

Ministry of Healthcare of Ukraine
Poltava State Medical University

Department of Internal Medicine №3 with phthisiology

SYLLABUS

**“INTERNAL MEDICINE
(INCLUDING INFECTIOUS DISEASES AND EPIDEMIOLOGY,
CLINICAL PHARMACOLOGY)”**

compulsory discipline

Module 1. Basics of Internal Medicine

Basics of internal medicine (diseases of respiratory system, cardio-vascular system, rheumatic diseases and diseases of gastro-intestinal system)

Module 2. Basics of Internal Medicine

Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation. Diseases of renal and urinary systems.

Diseases of endocrine system, metabolic diseases.

Diseases of hematopoiesis. Allergic diseases.

academic and professional level
field of knowledge
specialty

the second (master's) level of higher education
22 «Healthcare»
«Dentistry»

academic qualification

Master of Dentistry

professional qualification

Dentist

academic and professional program
mode of study
course(s) and semester(s) of study of the
discipline

«Dentistry»,
full-time
Years 4
Terms 7 - 8

INFORMATION ABOUT LECTURERS WHO DELIVER THE ACADEMIC DISCIPLINE

Surname, name, patronymic of the lecturer (lecturers), scientific degree, academic title	Borzykh Oksana, MD PhD, docent; Kaidashev Ihor, MD PhD DMedSc, professor; Lavrenko Anna, MD PhD, docent;
Profile of the lecturer (lecturers)	https://int-med-three.pdmu.edu.ua/team
Contact phone	+380532676269
E-mail:	vnutrmed3@pdmu.edu.ua
Department page at the website of PDMU	https://int-med-three.pdmu.edu.ua/

MAIN CHARACTERISTICS OF THE ACADEMIC DISCIPLINE

The scope of the academic module 1.

Number of credits / hours - 3 / 90, of which:

Lectures (hours) - 8

Practical (hours) - 40

Self-directed (hours) - 42

Type of control - final module control

Year of study - 3

Semester V-VI

The scope of the academic module 2.

Number of credits / hours – 1,5 / 45, of which:

Lectures (hours) - 0

Practical (hours) - 40

Self-directed (hours) - 5

Type of control - final module control

Year of study - 4

Semester VII-VIII

The policy of the academic discipline is built taking into account the norms of the legislation of Ukraine on academic integrity, the Charter of the University, the provisions of the PSMU and other normative documents.

When organizing the educational process at PSMU, lecturers and students act in accordance with:

Regulation on the organization of the educational process at Poltava state medical university

(<https://en.pdmu.edu.ua/documents>)

Regulation on the academic integrity of recipients of higher education and employees of Poltava state medical university (<https://en.pdmu.edu.ua/documents>)

Internal code of conduct for students of Poltava state medical university (<https://en.pdmu.edu.ua/documents>).

Regulation on the organization and methods for assessment of educational activities of higher education recipients at Poltava state medical university (<https://en.pdmu.edu.ua/documents>)

Regulation on the organization of self-directed work of students at Poltava state medical university (<https://en.pdmu.edu.ua/documents>)

Regulation on the procedure of forming the individual educational trajectories for the recipients of higher education at Poltava state medical university (<https://en.pdmu.edu.ua/documents>)

Regulation on the procedure of credit transfer for academic disciplines and calculation of academic difference (<https://en.pdmu.edu.ua/documents>)

The department of internal medicine №3 with phthisiology is based in the department of internal medicine in the 1st City Clinical Hospital. Address: Poltava, Olesya Honchara street 27a. Students attend classes according to the timetable, punctually. Classes are held without a break. There is a cloak room in the hospital where students can change. While at the department, students have to follow the professional dress code, which includes medical uniform - white coat, medical hat (preferably white), perfectly clean and well-ironed. It is prohibited to wear medical uniform outside the hospital. It is students' personal moral responsibility to follow dress code regulations.

Description of the academic discipline (summary). Studying the basics of internal medicine is crucial for the training of doctors of all specialties. Any doctor has to be able to provide first aid in case of emergency medical condition, trauma, bleeding, clinical death, to perform injections, place drainages, perform blood transfusion and other manipulations. **Module 1. “Basics of internal medicine”** is studied during the 3rd

year. It includes learning about diseases of respiratory system, cardio-vascular system, rheumatic diseases and diseases of gastro-intestinal system. It enables students to learn main diagnostic and treatment principles of most common internal diseases, tactics for the dentist (according to the list 3), as well as diagnosing and treating emergency conditions (according to the list 4) based on the Standard of Higher Education of Ukraine, Specialization Dentistry, from 26.06.2019.

Module 2. “Basics of internal medicine” is studied during the 4th year. It includes learning about completion of patient’s medical history, diseases of renal and urinary systems, diseases of endocrine system, metabolic diseases, diseases of bone marrow and allergic diseases. It enables students to learn main diagnostic and treatment principles of most common internal diseases, tactics for the dentist (according to the list 3), as well as diagnosing and treating emergency conditions (according to the list 4) based on the Standard of Higher Education of Ukraine, Specialization Dentistry, from 26.06.2019.

Prerequisites and post-requisites of the subject. Module 1. “Basics of internal medicine”

Prerequisites

Studying the basics of internal medicine is based on knowledge, gained from biomedical (medical biology, biochemistry, microbiology, virology and immunology, social medicine, public health etc.) and clinical departments.

Post-requisites

Knowledge and skills gained while studying internal medicine will be integrated in further learning and professional work. The knowledge acquired in the learning process is integrated into the skills of semiotic thinking. This involves the formation of skills to apply knowledge of internal medicine in the process of further education and professional activities. Also, the study of the basics of internal medicine lays the foundations for the formation of knowledge, skills and abilities necessary for future professional activities.

The aim and tasks of the academic discipline:

Aim of Module 1, 2 “Basics of internal medicine” is: to teach students to perceive human body as one, highlight the link between oral cavity pathology and

internal organs, develop skills of fast examination and provision of first aid for patients during pre-hospital stage and in emergency situations. Numerous internal diseases often manifest on the mucosa of the oral cavity. This causes patients to approach dentist first. Additionally, certain life-threatening emergencies can arise during the work on the dentist, thus the tactics and treatment choice made by the dentist are crucial for the life and health of patients. Gain skills to diagnose main internal diseases based on objective signs and history; diagnose life-threatening complications; know the management plan for patients with somatic disorders; be able to determine the impact of internal diseases on the dental health and the role of oral cavity pathology for the development of somatic diseases.

The main tasks of studying the Module 1, 2 “Basics of internal medicine” are:

- master the diagnostic methods of internal pathology based on syndromes and classification;
- master the principles of clinical diagnosis formation of diseases that require special management from the dentist;
- master the techniques of providing first medical aid in cases of life-threatening conditions according to the list.

Competences and learning outcomes in accordance with the academic and professional program, the formation of which is facilitated by the discipline (integral, general, special)

Based on the Standard of Higher Education of Ukraine, Specialization Dentistry, from 26.06.2019. competencies are:

- *Integral:*

Ability to solve problems and problems in the field of health care in the specialty "Dentistry" in professional activity or in the process of study, which involves carrying out research and / or implementation of innovations.

- *General competencies (GC):*

GC 1. Ability to think abstractly, analyze and synthesize.

GC 2. Ability to learn and master modern knowledge.

GC 3. Ability to apply knowledge in practical situations.

GC 4. Knowledge and understanding of the subject area and understanding of professional activities.

GC 5. Ability to adapt and act in a new situation.

GC 6. Ability to make informed decisions.

GC 7. Ability to work in a team.

GC 8. Ability to interpersonal interaction.

GC 9. Ability to communicate in a foreign language.

GC 10. Ability to use information and communication technologies.

GC 11. Ability to search, process and analyze information from various sources.

