulcer of the stomach and duodenum
5. Celiac disease and other enteropathies
6. Nonspecific ulcerative colitis, Crohn's disease
7. Gallstone disease; chronic cholecystitis
8. Chronic hepatitis
9. Liver cirrhosis
10. Chronic pancreatitis

Diseases of the musculoskeletal system and connective tissue

1. Osteoarthritis
2. Systemic lupus erythematosus
3. Systemic scleroderma
4. Gout

5. Reactive arthritis
6. Acute rheumatic fever
7. Rheumatoid arthritis
8. Dermatomyositis / poliomyositis
9. Ankylosing spondylitis
10. Systemic vasculitis (hypersensitive and hemorrhagic vasculitis, nodular polyarteritis)

Diseases of the urinary system

1. Pyelonephritis
2. Tubulo-interstitial nephritis
3. Acute and chronic glomerulonephritis
4. Renal amyloidosis
5. Nephrotic syndrome
6. Chronic kidney disease

Diseases of the hematopoietic organs

1. Anemia
2. Acute and chronic leukemias
3. Lymphomas
4. Myeloma
5. Hemophilia
6. Thrombocytopenic purpura

List 4 (laboratory and instrumental research methods)

1. Adrenocorticotropic hormone, cortisol, aldosterone and blood renin
2. Analysis of pleural fluid
3. Analysis of ascitic fluid
4. Analysis of synovial fluid
5. Analysis of urine for diastase
6. Urine analysis by Nechiporenko
7. Urine analysis according to Zymnytsky
8. Biochemical markers of myocardial necrosis, D-dimer
9. Biochemical parameters of serum iron metabolism.
10. Acute blood parameters, total blood protein and its fractions.
11. General blood test.
12. General analysis of urine, test for microalbuminuria.
13. General analysis of sternal punctate
14. General analysis of sputum
15. General immunological profile of blood
16. Blood electrolytes
17. Enzyme-linked immunosorbent assay, immunochemical, molecular biological study of blood
18. Ketone bodies of blood and urine, ioduria.
19. Coagulogram
20. Coprocytogram
21. Creatinine and blood urea, glomerular filtration rate
22. Blood lipid spectrum
23. Alkaline phosphatase, blood alpha-amylase
24. Markers of viral hepatitis
25. Metanephrines in urine
26. Microbiological study of biological fluids and secretions
27. Indicators of acid-base status of blood
28. Serological reactions in autoimmune diseases
29. Blood uric acid
30. Glucose tolerance test, glycemic profile, C-peptide, glycated hemoglobin, fructosamine
31. Blood transaminases, total bilirubin and its fractions

32. TSH, T4, T3, antibodies to thyroperoxidase (ATPO), antibodies to TSH receptors, antibodies to thyroglobulin
33. Fecal elastase-1
34. Respiratory tests with 13C-urea, 13C-triglycerides, 13C-starch, 13C-lactose and respiratory hydrogen tests with glucose and lactulose
35. Study of the function of external respiration
36. Examination of bile
37. Electrocardiographic examination
38. Echocardiography
39. Endoscopic examination of the bronchi
40. Endoscopic examination of the digestive tract
41. Samples with dosed exercise
42. Radiation examination of the abdominal cavity
43. Radiation examination of the thoracic cavity
44. Radiation study of the genitourinary system
45. Radiation examination of the skull, bones and joints
46. Sonography, thyroid scan
47. X-ray contrast angiography
48. pH-metry of the stomach, esophagus
49. Cytological examination of a lymph node biopsy.

KNOW THE CLINICAL PHARMACOLOGY OF THE MAIN GROUPS OF MEDICINES

1. α and β-blockers
2. Antianginal
3. Antiarrhythmic
4. Antibacterial
5. Antihypertensive
6. Anticoagulants
7. Expectorants
8. Hemostatics
9. Glucocorticoids and cytostatic immunosuppressants
10. Diuretics
11. Proton pump inhibitors
12. H2-histamine blockers
13. Nonsteroidal anti-inflammatory drugs
14. Oral hypoglycemic agents and preparations of insulin, thyroxine, imidazole derivatives
15. Iron supplements
16. Cholinolytics

List 3 (EMERGENCY STATES)

