

1. General information	
Name of the faculty	
Educational program (branch, specialty, level of higher education, form of education)	22 Healthcare, 222 Medicine, second (master's) level of higher education, full-time
Academic year	2023-2024
Name of discipline, code (e-mail address on the website of LNMU named after Danylo Halytsky	Internal medicine Mandatory componenets-28 https://new.meduniv.lviv.ua/kafedry/kafedra-vnutrishnoyi-medytsyny-1
Department (name, address, phone, e-mail)	Department of Internal Medicine №1 79010, Lviv, street Nekrasova, 4 tel./fax: +38 (032) 276-97-63 kaf_internalmed_1@meduniv.lviv.ua
Head of the department (contact e-mail)	Prof. Abrahamovych Orest docorest@gmail.com
Year of study (year in which the study of the discipline)	4 year
Semester (semester in which the study of the discipline is implemented)	VII-VIII
Type of course / module (compulsory / optional)	compulsory
Teachers (names, surnames, scientific degrees and titles of teachers who teach the discipline, contact email)	DMSc., prof. Abrahamovych Orest docorest@gmail.com PhD, Assoc. Prof Bilous Zoriana zoryanabilous@gmail.com PhD, Assoc. Prof Pliatsko Mykhailo drplzk@gmail.com
Erasmus yes / no (availability of the discipline for students within the Erasmus + program)	yes
Person responsible for the syllabus (person to be commented on the syllabus, contact e-mail)	DMSc., prof. Abrahamovych Orest docorest@gmail.com PhD, Assoc. Prof Bilous Zoriana zoryanabilous@gmail.com PhD, Assoc. Prof Pliatsko Mykhailo drplzk@gmail.com
Number of ECTS credits	7,0 credits
Number of hours (lectures / practical	210 hours, 26 lec., 80 prac. c., 104 stud. self prep.,

classes / independent work of students	
Language of instruction	Ukr/eng
Information about consultations	onsultations are held as needed in the first and second semesters
Address and telephone number of the clinical base	"Lviv Regional Clinical Hospital", 79010, Lviv, st. Nekrasova, 4 tel./fax: +38 (032) 276-97-63
2. Short annotation to the course	
<p>The organization of the educational process is carried out according to the European credit transfer system of the Organization of the educational process (ECTS).</p> <p>The program of "Internal Medicine" in the 4th year involves the study of the basics of internal medicine in its main sections (gastroenterology, pulmonology, hematology, general internal medicine), with emphasis on the study of etiology, pathogenesis, clinic, diagnosis, treatment and prevention of basic and the most common diseases of the internal organs.</p> <p>Approximate duration of practical classes - 5.0 hours. The main purpose of this course is to teach students the basics of internal medicine. Emphasis is placed on the skills of interviewing and clinical examination of the patient, diagnosis, differential diagnosis, treatment and prevention of diseases of the internal organs, diagnosis and emergency care in case of emergency, as well as medical manipulations. Students participate in the diagnostic and treatment process of patients under the guidance of teachers of the department. It is also provided to master / get acquainted with the procedures most often used in the practice of internal medicine. Practical classes, clinical tours with assistants, associate professors and professors of the department are the main part of this course. Each student records and reports the clinical results of the patient's examination to the assistant on a daily basis and writes a patient card.</p>	
3. The purpose and objectives of the course	
<p>1. The purpose of teaching the discipline "Internal Medicine" is the formation of the ability to apply the acquired knowledge, skills, abilities and understanding to solve typical problems of the doctor in the field of health care, the scope of which provides certain lists of syndromes and symptoms of diseases, emergencies and diseases. that require special tactics of patient management; laboratory and instrumental research, medical manipulations.</p> <p>2. The main tasks of studying the discipline "Internal Medicine" are:</p> <ul style="list-style-type: none"> • conduct surveys and clinical examinations of patients with major diseases of the digestive, respiratory, blood and hematopoietic organs and analyze their results; • determine the etiological and pathogenetic factors of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • analyze typical clinical signs, identify clinical variants and complications of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • establish a preliminary diagnosis of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • prescribe laboratory and instrumental examination of patients with the most common diseases of the digestive, respiratory, blood and hematopoietic organs and their complications; • on the basis of evaluation of the results of laboratory and instrumental examination, to make a differential diagnosis, substantiate and establish the clinical diagnosis of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • determine the necessary mode of work and rest during the treatment of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • determine the necessary medical nutrition in the treatment of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • determine the principles and nature of treatment in the treatment of the most common diseases of the digestive, respiratory, blood and hematopoietic organs; • prescribe treatment, including prognostic-modifying, of the most common diseases of the digestive, respiratory, blood and hematopoietic organs and their complications; 	

- determine the tactics of emergency medical care on the basis of a diagnosis of emergency;
- provide emergency medical care on the basis of an emergency diagnosis;
- carry out primary and secondary prevention of the most common diseases of the digestive, respiratory, blood and hematopoietic organs;
- assess the prognosis and efficiency of patients with the most common diseases of the digestive, respiratory, blood and hematopoietic organs;
- perform medical manipulations;
- fill out medical records;
- adhere to the requirements of ethics, bioethics and deontology in their professional activities.

3. Competences and learning outcomes, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the EPP).

According to the requirements of the PP, the discipline provides students with the acquisition of **competencies**:

- *integral*:

ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

- *general*:

GC1. Ability to abstract thinking, analysis and synthesis.

GC2. Ability to learn and master modern knowledge.

GC3. Ability to apply knowledge in practical situations.

GC4. Knowledge and understanding of the subject area and understanding of professional activity.

GC5. Ability to adapt and act in a new situation.

GC6. Ability to make informed decisions.

GC7. Ability to work in a team.

GC8. Interpersonal skills.

GC9. Ability to communicate in the state language both orally and in writing.

GC 11. Skills in the use of information and communication technologies.

GC 12. Definiteness and perseverance in terms of tasks and responsibilities.

GC 13. The ability to act socially responsibly and consciously.

GC 15. Ability to act on the basis of ethical considerations (motives)

- *special (professional, subject)*:

PC1. Skills of interviewing and clinical examination of the patient.

PC2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.

PC3. Ability to establish a preliminary and clinical diagnosis of the disease.

PC4. Ability to determine the required mode of work and rest during the treatment of diseases.

PC5. Ability to determine the nature of nutrition in the treatment of diseases.

PC6. Ability to determine the principles and nature of disease treatment.

PC7. Ability to diagnose emergencies.

PC8. Ability to determine the tactics of emergency medical care.

PC9. Emergency care skills.

PC11. Skills to perform medical manipulations.

PC13. Ability to carry out sanitary and hygienic and preventive measures.

PC15. Ability to determine the tactics of management of persons subject to dispensary supervision.