GC 12. Determination and perseverance in tasks and responsibilities.

GC 13. Awareness of equal opportunities and gender issues.

GC 14. Ability to realize their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, and the development, the rule of law, human and civil rights and freedoms in Ukraine.

GC 15. The ability to preserve and enhance moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of physical activity for active recreation and healthy lifestyle.

- *Special (professional) competencies (SC):*

SC 1. Ability to collect medical information about the patient and analyze clinical data.

SC 2. Ability to interpret the results of laboratory and instrumental research.

SC 3. The ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.

SC 4. Ability to plan and carry out preventive measures

diseases of the organs and tissues of the oral cavity and maxillofacial region.

SC 5. Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of diseases of the organs and tissues of the oral cavity and maxillofacial area.

SC 7. The ability to determine the management tactics of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region with accompanying somatic diseases.

SC 8. Ability to perform medical and dental manipulations.

SC 11. Ability to determine tactics, methods and provision of emergency medical assistance.

SC 13. The ability to assess the impact of the environment on the state of health of the population (individual, family, population).

SC 14. Ability to maintain regulatory medical documentation.

SC 15. Processing of state, social and medical information.

SC 17. Ability to legally support one's own professional activity.

SC 18. The ability to provide pre-medical care according to the protocols of tactical medicine.

Program learning outcomes (PLO) according to the educational and professional program, the formation of which is facilitated by the discipline:

“Internal medicine (including infectious diseases and epidemiology, clinical pharmacology)”, modules 1 and 2 “Basics of internal medicine”:

PLO 1. To determine and identify leading clinical symptoms and syndromes (list 1): anemia, chest pain, abdominal pain, loss of consciousness, hemorrhagic syndrome, headache, jaundice, shortness of breath, asphyxia, dizziness, change of skin color, oral mucous color, xerostomia, fever, lymphadenopathy, macroglossia, macrocheilia, edema,

heartburn, change of taste, via standard methods, using medical history data, examination results. Using the knowledge about human body, organs and systems, determine likely topical and syndrome-based preliminary diagnosis of dental disease (list 2): oral mucosa: auto infectious diseases of oral mucosa (ulcerative-necrotic lesions, candidiasis), mucosal diseases in case of dermatitis with autoimmune component (pemphigus, lupus), changes of mucosa in allergic diseases, metallic intoxication, symptomatic manifestations of gastro-intestinal tract (ulcer, gastritis, enteritis, colitis, chronic hepatitis), symptomatic manifestations of cardio-vascular diseases (circulation insufficiency, arterial hypertension), symptomatic manifestations of endocrine diseases (acromegaly, Cushing syndrome, diabetes mellitus, hyper- and hypothyroid), symptomatic manifestations of hematological diseases (anemia, thrombocytopenic purpura, leukemias), symptomatic manifestations of hypo- and avitaminosis.

PLO 2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the maxillofacial area, based on the results of laboratory and instrumental tests, to assess information about the diagnosis (list 5): blood glucose analysis, thyroid function tests (respiration, swallowing, speech, chewing and temporomandibular joint function), general blood test, general urine test, biochemical blood test, immunological test for dental diseases, coagulation test.

PLO 3. Assign and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and / or instrumental) according to list 5: analysis of blood glucose, study of thyroid function (breathing, swallowing, speech, chewing and temporomandibular joint function), general blood test, general urine test, biochemical blood test, immunological test for dental diseases, coagulation test, patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (according to list 2) of the oral mucosa: auto infectious diseases of oral mucosa (ulcerative-necrotic lesions, candidiasis), mucosal diseases in case of dermatitis with autoimmune component (pemphigus, lupus), changes of mucosa in allergic diseases, metallic intoxication, symptomatic manifestations of gastro-intestinal tract (ulcer, gastritis, enteritis, colitis, chronic hepatitis), symptomatic manifestations of cardio-vascular diseases (circulation insufficiency, arterial hypertension), symptomatic manifestations of endocrine diseases (acromegaly, Cushing syndrome, diabetes mellitus, hyper- and hypothyroid), symptomatic manifestations of hematological diseases (anemia, thrombocytopenic purpura, leukemias), symptomatic manifestations of hypo- and avitaminosis.

PLO 5. To diagnose emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, lack of information and limited time (according to list 4): asphyxia, hypertensive crisis, acute respiratory failure, acute heart failure, acute poisoning, electric shock, fainting, collapse, coma, laryngeal edema, Quincke's edema, convulsions, drowning, shock.

PLO 10. Determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making a reasoned decision according to existing algorithms and standard schemes.

PLO 13. Determine the tactics of providing emergency medical care, using the recommended algorithms, under any circumstances based on the diagnosis of an emergency condition in limited time (according to list 4).

PLO 14. Analyze and evaluate government, social and medical information using standard approaches and computer information technologies.

PLO 15. Assess the impact of the environment on the state of health of the population in the conditions of a medical institution using standard methods.

PLO 16. To form goals and determine the structure of personal activity based on the result of the analysis of certain social and personal needs.

PLO 17. Follow a healthy lifestyle, use self-regulation and self-control techniques.

PLO 18. To be aware of and be guided in one's activities by civil rights, freedoms and responsibilities, to raise the general educational cultural level.

PLO 19. To comply with the requirements of ethics, bioethics and deontology in their professional activity.

PLO 20. To organize the required level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

PLO 21. Perform medical manipulations on the basis of a preliminary and/or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

PLO 23. Perform emergency medical care manipulations using standard schemes, under any circumstances based on the diagnosis of an emergency (according to list 4) in limited time (according to lists 6, 7).

Learning outcomes of the academic discipline: upon completing their study in the **Module 1, 2 “Basics of internal medicine”** students must:

know:

- most common internal diseases and associated life-threatening complications;
- tactics for the dentist when dealing with somatic patients;
- main healthcare policies, laws and regulations;
- specifics of development and distribution of somatic diseases;
- main clinical symptoms and syndromes associated with the most common somatic diseases;
- main approaches to laboratory diagnostics, treatment and prevention of somatic diseases.

be able to:

- determine preliminary clinical diagnosis of somatic diseases and distinguish diseases, what require special management;
- prescribe treatment for main somatic diseases, provide first aid and distinguish diseases, what require special management;
- evaluate the influence of somatic pathology and dental diseases on development and course of somatic diseases;

- determine the role and place of the dentist in the prevention of internal diseases and associated complications;
- diagnose and treat emergency conditions as a complication of internal diseases on the pre-hospital level.

Thematic plan of lectures (by modules), specifying the basic issues, which are considered at the lecture.

No	Topic	Hours
Module 1. Basics of Internal Medicine (diseases of respiratory system, cardio-vascular system, rheumatic diseases and diseases of gastro-intestinal system)		
1	Chronic obstructive pulmonary disease (COPD). Bronchial asthma (BA). Pneumonias. Pleurisies. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Pulmonary insufficiency. Role of dentist in a prevention. 1. COPD. Role of smocking, ecological, occupational factors and infections in the development of chronic bronchitis and lung emphysema. Classification. Clinical manifestations, changes in investigations results depending on the stage (severity). Diagnostics. Role of spirometry. Complications. Primary and secondary prevention. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace. 2. BA. Definition. Etiology, pathogenesis. Classification. Clinical manifestations, changes in investigations results depending on the stage (severity). Complications. Criteria for severity level for BA. Emergency treatment for BA attack. Role of oral hygiene for primary and secondary prevention of BA. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace. 3. Pneumonias. Definition. Most common etiological factors. Classification. Clinical manifestations depending on the type of pneumonia. Changes in laboratory and instrumental investigations. Complications. Pleural syndrome. Role of oral hygiene for primary and secondary prevention. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
2	Hypertension. Hypertensive crisis. Symptomatic arterial hypertension. Atherosclerosis. Coronary heart disease (CHD). Classification. Sudden coronary death. Cardio-pulmonary resuscitation. Angina pectoris. Clinical forms. Acute coronary syndrome. Acute myocardial infarction. Clinical, ECG and laboratory diagnosis. Complications of acute myocardial infarction early and late. Cardiogenic shock (reflex collapse). Principles of treatment of uncomplicated myocardial infarction. Acute and chronic heart	2