- Addisonic crisis
- Hypertensive crisis
- Acute coronary syndrome
- Acute heart failure
- Acute respiratory failure
- Acute hepatic encephalopathy
- Acute kidney damage
- Circulatory and respiratory arrest
- Komi
- Bleeding (esophageal and gastrointestinal)
- Quincke's edema / laryngeal edema
- Paroxysmal cardiac arrhythmias and cardiac conduction disorders (paroxysmal tachycardia and atrial fibrillation / flutter, high-grade atrioventricular block, Morgan-Edems-Stokes syndrome)
- Spontaneous pneumothorax

- Cardiac tamponade
- Thyrotoxic crisis
- Pulmonary artery thromboembolism
- Syncope
- Shocks

List 5 (MEDICAL MANIPULATIONS)

- Measure blood pressure
- Record an ECG in 12 leads
- Perform artificial ventilation and perform indirect heart massage
- Catheterize the bladder with a soft catheter
- Inject drugs
- Determine blood type

Teaching methods

- Teaching methods are proven and systematically functioning ways of interconnected activity of those who teach (teaching methods) and those who learn (teaching methods), aimed at solving certain educational, upbringing and developmental tasks in the educational process.
- The following teaching methods are used at the Departments of Internal Medicine №1 and 2:
- verbal (lecture, explanation, story, conversation, instruction);
- visual (observation, illustration, demonstration);
- practical (various types of practical activities of the student under the guidance of the teacher or independently);
- analysis of specific situations;
- role games;
- "brain storm";
- video training.

- The method of organizing clinical practical classes in internal medicine requires:
- to make the student a participant in the process of providing medical care to patients from the moment of their hospitalization, examination, diagnosis, treatment to discharge from the hospital;
- to master professional practical skills; skills of work in a team of students, doctors, other participants of medical care;
- to form the responsibility of the student as a future specialist for the level of his training, its improvement during training and professional activity.

To implement this, it is necessary in the first lesson of the relevant module, the student is provided with a detailed plan of his work in the clinic, which includes:

- research methods that the student must master (or get acquainted with);
- algorithms (protocols) of examinations, diagnosis, treatment, prevention in accordance with the standards of evidence-based medicine;
- the number of patients for curation that the student must perform during the cycle;
- reports of the patient's medical history in the study group, at clinical rounds, practical conferences.

Curation of the patient involves:

- clarification of the patient's complaints, medical history and life, conducting a survey of organs and systems;
- conducting a physical examination of the patient and determining the main symptoms of the disease;
- analysis of laboratory and instrumental examination data of the patient;
- formulation of the patient's diagnosis;
- appointment of treatment;
- identification of primary and secondary prevention measures;

- report of the results of examination of the patient by a team of students in the study group, analysis under the guidance of the teacher of the correctness of the diagnosis, differential diagnosis, the scope of the examination, treatment tactics, assessment of prognosis and performance.

In the practical classes, students keep diaries, which include brief information about the patients examined during the practical lesson, record the wording of the diagnosis, the patient's examination plan and the prescribed treatment.

Assessment forms and methods

The form of final control of learning progress (FMC).

When assessing the mastery of each topic of the module, the student is graded on a 4-point (traditional) scale using the evaluation criteria adopted by the academy for the discipline. This takes into account all types of work provided by the guidelines for the study of topics.

Table 1: Standardized generalized criteria for assessing the knowledge of higher education students at PSMU

On a 4-point scale	Assessment in ECTS	Evaluation criteria
5 perfectly	A	The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations, possesses not less than 90 % of knowledge on the topic both during the survey and all types of control.
4 good	B	The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standardized situations, independently corrects errors, the number of which is insignificant, has at least 85% knowledge of the topic both during the survey and all types of control.
	C	The student is able to compare, summarize, systematize information under the guidance of a scientific and pedagogical worker, in general, independently apply it in practice, control their own activities; to correct mistakes, among which there are significant, to choose arguments for confirmation of opinions, possesses not less than 75% of knowledge on a subject both during interrogation, and all types of control.
3 satisfactorily	D	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic provisions, with the help of a scientific and pedagogical worker can analyze the educational material, correct mistakes, among which there are a significant number of significant ones. Has at least 65% knowledge of the topic both during the survey and all types of control.
	E	The student has the educational material at a level higher than the initial, a significant part of it reproduces at the reproductive level. Has at least 60% knowledge of the topic both during the survey and all types of control.
2 unsatisfactorily	FX	The student has the material at the level of individual fragments that make up a small part of the material. Has less than 60% knowledge of the topic both during the survey and all types of control.
	F	The student has the material at the level of elementary recognition and reproduction of individual facts, elements, has less than 60% knowledge of the topic both during the survey and all types of control.