PC16. Ability to conduct a performance examination.

PC17. Ability to keep medical records.

PC18. Ability to conduct epidemiological and medical-statistical studies of public health; processing of state, social, economic and medical information.

PC19. Ability to assess the impact of the environment, socio-economic and biological determinants

on the health of the individual, family, population.

PC20. Ability to analyze the activities of a doctor, department, health care institution, to take measures to ensure the quality of medical care and improve the efficiency of medical resources.

PC21. Ability to conduct activities for the organization and integration of medical care and marketing of medical services.

4. Prerequisite of the course

Interdisciplinary links are based on students' study of human anatomy, medical biology, histology, cytology and embryology, pathomorphology, physiology, pathophysiology, medical and biological physics, bioorganic and biological chemistry, microbiology, virology and immunology, pharmacology, radiology, radiology internal medicine.

The discipline "Internal Medicine" contributes to the formation of integrative final program learning outcomes, for which students must:

- conduct professional activities in social interaction based on humanistic and ethical principles; identify future professional activities as socially significant for human health;
- apply knowledge of general and professional disciplines in professional activities;
- comply with the norms of sanitary and hygienic regime and safety requirements during professional activities;
- use the results of independent search, analysis and synthesis of information from various sources to solve typical problems of professional activity;
- argue information for decision-making, be responsible for them in standard and non-standard professional situations; adhere to the principles of deontology and ethics in professional activities;
- to carry out professional communication in modern Ukrainian, to use skills of oral communication in a foreign language, analyzing texts of professional orientation and to translate foreign language information sources;
- adhere to the norms of communication in professional interaction with colleagues, management, work effectively in a team;
- analyze the information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

5. Program learning outcomes

PLO 1. Collect data on patient complaints, medical history, life history, conduct and evaluate the results of physical examination.

PLO 2. Evaluate information on the diagnosis, using a standard procedure based on the results of laboratory and instrumental studies.

PLO 3. Highlight the leading clinical symptom or syndrome. Establish the most probable or syndromic diagnosis of the disease. Assign laboratory and / or instrumental examination of the patient. Carry out differential diagnosis of diseases. Establish a preliminary and clinical diagnosis.

PLO 4. To determine the necessary mode of work and rest in the treatment of the disease.

PLO 5. To determine the necessary medical nutrition in the treatment of the disease.

PLO 6. To determine the principles and nature of treatment (conservative, operative) of the disease.

PLO 7. Determine the tactics of emergency medical care on the basis of a diagnosis of emergency.

PLO 8. Provide emergency medical care on the basis of an emergency diagnosis.

PLO 11. Perform medical manipulations.

PLO 12. To form among the fixed contingent of the population dispensary groups of patients; groups of healthy people subject to dispensary supervision. Implement a system of anti-epidemic and preventive measures within the primary health care. Implement a system of primary prevention measures within the primary health care. Organize secondary and tertiary prevention measures among the assigned contingent of the population.

PLO 14. To determine the tactics of examination and secondary prevention of patients subject to dispensary supervision; tactics of examination and primary prevention of healthy persons subject to dispensary supervision

PLO 15. To determine the presence and degree of restrictions on life, type, degree and duration of disability with the execution of relevant documents.

PLO 17. Conduct screening for major non-communicable diseases; evaluate morbidity indicators, integrated health indicators; identify risk factors for the occurrence and course of disease; to form

risk groups of the population. Determine the source and / or location of the required information depending on its type; receive the necessary information from a specific source; process and analyze the received information.

PLO 18. Identify negative environmental factors; to analyze the incidence of the population, identifying risk groups.

PLO 19. Carry out the selection and use of unified clinical protocols for the provision of medical care, developed on the basis of evidence-based medicine; develop and use local health care protocols.

PLO 20. To form rational medical routes of patients.

PLO 21. Form goals and determine the structure of personal activities.

PLO 22. Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control

PLO 23. To be aware of and guided in its activities by civil rights, freedoms and responsibilities, to raise the general educational and cultural level.

PLO 24. Adhere to the requirements of ethics, bioethics and deontology in their professional activities.

5. List of learning outcomes

Learning outcome code	The content of the learning outcome	References to the code of the competence matrix
Category: Kn - knowledge Ab - ability Co- competence AR - autonomy and responsibility	Learning outcomes determine that the student must know, understand and be able to perform, after completing the discipline. Learning outcomes follow from the set learning goals. To enroll in the discipline, it is necessary to confirm the achievement of each	Symbol of the Program Learning Outcome (PLO) code in the High Education Standard
Kn-1	Have specialized knowledge about the person, his organs and systems, know the methods and standard schemes of questioning and physical examination of the patient.	PLO-1
Ab-1	Be able to have a conversation with the patient; on the basis of algorithms and standards, using standard techniques, to conduct a physical examination of the patient. Be able to assess the state of human health	
Co-1	Skills of interviewing and clinical examination of the patient	
AR-1	Be responsible for the quality collection of information received on the basis of interviews, surveys, examinations, palpation, percussion of organs and systems, timely assessment of human health and taking appropriate measures	
Kn-2	Know the standard methods of laboratory and instrumental research (according to list 4)	
Ab-2	Be able to analyze the results of laboratory and instrumental studies and on their basis to assess information about the patient's diagnosis (according to list 4)	
Co -2	Ability to determine the required list of laboratory and instrumental studies and evaluate their results	
AR-2	Be responsible for deciding on the evaluation of laboratory and instrumental research results	
Kn-3	Know the algorithms for diagnosing diseases;	PLO-3

	algorithms for isolating leading symptoms or syndromes (according to list 1); previous and clinical diagnoses (according to list 2); methods of laboratory and instrumental examination (according to list 4)	
Ab-3	Be able to make an informed decision about the selection of the leading clinical symptom or syndrome; be able to make a preliminary and clinical diagnosis of the disease (according to list 2); to appoint laboratory and instrumental examination of the patient (according to list 4) by applying standard methods	
Co -3	Ability to establish a preliminary and clinical diagnosis of the disease	
AR-3	Be responsible for making informed decisions and actions regarding the correctness of the established preliminary and clinical diagnosis of diseases	
Kn-4	Know about ethical and legal norms; algorithms and standard schemes for determining the mode of work and rest during treatment, based on preliminary and clinical diagnosis of the disease (according to list 2)	PLO-4
Ab-4	Be able to determine, on the basis of preliminary and clinical diagnosis, by making an informed decision the necessary mode of work and rest during the treatment of the disease (according to list 2)	
Co -4	Ability to determine the required mode of work and rest during the treatment of diseases	
AR-4	To be responsible for the validity of the appointment of work and rest during the treatment of the disease (according to list 2)	
Kn-5	Know the algorithms and standard schemes of nutrition during the treatment of diseases (according to list 2)	PLO-5
Ab-5	Be able to determine, on the basis of preliminary and clinical diagnosis, the nature of nutrition during the treatment of diseases (according to list 2)	
Co -5	Ability to determine the nature of nutrition in the treatment of diseases	
AR-5	To be responsible for the validity of the definition of nutrition during the treatment of the disease (according to list 2)	
Kn-6	Know algorithms and standard schemes of treatment of diseases (according to list 2)	PLO-6
Ab-6	Be able to determine the principles and nature of treatment of the disease (according to list 2)	
Co -6	Ability to determine the principles and nature of disease treatment	
AR-6	Be responsible for deciding on the principles and nature of treatment of the disease (according to list 2)	
Kn-7	Have specialized knowledge about urgent human conditions; know the standard methods of human examination (at home, on the street, in a health care facility) in the absence of information; principles of emergency medical care	PLO-7