	<p>failure. Principles of prevention and treatment.</p> <p>1. Hypertension. Definition of normal blood pressure (BP) and hypertension. Primary hypertension. Classification. Clinical manifestations and results of investigations. Damage to target organs. Risk stratification. Complications. Treatment. Complicated and uncomplicated hypertonic crisis, management. Main antihypertensive medications. Features of clinical presentation and diagnosis of renal (renovascular, nonparenchymal), endocrine (Cushing's disease and syndrome, pheochromocytoma, Conn's syndrome, diffuse toxic goiter) and hemodynamic arterial hypertension. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p> <p>2. Atherosclerosis. Definition and role of hyperlipidemia, arterial wall and thrombocytes in development of atherosclerosis. Risk factors. Clinical manifestations depending on the localization (aorta, coronary, mesenteric, renal arteries, lower limbs arteries). Role of laboratory, imaging and other investigation methods. Complications. Treatment. Primary and secondary prevention.</p> <p>3. CHD. Definitions. Role of atherosclerosis, destabilization of the patch, functional factors in pathogenesis of different forms of CHD.</p> <p>4. WHO classification.</p> <p>5. Primary sudden coronary death. CPR technique. Role of the dentist in provision of first aid at workplace.</p> <p>6. Clinical features and diagnostics of different variants of stable angina. Toothache as a symptom of angina. Clinical features and diagnostics of different variants of unstable angina. Complications. Treatment principles. Primary and secondary prevention.</p> <p>7. Acute coronary syndrome. Myocardial infarction (MI). Classification. Clinical features and diagnostics of MI. Treatment principles. Primary and secondary prevention.</p> <p>Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p> <p>8. Definition of acute heart failure. Main causes. Pathogenesis of disruption of central and peripheral hemodynamics. Heart asthma. Pulmonary oedema. Pulmonary embolism (PE). Clinical manifestations. Management. Primary and secondary prevention.</p> <p>9. Acute vascular insufficiency. Arterial hypotension. Fainting, collapse, shock. Definition. Etiology. Pathogenesis. Clinical presentation. Diagnosis. First aid. Primary and secondary prevention.</p> <p>10. Definition of the chronic heart failure. Etiology and pathogenesis. Classification. Clinical manifestations. Diagnostics. Managements. Primary and secondary prevention. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p>	
3	<p>Rheumatic disease. Large and small signs of rheumatic disease. Relapse-preventive treatment.</p> <p>Infectious endocarditis. Heart defects. Mitral and aortic defects. Etiology. Pathogenesis. Clinical presentation. Diagnosis.</p>	2

	<p>Role of a dentist in prevention. Dental management. Systemic vasculitis.</p> <p>1. Definition of rheumatic diseases. Classification. Etiology. Pathogenesis. Role of streptococcus infection and immunological reactivity in the development acute rheumatic fever. Clinical presentation. Treatment. Chronic rheumatic heart disease. Clinical picture. Principals of relapse-preventive treatment. Primary and secondary prevention.</p> <p>2. Definition of infectious endocarditis. Etiology. Pathogenesis. Manifestation depending on the infectious agent. Diagnostic criteria. Role of laboratory methods and echocardiogram. Complications (heart failure, emboli, abscess). Treatment. Antibiotics regimen. Indications for surgical treatment. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p> <p>3. Heart defects. Classification. Mitral defects – mitral insufficiency, mitral stenosis. Clinical presentation. Diagnostics. Treatment. Aortal defects – aortal insufficiency, aortal stenosis. Clinical presentation. Diagnostics. Treatment.</p> <p>4. Changes in oral cavity. Dental aspects of managing patients with heart defects. Role of the dentist in prevention of severe complications and provision of first aid at workplace. Disability prognosis.</p> <p>5. Preventive dental treatment for patients form risk group for heart defects, patients with heart failure.</p> <p>6. Hemorrhagic vasculitis. Nodular polyarteritis. Etiology and pathogenesis. Clinical presentation. Diagnostic criteria. Treatment. Prevention.</p>	
4	<p>Chronic gastritis. Stomach ulcer, duodenal ulcer. Chronic pancreatitis. Chronic cholecystitis. Gallstone disease. Intestinal diseases.</p> <p>Hepatitis and cirrhosis. Etiology. Pathogenesis. Classification. Clinical presentation. Diagnosis. Principles of treatment. Changes in the oral cavity. Role of a dentist in prevention.</p> <p>1. Definition, classification, etiology and pathogenesis of chronic gastritis. Role of H.Pylori in development of different types of chronic gastritis. Primary and secondary prevention.</p> <p>2. Definition, classification, etiology and pathogenesis of stomach and duodenal ulcerative disease. Role of H.Pylori, acid-peptic factor and medications in the development of ulcers and their relapses. Complications (perforation, penetration, bleeding, stenosis, melignisation). Role of laboratory and instrumental investigations. Up-to-date management strategy. Eradication therapy. Control of eradication.</p> <p>3. Definition, etiology and pathogenesis of intestinal diseases. Diagnostic criteria. Treatment. Irritable bowel syndrome. Non-specific colitis (ulcerative colitis and Crohn’s disease): definition. Etiology, pathogenesis. Clinical presentation. Diagnostic criteria. Complications.</p> <p>4. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p> <p>5. Pancreatitis. Definitions. Classification. Clinical presentation, diagnostics, treatment. Complications.</p>	2

	6. Cholecystitis. Definitions. Classification. Clinical presentation, diagnostics, treatment. Complications. 7. Gallstone disease. Clinical presentation. Diagnostics, treatment. 8. Chronic hepatitis. Definition. Classification. Autoimmune hepatitis, drug-induced hepatitis, chronic viral hepatitis. Alcoholic liver disease. Main syndromes. Features of clinical manifestation and diagnostics of particular groups. Role of morphological, biochemical and radiological diagnostic methods. 9. Liver cirrhosis. Definition. Classifications. Clinical presentation. Diagnostics of different types. Liver failure and other complications. Management principles. Emergency treatment of complications. 10. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	
	Total for Module 1	8

Thematic plan of lectures Module 2. Basics of Internal Medicine - lectures are not provided by the program

Thematic plan of seminars by modules and content modules with the indication of the main issues considered at the seminar - is not provided by the program.

Thematic plan of practical classes by modules and content modules, specifying the basic issues, which are considered at the practical class

№	Topic	Hours
Module 1. Basics of Internal Medicine (diseases of respiratory system, cardio-vascular system, rheumatic diseases and diseases of gastro-intestinal system)		
Semantic module 1. Diseases of respiratory system, cardio-vascular system.		
1	Bronchial asthma. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects. 1. Definition. Etiology, pathogenesis. 2. Classification. 3. Clinical manifestations, changes in investigations results depending on the stage (severity). 4. Complications. Criteria for severity level for BA. Emergency treatment for BA attack. 5. Role of oral hygiene for primary and secondary prevention of BA. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
2	COPD. Emphysema of the lungs. Pulmonary insufficiency. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects. 1. Role of smoking, ecological, occupational factors and infections in the development of chronic bronchitis and lung emphysema.	2