The current performance is equal to the arithmetic mean of the grades of the current control for practical classes and independent work (taking notes, medical documentation, writing a medical history, working in departments). The assessment of students' independent work, which is provided for in the topic along with classroom work, is carried out during the current control of the topic at the

relevant classroom session. The teacher enters the points after converting them from the grade point average according to the table. The minimum number of points that students receive for current performance is 72.

The score is determined according to Table 2:

Middle ball for current progress (A)	Ball for current progress from the module (A*24)	Ball for FMC with module. (A*16)	Points for the module and / or exam (A*24 + A*16)	Category ECTS	By 4-point scale
1	2	3	4	5	6
2	48	32	80	F FX	2 unsatisfactorily
2,1	50	34	84		
2,15	52	34	86		
2,2	53	35	88		
2,25	54	36	90		
2,3	55	37	92		
2,35	56	38	94		
2,4	58	38	96		
2,45	59	39	98		
2,5	60	40	100		
2,55	61	41	102		
2,6	62	42	104		
2,65	64	42	106		
2,7	65	43	108		
2,75	66	44	110		
2,8	67	45	112		
2,85	68	46	114		
2,9	70	46	116		
2,95	71	47	118		
3	72	50	122	E	з satisfactorily
3,05	73	50	123		
3,1	74	50	124		
3,15	76	50	126		
3,2	77	51	128		
3,25	78	52	130	D	
3,3	79	53	132		
3,35	80	54	134		
3,4	82	54	136		
3,45	83	55	138		
3,5	84	56	140	C	4 good
3,55	85	57	142		
3,6	86	58	144		
3,65	88	58	146		
3,7	89	59	148		
3,75	90	60	150	C	4 good
3,8	91	61	152		
3,85	92	62	154		
3,9	94	62	156		
3,95	95	63	158		

4	96	64	160	B	
4,05	97	65	162		
4,1	98	66	164		
4,15	100	66	166		
4,2	101	67	168		
4,25	102	68	170		
4,3	103	69	172		
4,35	104	70	174		
4,4	106	70	176		
4,45	107	71	178		
4,5	108	72	180	A	5 perfectly
4,55	109	73	182		
4,6	110	74	184		
4,65	112	74	186		
4,7	113	75	188		
4,75	114	76	190		
4,8	115	77	192		
4,85	116	78	194		
4,9	118	78	196		
4,95	119	79	198		
5	120	80	200		

Students who have attended all the classroom training sessions provided for by the discipline curriculum, completed independent work and scored at least the minimum number of points in the module are allowed to take the final module control. A student who has missed classes for valid reasons will have his/her individual curriculum adjusted and will be allowed to work off academic debt by a certain deadline.

The presence of a grade of "2" for the current academic performance does not deprive the student of the right to be admitted to the final module control with the permissible minimum number of points for the current academic performance. A student has no right to retake current grades of "2" if he or she has the minimum amount of points for admission to the control measures. Current grades of "3" or "4" are not retaken. The student is obliged to retake the grade "2" if the average score of current academic performance for the module does not reach the minimum (3.0 points) for admission to the FMC. Permission to work out the current grade "2" is granted by the head of the department only in order for the student to achieve the minimum number of points for admission to the final control.

The retake is carried out by a teacher appointed by the head of the department according to the schedule of consultations and work on missed classes, which is agreed with the dean's office.

The number of retakes of the current "2" is limited to two attempts. Students who have a grade point average of less than 3.0 have the right to retake the current "2", but no later than the beginning of the new semester.

The final module control is carried out after studying the module program in the discipline and is held at the last lesson of the module. For the final module control, the hours provided in the curriculum for practical classes are used. Students who have an average grade point average of 4.0 to 5.0 during the course of the discipline are exempted from passing the FMC and automatically (by agreement) receive a final grade in accordance with Table 2, while the presence of the student at the FMC is mandatory. In case of disagreement with the grade, this category of higher education students passes the FMC according to the general rules.