Ab-7	Be able to identify emergencies (according to list 3); to carry out organizational and diagnostic measures aimed at saving and saving human life	
Co -7	Ability to diagnose emergencies and determine tactics of emergency medical care	
AR-7	Be responsible for the correctness and timeliness of diagnosing an emergency, its severity and tactics of emergency medical care	
Kn-8	Know the algorithms for providing emergency medical care in emergencies (according to list 3)	PLO-8
Ab-8	Be able to provide emergency medical care during an emergency (according to list 3)	
Co-8	Have the skills to provide emergency medical care	
AR-8	Be responsible for the timeliness and quality of emergency medical care	
Kn-9	Know algorithms for performing medical manipulations (according to list 5)	PLO-11
Ab-9	Be able to perform medical manipulations (according to list 5)	
Co -9	Skills to perform medical manipulations	
AR-9	Be responsible for the quality of medical manipulations (according to list 5)	
Kn-10	To know the system of sanitary-hygienic and preventive measures among the fixed contingent of the population. Know the principles of medical examination of different groups of the population: Know the indicators of evaluation of the organization and effectiveness of medical examination.	PLO-12
Ab-10	Be able to form groups of the population for their medical examination.	
Co -10	Ability to carry out sanitary and hygienic and preventive measures	
AR-10	Be responsible for the timely and high-quality implementation of measures to assess the health of the population	
Kn-11	Know the relevant ethical and legal norms for medical examination of the population; examination tactics and principles of secondary prevention of patients subject to dispensary supervision; to know the principles of organization of primary prevention of healthy persons subject to dispensary supervision	PLO-14
Ab-11	Be able to assess the health of patients and the affected population; to organize medical examination of persons subject to dispensary supervision	
Co -11	Ability to determine the tactics of management of persons subject to dispensary supervision	
AR-11	To be responsible for the quality of the organization of dispensary supervision of certain contingents of persons	
Kn-12	Have basic knowledge of medical and social examination	PLO-15
Ab-12	Be able to draw up the relevant documents certifying temporary disability	

Co -12	Ability to conduct a performance examination	
AR-12	To be responsible for the validity of decisions on medical and social examination of working capacity	
Kn-13	Know standard methods, including modern computer information technology, processing of state, social and medical information	PLO-17
Ab-13	Have standard methods of medical and statistical research.	
Co -13	Ability to conduct epidemiological and medical-statistical studies of public health; processing of state, social, economic and medical information	
AR-13	Be responsible for the validity of the conclusions about the state of health of the population; high-quality and timely execution of statistical processing and analysis of the received information	
Kn-14	Know the methods of assessing public health and the principles of risk groups	PLO-18
Ab-14	Be able to assess the health of the population and plan preventive measures	
Co -14	Ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population	
AR-14	Be responsible for timely conclusions on the state of health of the population on the basis of the negative impact of environmental factors, socio-economic and biological determinants, for the timely submission of proposals for appropriate preventive measures.	
Ab-15	Be able to choose the appropriate unified clinical protocol for the provision of medical care	PLO-19
Ab-16	Be able to organize their own work, work in a team with junior medical staff or in an interdisciplinary team	PLO-20
Ab-17	Be able to form goals and determine the structure of personal activities	PLO-21
AR-15	Be responsible for maintaining a healthy lifestyle and timely use of self-regulatory methods	PLO-22
AR-16	To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general educational and cultural level.	PLO-23
Co -15	Adhere to the requirements of ethics, bioethics and deontology in their professional activities	PLO-24
AR-17	Be responsible for compliance with the requirements of ethics, bioethics and deontology in their professional activities.	
6. Format and scope of the course		
Course format - full-time		
Type of study activities	Number of hours	Number of groups
lectures	32	30
practical	98	
seminars	0	
independent	80	

7. Topics and content of the course			
Class type code	Topic	Content of training	Code learning outcome
L-1 (lecture-1)	Anemia. The global COVID-19 pandemic. Diagnosis of SARS-CoV-2. Clinical manifestations, prevention and treatment	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L- 2	Acute and chronic leukemias	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-3	Hemophilia and thrombocytopenic purpura	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-4	Chronic obstructive pulmonary disease	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-5	Bronchial asthma	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-6	Pneumonia	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-7	Gastroesophageal reflux disease	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-8	Gastric dyspepsia and	Definition. Etiology, pathogenesis.	

	chronic gastritis	Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-9	Peptic ulcer of the stomach and duodenum	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-10	Chronic diseases of the small and large intestines	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-11	Gallstone disease, chronic cholecystitis and functional biliary disorders	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-12	Chronic hepatitis	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-13	Cirrhosis of the liver	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-14	Chronic pancreatitis	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
L-15	Principles of evidence-based medicine	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability.	

		Demonstration of the patient.	
L-16	Diagnosis and treatment of diseases of the internal organs in the elderly	Definition. Etiology, pathogenesis. Classification. Clinical manifestations. Diagnosis. Examples of diagnosis formulation. Principles of treatment. Primary and secondary prevention. Prognosis and working ability. Demonstration of the patient.	
P-1 (practical lesson - 1)	Anemia	Definition of iron deficiency, B12-deficiency, folate deficiency, hemolytic, hypoplastic, posthemorrhagic anemia. Etiological factors and pathogenesis. Mechanisms of intravascular and intracellular hemolysis. Features of clinic and laboratory diagnostics of various forms. Differential diagnosis. Complication. Treatment of various forms. Blood transfusion and components. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
P-2	Acute and chronic leukemias	Definition. Modern views on the etiology and pathogenesis. Classification. The main clinical and hematological syndromes. Clinical manifestations. Criteria for diagnosis. Differential diagnosis. Complication. Principles of treatment. Bone marrow transplantation. Supportive therapy. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
P-3	Lymphomas and myeloma	Definition and classification of lymphomas. Hodgkin's and non-Hodgkin's lymphomas. Clinical manifestations and their features in different variants of the course. Criteria for diagnosis. Differential diagnosis. Complication. Principles of treatment. Prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
P-4	Hemophilia and thrombocytopenic purpura	Definition of hemophilia and thrombocytopenic perpura. Etiology and pathogenesis, main clinical syndromes. Criteria for diagnosis. Differential diagnosis. Treatment. Therapy of various hemophilias. Prevention of bleeding. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
P-5	Chronic obstructive pulmonary disease: chronic bronchitis and emphysema	Definition of chronic bronchitis and emphysema. The importance of smoking, environmental, occupational factors and infection in the development of chronic bronchitis. Classification.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17