	<p>2. Classification. Clinical manifestations, changes in investigations results depending on the stage (severity).</p> <p>3, Diagnostics. Role of spirometry.</p> <p>4. Complications. Primary and secondary prevention.</p> <p>5. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p>	
3	<p>Pneumonias. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects.</p> <p>1. Definition. Most common etiological factors.</p> <p>2. Classification. Clinical manifestations depending on the type of pneumonia.</p> <p>3. Changes in laboratory and instrumental investigations.</p> <p>4. Complications.</p> <p>5. Role of oral hygiene for primary and secondary prevention. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p>	2
4	<p>Hypertensive disease. Symptomatic hypertension. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects.</p> <p>1. Definition of normal blood pressure (BP) and hypertension.</p> <p>2. Primary hypertension. Classification.</p> <p>3. Clinical manifestations and results of investigations. Damage to target organs. Risk stratification.</p> <p>4. Complications. Treatment. Complicated and uncomplicated hypertonic crisis, management. Main antihypertensive medications.</p> <p>5. Features of clinical presentation and diagnosis of renal (renovascular, nonparenchymal), endocrine (Cushing's disease and syndrome, pheochromocytoma, Conn's syndrome, diffuse toxic goiter) and hemodynamic arterial hypertension.</p> <p>6. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.</p>	2
5	<p>Coronary artery disease (CAD). Classification. Sudden stop of circulation. Principles of cardiopulmonary resuscitation (CPR).</p> <p>1. CAD. Definitions. Role of atherosclerosis, destabilization of the patch, functional factors in pathogenesis of different forms.</p> <p>2. Classification.</p> <p>3. Primary sudden coronary death.</p> <p>4. CPR technique.</p> <p>5. Role of the dentist in provision of first aid at workplace.</p>	2
6	<p>Stenocardia. Clinical types. Unstable angina.</p> <p>1. Clinical features and diagnostics of different variants of stable angina.</p> <p>2. Toothache as a symptom of angina.</p> <p>3. Clinical features and diagnostics of different variants of unstable angina.</p> <p>4. Complications. Treatment principles. Primary and secondary prevention.</p>	2
7	<p>Acute coronary syndrome. Myocardial infarction (MI).</p> <p>1. Acute coronary syndrome.</p> <p>2. Myocardial infarction (MI). Classification.</p> <p>3. Clinical features and diagnostics of MI.</p>	2

	4. Treatment principles. Primary and secondary prevention. 5. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	
8	Acute cardiac insufficiency (heart failure), left- and right-ventricular. Acute vascular insufficiency. 1. Definition of acute heart failure. Main causes. 2. Pathogenesis of disruption of central and peripheral hemodynamics. 3. Heart asthma. Clinical manifestations. Management. Primary and secondary prevention. 4. Pulmonary edema. Clinical manifestations. Management. Primary and secondary prevention. 5. Pulmonary embolism (PE). Clinical manifestations. Management. Primary and secondary prevention.	2
9	Chronic cardiac insufficiency (heart failure). 1. Definition of the chronic heart failure. Etiology and pathogenesis. 2. Classification. Clinical manifestations. Diagnostics. Managements. Primary and secondary prevention. 3. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
10	Control of semantic module №1.*	2
Semantic module 2. Rheumatic diseases and diseases of gastro-intestinal system.		
11	Rheumatic diseases. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects. 1. Definition of rheumatic diseases. Classification. 2. Etiology. Pathogenesis. Role of streptococcus infection and immunological reactivity in the development acute rheumatic fever. 3. Clinical presentation. 4. Role of laboratory and instrumental investigations. Diagnostic criteria. 5. Treatment. 6. Chronic rheumatic heart disease. Clinical picture. 7. Principals of relapse-preventive treatment. Primary and secondary prevention.	2
12	Infectious endocarditis. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Role of the dentist in prevention. 1. Definition of infectious endocarditis. Etiology. Pathogenesis. 2. Manifestation depending on the infectious agent. Diagnostic criteria. 3. Role of laboratory methods and echocardiogram. 4. Complications (heart failure, emboli, abscess). 5. Treatment. Antibiotics regimen. Indications for surgical treatment. 6. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
13	Acquired heart defects. Mitral defects. Aortic defects. 1. Definition of heart defects. Classification. 2. Mitral defects – mitral insufficiency. Clinical presentation. Diagnostics. Treatment. 3. Mitral defects – mitral stenosis. Clinical presentation. Diagnostics. Treatment.	2

	4. Aortal defects – aortal insufficiency. Clinical presentation. Diagnostics. Treatment. 5. Aortal defects – aortal stenosis. Clinical presentation. Diagnostics. Treatment	
14	Features of tactic of dentist for patients with rheumatic diseases, infectious endocarditis and acquired heart defects. 1. Changes in oral cavity. Dental aspects of managing patients with heart defects. 2. Role of the dentist in prevention of severe complications and provision of first aid at workplace. Disability prognosis. 3. Preventive dental treatment for patients form risk group for heart defects, patients with heart failure.	2
15	Connective tissue diseases. Systemic vasculitis. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects. 1. Sjogren's syndrome. Diagnostic criteria. Complications. Management principles. 2. Hemorrhagic vasculitis. Etiology and pathogenesis. Clinical presentation. 3. Diagnostic criteria. Treatment. Prevention. 4. Nodular polyarteritis. Etiology and pathogenesis. 5. Clinical presentation. Diagnostic criteria. Treatment. Prevention. 6. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
16	Gastritis. Stomach and duodenal ulcerative disease. Intestinal diseases (chronic enteritis, colitis, ulcerous colitis). Clinical presentation. Diagnosis. Treatment. Prevention. 1. Definition, classification, etiology and pathogenesis of chronic gastritis. Role of H.Pylori in development of different types of chronic gastritis. 2. Modern approaches to diagnostics and treatment of different types of chronic gastritis. Primary and secondary prevention. 3. Definition, classification, etiology and pathogenesis of stomach and duodenal ulcerative disease. Role of H.Pylori, acid-peptic factor and medications in the development of ulcers and their relapses. 4. Complications (perforation, penetration, bleeding, stenosis, melignisation). 5. Role of laboratory and instrumental investigations. 6. Up-to-date management strategy. Eradication therapy. Control of eradication. 7. Definition, etiology and pathogenesis of intestinal diseases. 8. Diagnostic criteria. Treatment. 9. Irritable bowel syndrome. 10. Non-specific colitis (ulcerative colitis and Crohn's disease): definition. Etiology, pathogenesis. 11. Clinical presentation. Diagnostic criteria. Complications. 12. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
17	Pancreatitis. Cholecystitis. Clinical presentation. Diagnosis. Treatment. 1. Pancreatitis. Definitions. Classification. 2. Clinical presentation, diagnostics. 3. Treatment principles. Complications.	2

	4. Cholecystitis. Definitions. Classification. 5. Clinical presentation, diagnostics. 6. Treatment principles. Complications 7. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	
18	Chronic hepatitis. Liver cirrhosis. Clinical presentation. Diagnosis. Treatment. 1. Chronic hepatitis. Definition. Classification. 2. Autoimmune hepatitis. Main syndromes. Features of clinical manifestation and diagnostics of particular groups. Role of morphological, biochemical and radiological diagnostic methods. 3. Drug-induced hepatitis. Main syndromes. Features of clinical manifestation and diagnostics of particular groups. Role of morphological, biochemical and radiological diagnostic methods. 4. Chronic viral hepatitis. Main syndromes. Features of clinical manifestation and diagnostics of particular groups. Role of morphological, biochemical and radiological diagnostic methods. 5. Alcoholic liver disease. Main syndromes. Features of clinical manifestation and diagnostics of particular groups. Role of morphological, biochemical and radiological diagnostic methods. 6. Liver cirrhosis. Definition. Classifications. 7. Clinical presentation. Diagnostics of different types. 8. Liver failure and other complications. Management principles. Emergency treatment of complications. 9. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
19	Control of semantic module 2.*	2
20	Control of Module 1.	2
	Total	40