The result of the FMC is evaluated in points and is not converted to the traditional 4-point grade. The maximum number of points for the FMC is 80 points. The minimum number of points of the FMC, at which the control is considered passed, is 50 points. The maximum number of points per module is 200 points (including up to 120 points for current performance).

The control of theoretical and practical training during the final module control is carried out by conducting a computer test control (performing 20 test tasks of a selective type).

Students who have passed the FMC are entered in the "Statement of final module control", after filling out the statement they are referred to the relevant dean's office.

For students who have not passed the FMC, the exact reason for failure is also entered in the "Record of final module control" and individual student curricula.

The reasons for non-enrollment may be as follows:

a) the student has unexcused absences from classes and/or lectures. The mark “not admitted” in the column "points for FMC";

b) a student who has attended all classes (practical, lecture) but has not scored the minimum number of points for the current learning activity; has not completed independent work (notes); has not written a medical history is not allowed to participate in the FMC;

c) the student attended all classes and scored the number of points for the current learning activity and was admitted to the FMC, but did not appear for the FMC. The mark “did not appear” in the column points for the FMC.

The student has the right to pass and two retakes of the FMC.

Control methods

Various methods and forms of control are used to effectively check the level of students' acquisition of knowledge, skills and abilities in the discipline.

The most common methods of control are: oral control, written, test, graphic, programmed control, practical examination, as well as methods of self-control and self-assessment.

Oral questioning involves the following sequence: formulation of questions (tasks) taking into account the specifics of the discipline and the requirements of the program; preparing students for the answer and presentation of knowledge; adjustment of the knowledge stated in the process of answering; analysis and evaluation of the response.

Written inspection is carried out in the form of inspection (control) work. The main advantage of a written test is that in a short time the teacher has the opportunity to form a clear idea of the knowledge of many students. The results of the inspection are clearly recorded. Written works are saved. Students have the opportunity to find out with the teacher details and inaccuracies in their own answers, to conduct self-analysis.

To determine the level of formation of knowledge and skills in the discipline use the method of tests. Open-form tests (with freely constructed answers) and closed-form tests (with suggested answers) are used. It is advisable to conduct a test of each topic of the discipline on all its major issues.

Assessment of practical skills involves the assessment of the acquisition of practical professional skills and abilities, and is carried out during practical classes and during the final lesson.

Forms of control. During training sessions use individual and frontal tests of knowledge, skills and abilities of students, as well as final forms of control.

Means of diagnosing learning outcomes (tests; situational tasks; materials of clinical examinations of the patient, medical history; materials of laboratory, functional, instrumental and other methods of examination of patients).

Methodical support

1. Working curriculum
2. Methodical development of lectures
3. Methodical recommendations for teachers
4. Methodical instructions for independent work of students during preparation for a practical lesson and in class
5. Methodical recommendations on the organization of industrial practice
6. List of recommended reading
7. Materials for control of knowledge, skills and abilities of students:
   - tests of different levels of difficulty
   - tests from the bank of licensing exams "Step - 2"
   - situational tasks

computer control programs
8. Videos.
9. Multimedia presentations.
10. Clinical tests.

Recommended Books

I. Basic

1. Internal medicine: Part 1: textbook for English-speaking students of higher medical schools/ edited by Professor M.A. Stanislavchuk. and Professor V.K. Siercjva.-Vinnytsy: Nova Knyha, 2019.-408 p.
2. Internal medicine: Part 2: textbook for English-speaking students of higher medical schools/ edited by Professor M.A. Stanislavchuk. and Professor V.K. Siercjva.-Vinnytsy: Nova Knyha, 2019.-360 p.
3. Davidson's Principles and Practice of Medicine / I.D. Perman, S.H. Ralston, M.W.J.Strachan et al. 24th Edition. – Elsevier, 2020. – 1378 p.