		Clinical manifestations, changes in the results of additional instrumental research methods depending on the stage (severity). Differential diagnosis. Complication. Treatment depending on the severity. Primary and secondary prevention. Prognosis and working ability	
P-6	Bronchial asthma	Definition of bronchial asthma. Etiology, features of pathogenesis. Classification. Clinical manifestations and changes in the results of instrumental research methods depending on the severity. Differential diagnosis. Complication. Treatment depending on the severity. Emergency care during an asthma attack. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-7	Pneumonia	Definition of pneumonia. The most common etiological factors. Classification. Clinical manifestations and their features in community-acquired, nosocomial, aspiration pneumonia and pneumonia in persons with severe immune defects. Changes in instrumental and laboratory research methods. Differential diagnosis. Complications (multiorgan lesion syndrome, respiratory distress syndrome and respiratory failure). Differential treatment. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-8	Pleurisy	Definition of pleurisy. Etiological factors. Classification. Clinical manifestations, changes in instrumental and laboratory data, their features depending on the form (dry, exudative) and etiology. Differential diagnosis. Complication. Indications for pleural puncture and drainage of the pleural cavity. Treatment. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-9	Infectious and destructive lung diseases	Bronchiectasis, abscess and lung gangrene. Definition. Factors that contribute to development. Clinic, diagnosis of different options. The value of radiological and endoscopic examinations. Differential diagnosis. Complication. Treatment. Indications for surgical treatment. Primary and secondary prevention. Prognosis and	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17

		working ability	
P-10	Respiratory failure	Respiratory failure: definition, classification, causes. Features of the clinical course of different forms. Diagnosis, the role of the study of the function of external respiration. Differential diagnosis. Therapeutic tactics. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-11	Gastroesophageal reflux disease	Definition. Etiology, pathogenesis. The role of gastroesophageal reflux in the development of esophagitis and Barrett's esophagus. Classification. Erosive and non-erosive GERD. Clinical manifestations depending on the variant and stage. Diagnostic criteria, differential diagnosis. Complication. Differentiated therapy. Primary and secondary prevention.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-12	Gastric dyspepsia and chronic gastritis	Definition, etiology and pathogenesis of chronic gastritis. The role of H. pylori in the occurrence of gastroduodenal pathology. Classification of chronic gastritis. Functional dyspepsia: criteria for diagnosis. Differential diagnosis with organic pathology. Modern approaches to the treatment of functional dyspepsia. Primary and secondary prevention. Prognosis and working ability Chronic gastritis: definition, etiology and pathogenesis. The role of H. pylori in the occurrence of chronic gastritis. Classification. Neutrophic and atrophic gastritis. The value of endoscopic (with morphology) and X-ray examination for diagnosis. Modern approaches to the treatment of various types of chronic gastritis. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-13	Peptic ulcer of the stomach and duodenum	Definition. The role of H. pylori, acid-peptic factor and drugs in the occurrence of peptic ulcers and their recurrence. Features of Hp-positive and Hp-negative ulcers. Complications (perforation, penetration, bleeding, impaired evacuation-motor function). The value of instrumental and laboratory diagnostic methods. Methods of diagnosis of Hp infection. Modern tactics of management of the patient with an ulcer. Eradication therapy. Eradication control. Drug therapy of	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17

		Hp-negative ulcers. Indications for surgical treatment. Primary and secondary prevention. Prognosis and working ability	
P-14	Celiac disease and other enteropathies	Celiac disease and other enteropathies. Definition, etiology, pathogenesis. The role of food intolerance, enzymopathies and immune factors. Diagnostic criteria, differential diagnosis. Complication. Differential treatment. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-15	Chronic diseases of the small and large intestines	Definition, etiology, pathogenesis of chronic enteritis. Malabsorption and maldigestion syndromes. Diagnostic criteria, differential diagnosis. Complication. Differential treatment. Irritable bowel syndrome, definition, Roman diagnostic criteria. Etiology, pathogenesis, classification of diseases of the colon. Clinical manifestations of different options. Diagnostic and exclusion criteria. Differential diagnosis. Treatment of various forms. Primary and secondary prevention. Prognosis and working ability. Nonspecific colitis (nonspecific ulcerative colitis and Crohn's disease): definition, etiology and pathogenesis. Classification. Features of the clinical course depending on the degree of activity, severity and phase of the course. Diagnostic criteria. Differential diagnosis. Complications and diseases associated with ulcerative colitis (sclerosing cholangitis, spondyloarthritis, arthritis, dermatoses). Prognosis and working ability.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-16	Gallstone disease, chronic cholecystitis and functional biliary disorders	Definition, etiology, pathogenesis of cholecystitis. Significance of infection, motility disorders and dyscholia in the development of chronic non-stone cholecystitis, cholangitis and gallstone disease. Features of the clinical course. The role of instrumental methods in diagnosis. Differential diagnosis. Complication. Differential treatment depending on the clinical variant and the presence of complications. Indications for surgical treatment. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-17	Chronic hepatitis	Definition, classification of chronic hepatitis. The role of virus persistence,	Kn – 1-14 Ab – 1-17

		drug agents, immune disorders and alcohol. Methods of diagnosis of viral infection. Autoimmune hepatitis, chronic viral, drug-induced hepatitis. Alcoholic liver disease. Basic clinical and biochemical syndromes. Features of the clinical course and diagnosis of individual forms. Significance of morphological, biochemical and radioisotope methods. Differential diagnosis. Complication. Features of treatment of various forms. Primary and secondary prevention. Prognosis and working ability	Co-1-15 AR – 1-17
P-18	Cirrhosis	Definition of liver cirrhosis. Significance of viral infection, alcohol, toxic substances and immunological disorders. Classification. Features of clinical manifestations and diagnosis of different options. Differential diagnosis. Hepatic failure and other complications. Differential therapy. Immediate treatment of complications. Primary and secondary prevention. Prognosis and working ability.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-19	Chronic pancreatitis	Definition of chronic pancreatitis. Significance of various etiological factors. Classification. Features of the clinical course, diagnosis and differential diagnosis depending on the form and location of the pathological process. Complication. Research methods in the diagnosis of pancreatitis. Differential treatment. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
P-20	Obesity and its consequences Acquire proficiency	Definition and classification of obesity. Features of clinical manifestations and diagnosis of different options. Differential diagnosis. Differential treatment. Prevention and treatment of obesity. Primary and secondary prevention. Prognosis and working ability	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -1 (ndependent study)	Preparation for a practical lesson on "Anemia".	Preparation for a practical lesson on "Anemia". Mastering the skills of interpreting a general blood test. - Acquire proficiency of interpreting the results of iron metabolism (serum iron, total serum iron binding capacity, iron transferrin saturation, ferritin level). - Mastering the skills of evaluating bone marrow punctate data.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17