№	Topic	Hours
Module 2. Basics of Internal Medicine (Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation. Diseases of renal and urinary systems. Diseases of endocrine system, metabolic diseases. Diseases of hematopoiesis. Allergic diseases.)		
Semantic module 3. Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation: patient's outpatient card (history of the disease). Diseases of renal and urinary systems. Diseases of endocrine system, metabolic diseases.		
1	Analysis of the history of the disease. Curation and history taking, anamnesis, examination, preliminary diagnosis, laboratory and instrumental investigations, justification of clinical diagnosis, differential diagnosis, final diagnosis,	2

	<p>treatment and prevention.</p> <ol style="list-style-type: none"> 1. History of the disease as a crucial instrument for the doctor. Main components of outpatient card (medical history). Primary and secondary complains, role of medical history for justifying the diagnosis. 2. Gathering complains from the particular patient. History of the disease. History of life. Examination. General examination according to the guideline. Condition of teeth and tongue. Main syndromes determination. Preliminary diagnosis. 3. Creating a plan for laboratory and instrumental investigation. Interpretation of the results, clinical diagnosis. Final diagnosis: main, complication, comorbidities. 4. Treatment guidelines. Changes in oral cavity. Role of the dentist in prevention of complication is provision of first aid at workplace. 	
2	<p>Glomerulonephritis. Pyelonephritis. Urolithiasis. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects.</p> <ol style="list-style-type: none"> 1. Acute and chronic glomerulonephritis. Definition. Etiology. Pathogenesis. 2. Acute and chronic glomerulonephritis. Clinical presentation. Diagnostics. Complications. 3. Acute and chronic glomerulonephritis. Emergency aid for renal arterial hypertension. Treatment guidelines. 4. Pyelonephritis. Urolithiasis. Definition. Diagnostics. 5. Pyelonephritis. Urolithiasis. Clinical presentation, complications. 6. Pyelonephritis. Urolithiasis. Role of infection source control for prevention. Treatment. Treatment guidelines. 7. Role of oral hygiene for primary and secondary prevention. Disability prognosis. 	2
3	<p>Acute renal failure. Chronic renal failure. Etiology. Pathogenesis. Clinical presentation. Diagnosis Treatment. Dental aspects.</p> <ol style="list-style-type: none"> 1. Acute kidney disease. 2. Chronic kidney disease. 3. Updated classification of renal diseases. 4. Acute and chronic renal failure. Definition. Etiology. Pathogenesis. Damage to organs and systems. Clinical presentation. 5. Classification of chronic renal failure. 6. Treatment. Replacement therapy: hemodialysis, kidney transplantation. 7. Disability prognosis. 8. Role of the dentist in prevention of exacerbation. Changes in oral cavity. Tactics for the dentist. 	2
4	<p>Diabetes mellitus type 1 and 2. Etiology. Pathogenesis. Clinical presentation. Diagnosis Treatment.</p> <ol style="list-style-type: none"> 1. Diabetes mellitus. Definition. 2. Prevalence, medical and social impact of DM. 3. Classification. Etiology. Pathogenesis. 	2

	<p>4. Connection to obesity, metabolic disorders. Metabolic syndrome.</p> <p>5. Clinical presentation of DM type 1 and 2.</p> <p>6. Clinical and laboratory diagnostics.</p> <p>7. Treatment principles of DM type 1 and 2. Prevention.</p>	
5	<p>Diabetes mellitus type 1 and 2. Complication. Emergency aid. Dental aspects.</p> <p>1. Complications: microangiopathies (retinopathy, nephrosclerosis), chronic renal failure.</p> <p>2. Diabetic foot, diabetic comas.</p> <p>3. Emergency treatment.</p> <p>4. Changes in oral cavity and specific tactics for the dentist for DM type 1 and 2.</p> <p>5. Role of dentist in prevention and diagnostics of DM type 1 and 2.</p>	2
6	<p>Diseases of the thyroid gland. Diseases of the parathyroid glands. Etiology. Pathogenesis. Clinical presentation. Diagnosis Treatment. Dental aspects.</p> <p>1. Thyrotoxicosis (diffuse toxic goiter). Definition. Etiology. Pathogenesis.</p> <p>2. Thyrotoxicosis. Clinical presentation, changes in cardio-vascular system, metabolism.</p> <p>3. Thyrotoxicosis. Diagnostic methods. Disease course.</p> <p>4. Thyrotoxicosis. Complications. Treatment, Prognosis. Prevention.</p> <p>5. Hypothyroidism. Definition, etiology, pathogenesis.</p> <p>6. Hypothyroidism. Clinical presentation, complications.</p> <p>7. Hypothyroidism. Diagnostics. Treatment.</p> <p>8. Hypoparathyroidism. Etiology, pathogenesis.</p> <p>9. Hypoparathyroidism. Clinical presentation, disease course, diagnostics.</p> <p>10. Hypoparathyroidism. Treatment.</p> <p>11. Hyperparathyroidism. Etiology, pathogenesis.</p> <p>12. Hyperparathyroidism. Clinical presentation, disease course, diagnostics.</p> <p>13. Hyperparathyroidism. Treatment.</p> <p>14. Emergency treatment for the vascular syndrome.</p> <p>15. Impact on dental health, mineral metabolism disorder.</p>	2
7	<p>Diseases of the adrenal gland. Pituitary Diseases. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Dental aspects.</p> <p>1. Diseases of the adrenal gland. Adrenal gland failure. Addison disease. Etiology, pathogenesis, risk factors. Diagnostics. Complications.</p> <p>2. Cushing syndrome. Clinical presentation (inc. muscular and dental).</p> <p>3. Primary hyperaldosteronism (aldosteroma, Conn's syndrome). Etiology. Pathogenesis. Diagnostics. Clinical presentation. Arterial hypertension. Emergency treatment for hypersonic crisis.</p> <p>4. Pheochromocytoma. Diagnostic criteria. Characteristics. Diagnostics, disease course. Complications. Treatment.</p> <p>5. Pituitary gland diseases. Clinical forms.</p> <p>6. Acromegaly. Clinical presentation, diagnostics, treatment.</p> <p>7. Gigantism, nanism. Characteristics. Diagnostics. Complications. Treatment.</p>	2

	<p>8. Cushing's disease. Characteristics. Diagnostics. Complications. Treatment.</p> <p>9. Hypopituitarism. Diabetes insipidus. Characteristics. Diagnostics. Complications. Treatment.</p> <p>10. Differential diagnostic features of changes on mucosa and tongue due to endocrine and metabolic diseases.</p>	
8	Control of semantic module №3.*	2
Semantic module 4. Diseases of the hematopoiesis. Diseases of the immune system in the practice of the dentist. Allergic diseases. Secondary immunodeficiencies. Defense of work on conducting medical documentation: an outpatient card of the patient (history of the disease).		
9	<p>Iron deficiency anemia. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Iron deficiency anemias. Definition.</p> <p>2. General clinical manifestations of anemia.</p> <p>3. Etiology. Pathogenesis.</p> <p>4. Diagnostics. Dental manifestations of iron deficiency anemia.</p> <p>5. Treatment. Prognosis.</p> <p>6. Role of dentist in prevention.</p>	2
10	<p>Megaloblastic anemia. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Megaloblastic anemia. Definition.</p> <p>2. Etiology. Pathogenesis.</p> <p>3. Clinical presentation, inc. in oral cavity. Diagnostics.</p> <p>4. Role of dentist in prevention.</p>	2
11	<p>Hypo-, aplastic and hemolytic anemias. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Hypo-, aplastic and hemolytic anemias. Definition.</p> <p>2. Etiology. Pathogenesis.</p> <p>3. Clinical presentation, inc. in oral cavity. Diagnostics.</p> <p>4. Treatment. Prognosis.</p> <p>5. Role of dentist in prevention.</p>	2
12	<p>Hematological diseases. Acute and chronic myeloid, lymphoid leukemias and lymphomas. Agranulocytosis. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Modern approaches to etiology and pathogenesis of hematological diseases. Tumor transformation, dissemination and progression.</p> <p>2. WHO classification.</p> <p>3. General principles of treatment. Role of the dentist in diagnosing, treating dental symptoms and complications from treatment.</p> <p>4. Acute and chronic lymphoid leukemias and lymphomas. Clinical manifestations, main syndromes. Diagnostics. Treatment.</p> <p>5. Manifestations in oral cavity and their treatment.</p> <p>6. Acute and chronic myeloid leukemias and lymphomas. Myelodysplastic</p>	2