II. Additional:

1. Harrison's Principles of Internal Medicine / D.Kasper, A.Fauci, S.Hauser, D. Longo.-21 ed. –N.Y.: McGraw-Hill Professional, 2022. - Vol. 1, Vol.2.-3000 p.
2. Current Medical Diagnosis and Treatment, 62-th Anniversary Edition by Maxine A. Papadakis, Stephen J. McPhee, Michael W. Rabow. Eds. McGraw-Hill Education, Inc, 2023
3. Current Diagnosis & Treatment: Cardiology, Fifth Edition. By Michael H. Crawford. Eds. McGraw-Hill Education, Inc. -2017
4. Current Diagnosis & Treatment: Emergency Medicine, 8e. By C. Keith Stone, Roger L. Humphries. Eds. McGraw-Hill Education, Inc. 2017
5. Current Diagnosis & Treatment: Rheumatology, 4e. By John H. Stone. Eds. McGraw-Hill Education, Inc. 2021.
6. Current Diagnosis & Treatment: Gastroenterology, Hepatology, & Endoscopy, 3e Norton J. Greenberger, Richard S. Blumberg, Robert Burakoff. McGraw-Hill Education, Inc. 2016.
7. Critical Care. By John M. Oropello, Stephen M. Pastores, Vladimir Kvetan. Eds. The McGraw-Hill Education, Inc. -2018.
8. Cardiology: An Integrated Approach. Adel Elmoselhi. Eds. The McGraw-Hill Education, Inc. -2018.
9. Current Diagnosis & Treatment: Nephrology & Hypertension, 2e Edgar V. Lerma, Mitchell H. Rosner, Mark A. Perazella. The McGraw-Hill Education, Inc. -2018.
10. Goodman & Gilman's: The Pharmacological Basis of Therapeutics, 13e Laurence L. Brunton, Randa Hilal-Dandan, Björn C. Knollmann. The McGraw-Hill Education, Inc. -2018.
11. Harrison's Manual of Medicine, 20e J. Larry Jameson, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, Joseph Loscalzo. The McGraw-Hill Education, Inc. -2020.
12. Lichtman's Atlas of Hematology 2016 Lichtman MA, Shafer MS, Felgar RE, Wang N. The McGraw-Hill Education, Inc. -2017
13. Pathophysiology of Blood Disorders, 2e Jon C. Aster, H. Franklin Bunn. The McGraw-Hill Education, Inc. -2017.

14. Pathophysiology of Disease: An Introduction to Clinical Medicine, 8e Gary D. Hammer, Stephen J. McPhee. The McGraw-Hill Education, Inc. -2019.
15. Principles and Practice of Hospital Medicine, 2e Sylvia C. McKean, John J. Ross, Daniel D. Dressler, Danielle B. Scheurer. The McGraw-Hill Education, Inc. -2017.
16. Quick Medical Diagnosis & Treatment 2021 Maxine A. Papadakis, Stephen J. McPhee, Jennifer Bernstein. The McGraw-Hill Education, Inc. -2021.
17. Symptom to Diagnosis: An Evidence-Based Guide, 4e Scott D.C. Stern, Adam S. Cifu, Diane Altkorn. The McGraw-Hill Education, Inc. -2020.
18. Williams Hematology, 10e Kenneth Kaushansky, Josef T. Prchal, Linda J. Burns, Marshall A. Lichtman, Marcel Levi, David C. Linch. The McGraw-Hill Education, Inc. -2021

Information resources
https://esor.eular.org/course/view.php?id=135 https://www.rheumatologyclinic.ca/imagebank/
https://images.rheumatology.org/bp/#/assets https://oxfordmedicaleducation.com/ecgs/ecg-examples/
https://litfl.com/category/top-100/top-100-ecg/
https://escelearning.escardio.org/catalogue?query=&page=1&sort=MostRelevant
https://123sonography.com/ultrasound-courses
https://www.asecho.org/guidelines-search/
http://inephrology.kiev.ua/?page_id=1849
https://ueg.eu/education/online-education/online-courses
www.WebCardio.org
https://www.osmosis.org/library/md?key=MD&source_cta=navbar#clerkships_internal-medicine
https://easl.eu/publications/clinical-practice-guidelines/

Developers:

Katerenchuk I.P. - Head of the Department, Doctor of Science in Medical Sciences, Professor

Maslova G.S. - Head of the Department, Doctor of Science in Medical Sciences,

Prykhodko N.P. – associate professor, Ph.D of Medical Sciences

Kostrikova Iu.A. – associate professor, Ph.D of Medical Sciences