IS – 2	Preparation for a practical lesson on "Acute and chronic leukemias".	- Preparation for a practical lesson on "Acute and chronic leukemias".- Mastering the skills of interpreting the general analysis of blood and myelogram. - Mastering the method of transfusion of blood components and blood - Evaluation of the results of cytochemical studies.substitutes.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -3	Preparation for a practical lesson on "Lymphoma and myeloma".	- Preparation for a practical lesson on "Lymphoma and myeloma".- Acquire proficiency of interpreting the general analysis of blood and myelogram. - Mastering the skills of interpreting the results of X-ray examination of bones on the topic.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -4	Preparation for a practical lesson on "Hemophilia and thrombocytopenic purpura"	- Preparation for a practical lesson on "Hemophilia and thrombocytopenic purpura" Mastering the skills of interpreting a general blood test. - Mastering the method of determining blood type. - Mastering the skills of interpretation of the coagulogram in the case of hemophilia.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -5	Preparation for a practical lesson on "Chronic obstructive pulmonary disease: chronic bronchitis and emphysema."	- Preparation for a practical lesson on "Chronic obstructive pulmonary disease: chronic bronchitis and emphysema." - Mastering the skills of interpretation of sputum analysis (microscopic, bacteriological, bacterioscopic examination), definition of sensitivity to antibiotics. - Mastering the skills of interpreting the indicators of the function of external respiration on the topic.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -6	Preparation for a practical lesson on "Bronchial asthma".	- Preparation for a practical lesson on "Bronchial asthma". - Mastering the skills of interpretation of sputum analysis (microscopic, bacteriological, bacterioscopic examination). - Mastering the skills of interpreting the indicators of the function of external respiration on the topic.	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17
IS -7	Preparation for a practical lesson on "Pneumonia".	- Preparation for a practical lesson on "Pneumonia". - Mastering the skills of interpretation of sputum analysis (microscopic, bacteriological, bacterioscopic examination), definition of sensitivity to antibiotics. - Mastering the skills of interpreting the data of sonography and radiography of the thoracic cavity in two projections on	Kn – 1-14 Ab – 1-17 Co-1-15 AR – 1-17

		the topic.	
IS -8	Preparation for a practical lesson on "Pleurisy"	- Preparation for a practical lesson on "Pleurisy". - Mastering the skills of interpreting the data of sonography and radiography of the thoracic cavity on the topic. - Mastering the skills of interpretation of the analysis of pleural fluid (microscopic, bacteriological and bacterioscopic examination).	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -9	Preparation for a practical lesson on "Infectious and destructive lung diseases and pulmonary insufficiency"	- Preparation for a practical lesson on "Infectious and destructive lung diseases and pulmonary insufficiency." - Mastering the skills of interpreting the results of chest radiography on the topic. - Mastering the skills of interpretation of general blood tests, sputum analysis (bacteriological, microscopic, definition of sensitivity to antibiotics).	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -10	Preparation for a practical lesson on "Respiratory failure"	- Preparation for a practical lesson on "Respiratory failure". - Mastering the skills of interpreting the composition of arterial and venous blood gases.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -11	Preparation for a practical lesson on "Gastroesophageal reflux disease"	Preparation for a practical lesson on "Gastroesophageal reflux disease". Mastering the skills of interpreting the results of 24 hour esophageal pH monitoring on the topic. Mastering the skills of interpreting the endoscopic picture of the esophagus on the topic.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -12	Preparation for a practical lesson on "Gastric dyspepsia and chronic gastritis"	Preparation for a practical lesson on "Gastric dyspepsia and chronic gastritis". Mastering the skills of interpreting the results of respiratory tests with a stable isotope (¹³ C-rea). Mastering the skills of interpretation of the study of acid production (intra-gastric topographic express pH-metry). Mastering the skills of interpreting the results of esophagogastroduodenoscopy with a biopsy on the topic.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -13	Preparation for a practical lesson on "Peptic ulcer of the stomach and duodenum"	Preparation for a practical lesson on "Peptic ulcer of the stomach and duodenum." Mastering the skills of interpreting the endoscopic picture of the stomach and duodenum on the topic.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -14	Preparation for a	Preparation for a practical lesson on	Kn – 1-14

	practical lesson on "Celiac disease and other enteropathies"	"Celiac disease and other enteropathies". Mastering the skills of interpreting the results of the coprocytogram. Mastering the skills of interpretation of the results of enzyme linked immunosorbent assay of antibodies to tissue transglutaminase and gliadin peptides in the case of celiac disease (ELISA method), hydrogen tests.	Ab – 1-17 Co–1-15 AR – 1-17
IS -15	Preparation for a practical lesson on "Chronic diseases of the small and large intestine"	Preparation for a practical lesson on "Chronic diseases of the small and large intestines." Mastering the skills of interpreting the endoscopic picture of the colon on the topic. Mastering the skills of interpreting the results of fecal calprotectin.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -16	Preparation for a practical lesson on "Gallstone disease, chronic cholecystitis and functional biliary disorders"	Preparation for a practical lesson on "Gallstone disease, chronic cholecystitis and functional biliary disorders". Mastering the skills of interpreting the results of ultrasound of the liver, bile ducts and gallbladder on the topic. Mastering the skills of interpretation of the results of microscopic and biochemical examination of bile obtained by multi moment duodenal sounding.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -17	Preparation for a practical lesson on "Chronic hepatitis"	Preparation for a practical lesson on "Chronic hepatitis". Mastering the skills of interpreting the results of general and biochemical analysis of blood (total protein, protein fractions, bilirubin and its fractions, the activity of ALT, AST, alkaline phosphatase). Mastering the skills of evaluating the results of serological blood tests (serum markers of viral and autoimmune hepatitis; polymerase chain reaction, qualitative and quantitative analysis; genotyping of the virus).	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -18	Preparation for a practical lesson on "Cirrhosis of the liver"	Preparation for a practical lesson on "Cirrhosis of the liver." Mastering the skills of interpreting the results of biochemical analysis (ALT, AST, gamma-GT, AP, bilirubin and its fractions, proteins and protein fractions, glucose, coagulogram). Mastering the skills of interpreting the results of ultrasound of the liver, gallbladder, pancreas, spleen and vessels of the portal system (Doppler)	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17