	<p>syndrome. Clinical manifestations, main syndromes. Diagnostics. Treatment.</p> <p>7. Manifestations in oral cavity and their treatment.</p> <p>8. Agranulocytosis. Etiology and pathogenesis. Clinical presentation of immune agranulocytosis. Main features. Complications.</p> <p>9. Definition of cytostatic disease. Clinical and laboratory diagnostics of cytopenic syndrome and agranulocytosis.</p> <p>10. Manifestations in oral cavity and their treatment.</p>	
13	<p>Thrombocytopenia and thrombocytopathy. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Hemorrhagic diseases. Updated classification, clinical presentation, principles of laboratory diagnostics of primary and secondary haemostasis disorders as well as fibrinolysis.</p> <p>2. Thrombocytopenia and thrombocytopathy (congenital and acquired). Diagnostics. Treatment. Prevention.</p> <p>3. Dental care features for patients with hemorrhagic diseases.</p> <p>4. Thrombocytopenic purpura (Welkhoff's disease). Diagnostic criteria. Complications.</p> <p>5. Emergency treatment of hemorrhage. Changes in oral cavity.</p>	2
14	<p>Hemophilia A, B, C. Willebrand disease. Hemorrhagic vasculitis (Shonlein-Genoch disease). Vasopathy. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Urgent Care. Dental aspects.</p> <p>1. Hemophilia A, B, C and other congenital coagulopathies.</p> <p>2. Clinical presentation. Treatment and prevention.</p> <p>3. Dental management and tactics for patients with hemophilia.</p> <p>4. Hemorrhagic vasculitis (Shonlein-Genoch disease). Etiology. Pathogenesis. Clinical presentation. Main forms (skin, joints, abdominal, renal).</p> <p>5. Treatment principles.</p> <p>6. Vasopathy. Etiology. Diagnostics.</p> <p>7. Prevention and features of emergency treatment of hemorrhage for patients with vasculitis and vasopathies in dental practice. Manifestations in oral cavity.</p>	2
15	<p>Anaphylactic shock, urticaria, angioedema. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. First aid. Dental aspects.</p> <p>1. Allergy. Definition.</p> <p>2. Allergy. Pathogenesis and types of allergic reactions.</p> <p>3. Allergic reaction of immediate type. Anaphylactic shock. Acute toxic-allergic reactions. Urticaria, Quincke's oedema. Etiology. Pathogenesis.</p> <p>4. Types and form of anaphylactic reaction. Clinical presentation. Diagnostics. Treatment. First aid.</p>	2
16	<p>Secondary immunodeficiency. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Treatment. Dental aspects.</p> <p>1. Secondary immunodeficiency. Definition. Etiology. Pathogenesis.</p> <p>2. Secondary immunodeficiency. Clinical presentation. Diagnostics.</p>	2

	4. Connective tissue diseases. Systemic vasculitis. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects. 1. Systemic lupus erythematosus. Definition. Changes in oral cavity. 2. Clinical manifestations depending on the effected organs and systems, activity of the disease. Role of laboratory, including immunological, investigation methods. 3. Diagnostic criteria. Complications. Management principles. 4. Systemic scleroderma and dermatomyositis. Definition. Management principles. 5. Clinical manifestations depending on the effected organs and systems. 6. Diagnostic criteria. Treatment. Prevention. 7. Nodular polyarteritis. Etiology and pathogenesis. 8. Clinical presentation. Diagnostic criteria. Treatment. Prevention. 5. Gallstone disease. Clinical presentation. Diagnosis. Treatment. 1. Gallstone disease. Clinical presentation. Diagnostics, treatment. 2. Changes in oral cavity. Role of the dentist in prevention of severe complications and provision of first aid at workplace.	2
		2
3	Preparation for the final module control of module 1.	6
4	Preparation of the control work, essay, preparation for current control activities	6
	Total for module 1	42

№	Topic	Hours
Module 2. Basics of Internal Medicine (Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation. Diseases of renal and urinary systems. Diseases of endocrine system, metabolic diseases. Diseases of hematopoiesis. Allergic diseases.)		
1	Preparation for seminars; preparation for specific topics according to the calendar-thematic plans; preparation for all types of control.	3,125
2	Curating a patient with written diagnosis with justification and a fragment of medical history.	0,652
3	Preparation for the final semantic module 2 control.	1,25
	Total for module 2	5

Individual tasks:

Individual tasks are performed individually under the supervision of the tutor. Individual tasks include presenting an assignment during the practical class, presenting on the clinical meeting, presenting patient's history, writing abstracts, articles.

Following topics for individual tasks are suggested for **module 1, 2**:

1. Prepare literature review according to the topics studied.
2. Conduct a research on the following topics:
 - Bronchial asthma. Role of a dentist in prevention and provision of first aid.

- COPD manifestations in oral cavity.
- Management principles during hypertensive crisis.
- Role of dentist in prevention of infectious endocarditis.
- Gastro-intestinal diseases manifestations in oral cavity.
- Dental manifestation of diabetes mellitus type 1 and 2.
- Metabolic syndrome and dental status.
- Manifestations of agranulocytosis in oral cavity.
- Dental aspects of hematological diseases.
- Role of the dentist in prevention of allergic reactions.

3. Write assignment on the following topics:

- First aid in case of sudden stop of circulation
- Main principles of CPR.
- Role of a dentist in prevention of gastro-intestinal tract diseases.
- Role of a dentist in prevention of chronic renal failure.
- Role of a dentist in diagnostics of hematological diseases.
- Dental tactics in case of hemorrhagic diseases.

4. Conduct an educational campaign in clinic and hospital department, during patients' appointments, check-up examinations.

5. Conduct educational conversations with patients.

6. Create an educational leaflet.

**The list of theoretical questions for students' preparation for the final module control Modul 1.
Basics of Internal Medicine (diseases of respiratory system, cardio-vascular system, rheumatic
diseases and diseases of gastro-intestinal system)**

1. Bronchial asthma. Etiology. Pathogenesis. Clinical presentation. Diagnosis.

Treatment. Emergency aid. Dental aspects.

2. COPD. Emphysema of the lungs. Pulmonary insufficiency. Etiology. Pathogenesis.

Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects.

3. Pneumonias. Pleural syndrome. Etiology. Pathogenesis. Clinical presentation.

Diagnosis. Treatment. Emergency aid. Dental aspects.

4. Hypertensive disease. Symptomatic hypertension.

5. Atherosclerosis. CHD. WHO classification. Sudden stop of circulation. Principles of cardiopulmonary resuscitation.
6. Stenocardia. Clinical types. Unstable angina.
7. Acute coronary syndrome. Myocardial infarction (MI). Clinical presentation. Diagnosis. Treatment. Emergency aid.
8. Acute cardiac insufficiency (heart failure), left- and right-ventricular. Acute vascular insufficiency.
9. Chronic cardiac insufficiency (heart failure).
10. Rheumatic diseases. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Emergency aid. Dental aspects.
11. Infectious endocarditis. Etiology. Pathogenesis. Clinical presentation. Diagnosis. Treatment. Role of dentist in prevention.
12. Acquired heart defects. Mitral defects. Aortic defects.
13. Features of tactic of dentist for patients with rheumatic diseases, infectious endocarditis and acquired heart defects.
14. Connective tissue diseases. Systemic vasculitis. Role of dentist in prevention.
15. Gastritis. Stomach and duodenal ulcerative disease. Intestinal diseases (chronic enteritis, colitis, ulcerous colitis). Clinical presentation. Diagnosis. Treatment. Prevention.
16. Pancreatitis. Cholecystitis. Gallstone disease. Clinical presentation. Diagnosis. Treatment.
17. Chronic hepatitis. Liver cirrhosis. Clinical presentation. Diagnosis. Treatment.