		on the topic.	
IS -19	Preparation for a practical lesson on "Chronic pancreatitis"	Preparation for a practical lesson on "Chronic pancreatitis". Mastering the skills of interpreting the results of general analysis of blood, urine (α -amylase), biochemical analysis of blood (elastase 1, α -amylase), fecal analysis for fecal elastase 1. Mastering the skills of evaluating the results of the study of carbohydrate metabolism (glucose, insulin, C-peptide, pancreatic polypeptide, blood glucagon; test with sugar load, galactose, D-xylose).	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17
IS -20	Preparation for a practical lesson on "Obesity and its consequences"	Preparation for a practical lesson on "Obesity and its consequences". Mastering the skills of determining the degree of obesity by body mass index. Mastering the skills of interpreting the results of hormonal examination (STH, IGF-1, prolactin, gonadotropins, vasopressin) and urine analysis according to S.S. .Zymnytsky.	Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17

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

Thematic plans of lectures, practical classes and independent work reveal the problematic issues of the relevant sections of internal medicine. In the lecture course didactic means are used as much as possible (multimedia presentations, slides, educational videos, demonstration of thematic patients). Lecture and practical stages of students' learning are composed mainly in such a way that lectures precede the relevant practical classes.

Practical classes are held on the clinical bases of the department. Methods of organizing 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 teamwork of students, doctors, other participants in the process of providing medical care;
- to form in the student, as a future specialist, an understanding of responsibility for the level of their training, its improvement during training and professional activities.

To implement the relevant module specified in the first lesson, it is necessary to provide the student with a detailed plan of work in the clinic and provide conditions for its implementation. This plan should include:

- research 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;
- supervision of patients, which should be carried out by the student during the study of the discipline;
- reports of the patient's medical history in the study group, at clinical rounds, practical conferences.

Patient supervision involves:

- 1) clarification of the patient's complaints, medical history and life, conducting a survey of organs and systems;
- 2) conducting a physical examination of the patient and determining the main symptoms / syndromes of the disease;
- 3) analysis of the results of laboratory and instrumental research;
- 4) diagnosis;

5) appointment of treatment;

6) definition of primary and secondary prevention measures;

7) report on 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 diagnosis, differential diagnosis, scheduled examination, treatment tactics, assessment of prognosis and performance, prevention.

It is recommended to conduct practical classes with the inclusion of:

1) control of the initial level of knowledge with the help of test questions, compiled in the format of a question with 5 answer options, of which 1 - correct and checking workbooks;

2) management of 1-2 patients with diseases and conditions corresponding to the subject of the lesson, followed by discussion of the correctness of diagnosis, differential diagnosis and treatment with the use of evidence-based medicine and in accordance with National and European guidelines and protocols;

3) consideration of the results of additional research methods (laboratory and instrumental) used in the diagnosis and differential diagnosis, consideration of which is provided by the topic of practical training;

4) control of the final level of knowledge on test tasks.

In practical classes, students are recommended to keep protocols (patient card), in which it is necessary to enter brief information about the patients examined during the practical lesson, diagnosis, examination plan and prescribed treatment.

Independent and individual work of students is an integral part of educational activities and is included in the ECTS (European Community Course Credit Transfer System) credits of each module and discipline as a whole. It includes:

- preparation for practical classes;
- implementation and defense of ISRS (International Classification for Primary Care) (report of the abstract in a practical lesson; report at clinical conferences of departments; writing theses, articles; review of scientific literature on topics);
- preparation and writing of medical history;
- mastering practical skills;
- preparation for final control;
- writing a workbook on the topic of the lesson.

Teachers of the department provide an opportunity to carry out independent work. During practical classes and final control, control and evaluation of its implementation are carried out.

The Department of Internal Medicine has the right to make changes to the curriculum within 15.0%. Assimilation of the topic (current control) is controlled in practical classes, assimilation of content modules (intermediate control) - in practical final classes. It is recommended to use the following tools to assess the level of preparation of students: test tasks, solving situational problems, conducting laboratory tests and evaluating their results, analysis and evaluation of instrumental research and parameters characterizing the functions of the human body, control of practical skills and medical manipulations.

The final control is made at the last practical lesson to the teacher of the department according to the schedule approved at the educational and methodical meeting of the department. Assessment of student success in the discipline is a rating and is set on a multi-point scale, taking into account the assessment of the mastery of individual modules.

For those students who want to improve the grade in the discipline, upon completion of the discipline, the curriculum provides a deadline for re-assembly.

The organization of the educational process should ensure the participation of students in the management of at least 2/3 of inpatients. If it is not possible to provide supervision of patients with diseases on the topic of the lesson, students fill in the study history of diseases with diseases of the relevant topic. The need to write such a history is determined by the assistant / associate professor (responsible for teaching and methodological work) on the basis of a weekly review of information on the availability of relevant patients in the departments.

Daily patient examination reports are provided to the associate professor / assistant for supervision. Associate professors / assistants ensure that each student receives the necessary competence in the following areas: questioning the patient, clinical examination, oral report, making diagnostic

decisions and determining treatment tactics (critical thinking), filling out documentation.

8. Verification of learning outcomes

Current control

is carried out during training sessions and aims to check the assimilation of educational material by students.

Carrying out current control during training sessions should take place on the basis of test control, current survey, examination of the patient, filling in the patient's card and independent work, after which the student is given a comprehensive assessment. Forms of assessment of current educational activities should be standardized and include control of theoretical and practical training. The final grade for the current educational activity is set on a 4-point (national) scale.

Learning outcome code	Code of the type of classes	Method of verification of learning outcomes	Enrollment criteria
Kn – 1-14 Ab – 1-17 Co–1-15 AR – 1-17	Lec 1-16 Prac- 1-20 Semin - 1-20 Indep Study - 1-20	test control, solving situational problems, questioning and clinical examination of the patient, analysis and evaluation of the results of instrumental research and parameters that characterize the functions of the human body, determining the treatment tactics of the patient, filling the patient's card, demonstration of practical skills, report on the performed independent study	<ol style="list-style-type: none"> 1. Knowledge of theoretical material has significant errors, no homework, initial test control of knowledge is written less than 60.0%, unsatisfactory examination of the patient (unsatisfactory assessment of practical skills), the main test on the topic is written on unsatisfactory assessment, the student makes mistakes, that can lead to the death of the patient - unsatisfactory; 2. Knowledge of theoretical material has errors, which, however, can not cause the death of the patient, the initial test control is written at 60.0-74.0%, a satisfactory grade for practical skills, a test on the topic written on a satisfactory grade, the student makes mistakes that lead to a prolongation of the diagnostic search, but do not threaten the patient's life - satisfactory; 3. Knowledge of theoretical material without errors, corresponds to the program, the initial test control is written on 75,0-89,0%, the grade "good" for the performed practical skills, the test on the studied topic is written on the grade "good", the student does not make mistakes - good. 4. Knowledge of theoretical material without errors, corresponds to the program, from basic disciplines excellent knowledge which the student can use in therapy, the initial test control is written on 90,0% and more, an estimation "excellent" for the executed practical skills, control work on the studied subject written on the grade "excellent", the student does not make mistakes, is able to examine the patient, interpret the results of examinations and prescribe modern, individual, with a dosage of treatment - excellent.

Final control

General evaluation system

Participation in the work during the semester (credit) on a 200-

	point scale	
Rating scales	traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale	
Conditions of admission to the final control	The student attended all practical classes and received at least 120 points for current performance	
Type of final control	Methods of final control	Enrollment criteria
Credit	All topics submitted for current control must be included. Grades from the 4-point scale are converted into points on a multi-point (200-point) scale in accordance with the Regulation "Criteria, rules and procedures for evaluating the results of students' learning activities	Maximal number of points - 200. Minimal number of points - 120

9. Course policy

The course is compulsory for students majoring in "222 Medicine". The student is obliged to fully master the knowledge, skills, practical skills and competencies in the discipline. The presence and activity of the student during the practical classes must be taken into account.

The applicant of higher education has the right to an individual schedule of attending lectures. Debt settlement as a result of semester control is carried out under the control of the dean's office of the faculty in accordance with the schedule approved by the dean of the faculty.

For high efficiency of the educational process the student is obliged to follow the following rules:

- attend practical classes according to the schedule
- obligatory in a dressing gown and removable shoes, with an identifier;
- must have a mask, gloves, stethoscope and tonometer;
- do not be late for class;
- follow the rules of internal regulations of the university;
- do not talk during classes;
- turn off your mobile phone;
- do not miss classes without good reason;
- timely and diligently perform tasks;
- do not write off and do not use plagiarism;
- be polite and friendly to classmates and teachers;
- be punctual and obligatory.

10. References

LIST OF EDUCATIONAL MATERIALS

Required:

1. Cheifetz A., Brown A., Curry M.; 2012, Oxford American Handbook of Gastroenterology and Hepatology ; Oxford University Press; 488 p.
2. Fauci A., Dennis A., L. Dan K, LLongo L., HARRISON'S Gastroenterology and Hepatology McGraw-Hill 17-thy edition 2650 p.
3. Flynn J. AMC handbook of clinica assessment. 2007: Australian Medical Council: 894 p.
4. Lieber J., Noto F. 20187: Kaplan Medical's USMLE Step 2 CK Lecture Notes.Kaplan Publishing, 1356 p.
5. Gamal Abdul Hamid, 2012:, Clinnical hematology1 st edition; 251 p.
6. Harrison's Pulmonary and Critical Care Medicine, 3 dition 2017. Loscalzo J., McGraw-Hill Education 644p.
7. Hawkey C. J., Bosch J., Richter J Textbook of Clinical Gastroenterology and Hepatology. Second edition. 2012.. Wiley-Blackwell, 1274 p.

8. Hayes P. 2016: Guidelines for preventive activities in general practice, 9th edition
9. The Royal Australian College of General Practitioners, 173 p.
Hoffman R., Edward J., Benz Jr. et al 2017 7th edition. Hematology. Basic principles and practice. ELSEVIER, 2650 p..
10. Lynn S. Bickley. I 2016: Bates' Guide to Physical Examination and History Taking, 10th Edition. 1010p.
11. Murtagh J., Rosenblatt J., Coleman J., Murtagh C. General Practice, 2019:7th edition, McGraw-Hill Education (Australia) Pty Ltd, 6541 p.
12. Wearne S. 2016: Clinical cases for general practice exams / Susan Wearne. Edition: 3rd ed. 374 p.

Additional:

1. Harrison's Principles of Internal Medicine edited by Dan L. Longo, Anthony S. Fauci, Joseph Loscalzo, Stephen L. Hauser 18 th ed, 2011 New York, McGraw-Hill Professional.
2. Bloomfield CD, Herzig Gp. - Advances in the management of acute leukemia. - Hematol, Oncol. Clin. North Am. 7:1, 1993.
3. Khouri I et al., Chronic myeloid leukemia. - Clinical oncology. - New York Churchill Livingstone. 1995.-pp. 2035-2051.
4. Copelan EA, McGuire EA, The biology end treatment of acute lymphoblastic leukemia in adults. – Blood, 1995, Vol. 85, p. 1151
5. Kelley's Textbook of Internal Medicine, 4th ed., H. David Humes (Editor), Herbert L. Dupont (Editor) 2000 Lippincott Williams & Wilkins.
6. Aspinall RL, Simon DTR Gastroenterology and Liver Disease, Mosby Int, Lim 2002 -P 374.
7. Kirsner JB, Shorter RG (eds) Inflammatory Bowel Disease, 4th ed. Philadelphia. Lea and Febiger 1995
8. Schwatz SI et al. Principles of Surgery. 1994 6th ed. New York, McGraw Hill.
9. Yamada T. et al. Textbook of Gastroenterology. 1995 2d ed. Philadelphia, Lippincott

11. Equipment, logistics and software of the discipline / course

- 1) synopsis or extended plan of lectures
- 2) plans for practical classes
- 3) tasks for independent work
- 4) guidelines / recommendations for students and teachers
- 5) algorithms for treatment and emergency care (according to the standards of evidence-based medicine)
- 6) algorithms for performing skills practices, medical manipulations, videos
- 7) results of laboratory and instrumental research methods
- 8) models, phantoms, etc.
- 9) simulators, electronic directories, computers with appropriate information support
- 10) questions, tasks, tasks or cases for current and final control.

Equipment:

1. Enzyme-linked immunosorbent assay (BioTek, USA)
2. ABPM-04 (daily blood pressure monitoring) (Meditech Ltd., Hungary)
3. Daily monitor of blood pressure and electrocardiographic signals SDM 23 (LLC "X-Techno", Kyiv, Ukraine)
4. Sonost 2000 (diagnosis of osteoporosis by densitometric method) ("Osteosys", South Korea)
5. Pulse oximeter "NANOX exo". (MedLab, Germany)
6. Recorder of the daily electrocardiogram according to Holter B16600-12 (Heaco Ltd.)
7. Electrocardiograph ELI 230 (Mortara, Milwaukee, USA)
8. Electrocardiograph "BIOMED" BE 300 (Shenzhen Comen Medical Instruments Co., Ltd., China)
9. Scanner ultrasonic diagnostic UGEO H60 (Samsung Medison Co., Ltd.)
10. Patient monitor G3D (General Meditech, Inc.) (3 pcs.)
11. Syringe pump SN 50 F66 (SINO Medical-Device Technology Co., Ltd.) (2 pcs.)