The list of theoretical questions for students' preparation for the final module control Module 2.

Basics of Internal Medicine (Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation. Diseases of renal and urinary systems. Diseases of endocrine system, metabolic diseases. Diseases of hematopoiesis. Allergic diseases.).

1. Structure of the history of the disease. Curation and history taking, anamnesis, examination, preliminary diagnosis, justification of clinical diagnosis, differential diagnosis, final diagnosis.

2. Main syndromes in renal diseases: oedematose syndrome, nephrotic syndrome, syndrome of renal hypertension, renal colic, acute renal failure, chronic renal failure.
3. Acute and chronic glomerulonephritis. Nephritic syndrome. Definition. Clinical presentation. Diagnostics. Complications. Diagnostics. Treatment. Prognosis. Role of infection source control.
4. Acute and chronic pyelonephritis. Definition. Clinical presentation. Diagnostics. Treatment. Prognosis.
5. Acute renal failure. Definition. Classification. Pathogenesis. Clinical presentation. Stages of acute renal failure. Diagnostics. Prognosis. Prevention.
6. Chronic kidney disease. Chronic renal failure. Uremia. Emergency treatment.
7. Diabetes mellitus. Classification. Etiology. Pathogenesis. DM type 1 and 2. Clinical presentation. Diagnostics. Complications. Treatment. Dental tactics for diabetic patients. Diabetic comas (Hyperglycemic, hypoglycemic, hyperosmolar).
8. Thyrotoxicosis (diffuse toxic goiter). Definition. Etiology. Pathogenesis. Clinical presentation, changes in oral cavity. Hypothyroidism. Definition. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Treatment. Changes in oral cavity, dental tactics.
9. Hypoparathyroidism. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Disease course. Treatment.
10. Vascular syndrome in hypoparathyroidism. Emergency treatment. Changes in oral cavity, dental tactics. Hyperparathyroidism. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Treatment. Changes in oral cavity, dental tactics.
11. Adrenal gland diseases. Adrenal gland insufficiency. Addison's disease. Etiology. Risk factors. Diagnostics. Treatment. Changes in oral cavity. Cushing's syndrome. Clinical manifestations (inc. dental symptoms).
12. Primary hyperaldosteronism (aldosteroma, Conn's syndrome). Etiology. Pathogenesis. Diagnostics. Aldosterone testing in urine and blood. Clinical presentation. Arterial hypertension. Emergency treatment for hypersonic crisis.
13. Pheochromocytoma. Etiology. Clinical manifestations. Diagnostic criteria. Urine metanephrine test. CT scan. Radio-isotopic investigations.

14. Pituitary gland diseases. Clinical forms. Acromegaly. Clinical presentation. Treatment. Gigantism, nanism. Cushing's disease. Hypopituitarism. Diabetes insipidus. Specific features. Diagnostics. Treatment.
15. Differential diagnostic features of changes on mucosa and tongue due to endocrine and metabolic diseases.
16. Iron deficiency anemia. Definition. General clinical presentation of anemia, incl. dental aspects. Etiology. Pathogenesis. Diagnostics.
17. Megaloblastic anemias. Definition. Etiology. Pathogenesis. Diagnostics. Clinical presentation of anemia, incl. dental aspects.
18. Hypo- and aplastic anemias. Definition. Etiology. Pathogenesis. Diagnostics. Clinical presentation of anemia, incl. dental aspects.
19. Hematological diseases. Modern approaches to etiology and pathogenesis of hematological diseases. Tumor transformation, dissemination and progression. General treatment approaches (cytostatic therapy, support therapy, complications). Effectiveness control. Role of the dentist in diagnosing, treating dental symptoms and complications from treatment.
20. Agranulocytosis. Etiology and pathogenesis. Clinical presentation of immune agranulocytosis. Main features. Complications. Definition of cytostatic disease. Clinical and laboratory diagnostics of cytopenic syndrome and agranulocytosis.
21. Hemorrhagic diseases. Thrombocytopenia and thrombocytopathy (congenital and acquired). Diagnostics. Treatment. Thrombocytopenic purpura (Wells disease). Diagnostic criteria. Complications. Emergency treatment of hemorrhage. Changes in oral cavity.
22. Dental care features for patients with hemorrhagic diseases.
23. Hemophilia A, B, C and other congenital coagulopathies. Definition. Etiology. Pathogenesis. Diagnostics. Dental tactics.
24. Willebrand disease. Clinical presentation, disease course. Diagnostics. Prognosis. Treatment of prevention of hemorrhages.
25. Hemorrhagic vasculitis (Shonlein-Genoch disease). Etiology. Pathogenesis. Clinical presentation. Main forms (skin, joints, abdominal, renal). Manifestations in oral cavity. Treatment principles. Vasopathies. Etiology. Clinical presentation

in oral cavity. Prevention and features of emergency treatment of hemorrhage for patients with vasculitis and vasopathies in dental practice.

26. Allergy. Definition. Pathogenesis and types of allergic reactions. Allergic reaction of immediate type. Anaphylactic shock. Acute toxic-allergic reactions. Urticaria, Quincke's oedema. Etiology. Pathogenesis. Types and form ad anaphylactic reaction. Clinical presentation. Diagnostics. Treatment. First aid.
27. Secondary immunodeficiencies. Definition. Etiology. Pathogenesis. Clinical presentation. Diagnostics. Pain approaches to treatment of secondary immunodeficiencies. Dental aspects of immune diseases.

The list of practical skills required for the final module control

Module 1. Basics of Internal Medicine (diseases of respiratory system, cardiovascular system, rheumatic diseases and diseases of gastro-intestinal system)

Respiratory diseases:

1. Interpretation of imaging investigations of chest organs.
2. Interpretation of endoscopic investigations of bronchi.
3. Interpretation of spirometry.
4. Analysis of laboratory tests (complete blood count, total protein and its fractions, coagulogram, general and microbiological test of mucous, general and microbiological test of pleural fluid).
5. Provision of first aid for acute respiratory failure.

Cardio-vascular diseases:

6. Registration and interpretation of ECG.
7. Blood pressure measurement.
8. Interpretation of chest X-ray.
9. Analysis of laboratory tests (microbiological blood testing, acute phase blood markers, total protein and its fractions, coagulogram, laboratory markers of heart muscle necrosis, lipidogram, serum creatinine, creatinine clearance, blood electrolytes, autoimmune processes blood markers).

10. Provision of first aid for acute heart failure, collapse, shock, arrhythmias, Morgagni-Adams-Stokes syndrome, hypertensive crisis, stop of circulation or breathing.

Rheumatic diseases:

11. Interpretation of echocardiography.
12. Interpretation of laboratory results (complete blood count, total protein and its fractions, creatinine, urea, uric acid, blood electrolytes, immune status markers, acute phase markers, autoimmune processes blood markers, liver and kidney function markers).
13. Registration and interpretation of ECG.

Gastro-intestinal diseases:

14. Interpretation of endoscopy.
15. Interpretation of radiological (X-ray and sonography) investigation.
16. Interpretation of pH-metry.
17. Interpretation of microbiological and biochemical testing of gall.
18. Interpretation of biochemical (liver function) blood testing.
19. Interpretation of immune-enzyme blood and stool testing.