12. Video gastroscope EG27-i10 (Pentax)
13. Video colonoscope EC34-i10L (Pentax)
14. HOREV-2516 (washing and disinfection machine for 2 flexible endoscopes) (Kharkov, Ukraine)
15. Centrifuge laboratory SM-6MT with a rotor 6M 02 (ELMI ltd.)
16. Combined system "HELIK-scan-M" (LLC "AMA", Russia)
17. Power Heart AED G3 pro (automated external defibrillation) (Cardiac Science Corp., Bothell, USA)

12. Additional information

The student scientific circle of the department is present and each teacher prepares the student for participation in the scientific conference.

Practical classes are held on the clinical bases of the Department of Internal Medicine № 1.

link to the web page of the department:

<https://new.meduniv.lviv.ua/kafedry/kafedra-vnutrishnoyi-medytsyny->

13. Appendices

List 1 (syndromes and symptoms)

- 1) anemic syndrome
- 2) chest pain
- 3) abdominal pain
- 4) vomiting
- 5) bronchoobstructive syndrome
- 6) effusion into the pleural cavity
- 7) fever
- 8) hemorrhagic syndrome
- 9) hepatomegaly and hepatolienal syndrome
- 10) dyspepsia
- 11) dysphagia
- 12) diarrhea
- 13) jaundice
- 14) shortness of breath
- 15) asphyxia
- 16) constipation
- 17) cough
- 18) intestinal obstruction
- 19) hemoptysis
- 20) lymphadenopathy
- 21) edematous syndrome
- 22) portal hypertension
- 23) itchy skin
- 24) indigestion syndrome
- 25) gastrointestinal bleeding

List 2 (diseases)

I. Diseases of the blood and blood-forming organs, disorders involving the immune mechanism:

- 1) anemia
- 2) hemolytic disease of newborns
- 3) hemophilia
- 4) leukemia
- 5) lymphoma
- 6) congenital (Bruton's disease, Viscot-Aldridge syndrome) and acquired immunodeficiency states
- 7) idiopathic thrombocytopenic purpura
- 8) chronic radiation injuries

II. Respiratory and mediastinal diseases:

- 9) asphyxia
- 10) bronchial asthma
- 11) bronchitis
- 12) bronchiectasis
- 13) bronchopulmonary dysplasia
- 14) respiratory failure
- 15) infectious and destructive lung diseases
- 16) pulmonary insufficiency
- 17) mediastinitis
- 18) cystic fibrosis
- 19) neoplasms of the lungs and mediastinum
- 20) pleurisy
- 21) pneumoconiosis
- 22) pneumonia
- 23) pneumothorax
- 24) respiratory distress syndrome
- 25) a foreign body in the respiratory tract
- 26) chest injuries (superficial, open)
- 27) chronic obstructive pulmonary disease

III. Digestive diseases:

- 28) peptic ulcer disease
- 29) gastroesophageal reflux disease, esophagitis
- 30) gastritis, duodenitis
- 31) acute and chronic hepatitis
- 32) acute intestinal obstruction
- 33) acute and chronic appendicitis
- 34) acute and chronic pancreatitis
- 35) benign diseases of the esophagus
- 36) enteritis, colitis
- 37) neoplasms of the esophagus, stomach, colon, liver and pancreas
- 38) peptic ulcers of the stomach and duodenum
- 39) peritonitis
- 40) perforation of the hollow organ
- 41) liver failure
- 42) malabsorption syndrome
- 43) stenosis of the gastric pylorus
- 44) functional gastrointestinal disorders
- 45) diseases of the operated stomach
- 46) cholecystitis, cholangitis, gallstone disease, choledocholithiasis
- 47) cirrhosis of the liver
- 48) gastrointestinal bleeding

IV. Diseases of the endocrine system, eating disorders and metabolic disorders:

- 49) obesity

List 3 (emergencies):

- 1) acute respiratory failure
- 2) acute liver failure
- 3) acute blood loss syndrome
- 4) biliary colic

List 4 (laboratory and instrumental research):

- 1) analysis of pleural fluid
- 2) analysis of ascitic fluid
- 3) analysis of synovial fluid
- 4) alpha-amylase activity in blood and urine, fecal elastase-1

- 5) blood proteins and their fractions, C-reactive protein
- 6) blood glucose, glycosylated hemoglobin,
- 7) serum ferritin, iron and copper
- 8) creatinine, urea, blood and urine, glomerular filtration rate
- 9) blood electrolytes
- 10) blood aminotransferases
- 11) total blood bilirubin and its fractions
- 12) coagulogram
- 13) blood uric acid
- 14) alkaline blood phosphatase
- 15) histomorphological examination of lymph node biopsy
- 16) histomorphological examination of the biopsy of parenchymal organs
- 17) histomorphological examination of the biopsy of mucous membranes
- 18) histomorphological examination of muscle and skin biopsy
- 19) study of the function of external respiration
- 20) endoscopic examination of the bronchi
- 21) endoscopic examination of the digestive tract
- 22) general analysis of feces
- 23) general blood test
- 24) general analysis of urine
- 25) general analysis of cerebrospinal fluid
- 26) general analysis of sternal punctate
- 27) general analysis of sputum
- 28) general immunological profile of blood
- 29) serological reactions in infectious diseases
- 30) rapid tests for viral diseases
- 31) amplification methods for infectious diseases (PCR, LLR)
- 32) serological reactions in autoimmune diseases
- 33) microbiological study of biological fluids and secretions
- 34) methods of instrumental visualization of abdominal organs
- 35) methods of instrumental visualization of the thoracic cavity
- 36) multi-moment fractional study of bile and pH-metry of the stomach and esophagus

List 5 (medical manipulations):

- 1) perform indirect heart massage
- 2) perform artificial respiration
- 3) perform defibrillation using a manual automatic defibrillator-cardioverter
- 4) to register a standard ECG in 12 leads
- 5) to temporarily stop external bleeding
- 6) to carry out administration of medicinal substances (intravenous jet and drip, intraosseous)
- 7) provide peripheral venous access
- 8) measure blood pressure
- 9) to restore airway patency
- 10) to carry out finger research of a rectum
- 11) perform a pleural puncture
- 12) determine blood groups, rhesus affiliation
- 13) transfuse blood components and blood substitutes
- 14) taking smears for bacterioscopic, bacteriological and cytological examinations

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