The list of practical skills required for the final module control Module 2. Basics of Internal Medicine (Filling out the patient's outpatient card (medical history) and defending the work on conducting medical documentation. Diseases of renal and urinary systems. Diseases of endocrine system, metabolic diseases. Diseases of hematopoiesis. Allergic diseases.).

1. Knowledge of section of medical history, taking complains and history, examination of patient, giving preliminary diagnosis.
2. Analysis of laboratory tests (complete blood count, urine test, blood biochemistry, kidney ultrasound, CT, pyelography).
3. Giving differential and final diagnosis.
4. Determining clinical features of acute and chronic renal failure.
5. Assessment of changes in oral cavity among patients with renal diseases.
6. Diagnostics of main endocrine diseases, provision of emergency treatment for main endocrine diseases what lean to camas.
7. Differential diagnostics of tongue and mucosal changes in endocrine diseases.

8. Diagnostics of main hematological and allergy diseases, main features of secondary immunodeficiencies.
9. Emergency treatment and care for massive hemorrhages, anaphylactic shock, Quincke's oedema.
10. Specific features for tongue and mucosal changes in hemopoietic diseases, allergies, secondary immunodeficiencies.

The form of final control of academic performance - final module control

The system of continuous and final control

Continuous studying is assessed with a traditional 4-point based system (excellent, good, satisfactory, unsatisfactory):

- "excellent" – student knows over 90% of the material during both oral and testing examination. Has good command of the terminology, presents clear answers, fully performs practical tasks.
- "good" – student knows 75-89% of the material, makes insignificant mistakes, self-corrects. Achieves over 75% during the test. Practical tasks are performed fully with insignificant mistakes.
- "satisfactory" - student knows 60 -74% of the material, makes frequent mistakes, doesn't self-correct. Achieves over 60% during the test. Practical tasks aren't performed fully as required.
- "unsatisfactory" - student knows below 59% of the material, including testing. Has unclear answers and does not perform practical manipulations.

Scheme of calculation and distribution of points received by applicants for higher education Assessment of current learning activities is carried out at each practical lesson in accordance with the specific objectives of each topic. In assessing the educational activities of higher education students use standardized methods of control: testing, structured written work, oral answers and structured algorithm development of practical skills. At mastering of each theme of modules for current educational activity to the applicant of higher education marks on a four-point traditional scale are exposed. The final assessment of learning outcomes in PSMU is carried out on a single 200-point

scale. The assessment of the applicant corresponds to the ratio of the level of professional and general competencies established in the assessment to the planned learning outcomes (as a percentage). At the same time are used standardized generalized criteria for assessing the knowledge of higher education (Table 1).

Table 1. Standardized generalized criteria for assessing the knowledge of higher education students in PSMU

For 4-point scale	Assessment in ECTS	Evaluation criteria
5 (excellent)	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 as 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 ones, to choose arguments to confirm opinions, has at least 75% of knowledge on the topic both during the survey and all types of control.

3 (satisfactory)	D	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic provisions with the help of research and teaching staff can analyze educational material, correct errors, among which there is a significant number of significant, has at least 65% knowledge of the topic, and all types of control.
	E	The student has 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 (unsatisfactory)	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.
		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.

Continuous success equals the average of the marks for practical and self-studying (notes, patient's records, work in the department etc.). The assessment of self-studying is performed during the homework review. The control of the knowledge of topics for self-studying is performed during the final control.

Tutor puts marks after their conversion according to the table below. Minimally required mark is 72.

Final modular control from Modules 1,2 is held at the last practical lesson of VI, VII semesters on condition of full attendance applicant for higher education course of lectures and practical classes. Applicants for higher education who have scored the required minimum number of points during the current control (average grade point average 3.0 and above), do not have missed work and practical classes, have mastered the topics made for independent work within the module, and completed all

requirements for the discipline, which are provided by the working curriculum for the discipline (protection of medical history, positive assessments of meaningful modules, received permission to compile FMC during the test control, etc.) when studying Modules 1,2. The PMC score is evaluated in points and is not converted into a traditional 4-point score. The maximum number of FMC points is 80 points. The minimum number of FMC points at which the control is considered to be made is 50 points. The maximum number of points per module is 200 points (of which up to 120 points for current performance). Applicants for higher education who during the study of the module, which is the final control, had an average score of current performance from 4.50 to 5.0 are exempt from FMC and automatically (by agreement) receive a final grade in accordance with table 2. In case of disagreement with the assessment, this category of higher education seekers is FMC according to the general rules. The received points for the module the scientific and pedagogical worker exposes in Statement of final modular control (and individual student curriculum).

Table 2. Unified table of correspondence of scores for current performance, scores for FMC, exam, and traditional four-point score.

Average score for current performance (A)	Points for current success in the module (A * 24)	Points for FMC from the module (A * 16)	Points for the module and / or exam (A * 24 + A * 16)	Category ECTS	By 4-point scale
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	E	3 satisfactorily
2,95	71	47	118		
3	72	50	122		
3,05	73	50	123		
3,1	74	50	124		
3,15	76	50	126		
3,2	77	51	128	D	
3,25	78	52	130		
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		
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		

Grade for the module is defined as the sum of the scores of the current educational activity and the assessment of the final module control (FMC) in the ECTS scores, which are set when assessing theoretical knowledge and practical skills in accordance with the requirements defined by the discipline program The maximum number of ECTS points awarded to a higher education student when mastering each

module (credit) - 200, including for current educational activities - 120 points (60%), according to the results of the module final control - 80 points (40%). The minimum convertible sum of points of current success for all modules of all disciplines of all departments is uniform and makes 72 points.

Teaching methods

- verbal (lectures, explanations, stories, conversation, instruction);
- visual (observations and clinical examinations);
- practical (reception of patients, filling of medical documentation);
- research - organization by the teacher of search creative activity of students by statement of new problems and problem tasks
- methods of applying knowledge and acquiring and consolidating skills and abilities (practical classes, control individual tasks, work in the clinic, industrial practice).
- thematic discussions;
- analysis of specific situations (case method);
- simulation tasks.

Control methods

- oral control,
- written control,
- test control,
- graphic control,
- practical inspection,
- methods of self-control and self-assessment.

Methodological support

- Studying program of the subject;
- Plans for practical classes and self-studying;
- Methodical recommendations for tutors;
- Lecture notes or extended lecture plans;
- Methodical recommendations for students;
- Methodical recommendation for self-studying;
- Tests and question for classes;

- List of theoretical questions for the preparation for final module, list of practical skills for the preparation for final module control;
- Medical histories, laboratory results, guidelines,

Recommended reading

Basic (available at the library of PDMU)

1. Internal medicine. Part 1. Cardiorheumatology. Autor's. Prof M.S. Rasin, prof I.P. Kajdashev. Poltava. UMSA. 2007, 54 p.
2. Internal medicine. Part 2. Pulmonology. Gastroenterology. Nephrology. Endocrinology. Hematology. Immunology and allergic diseases. Autor's: prof M.S. Rasin, prof I.P. Kajdashev. Poltava.UMSA. 2007, 205 p.
3. Introduction to clinical medicine and patient care. Manual. Authors: prof. I.P. Kajdashev, prof. M.S. Rasin. Poltava.-2005.-120 p.
4. Family Medicine. In 3 books [Текст] : textbook [for students of higher education establishments – medical universities, institutes and academies]. Book 2. Symptoms and syndromes in clinical course of internal diseases / ed. O. M. Hyrina, L. M. Pasiyeshvili ; L. S. Babinets, O. M. Barna, S. V. Biletskyi et al. - K. : Medicine Publishing, 2018. - 375 p
5. Internal medicine [Текст] : textbook for English-speaking students of hinger medical educational establishments. Part 1. Cardiology, Rheumatology, Haematology / ed. M. A. Stanislavchuk and V. K. Sierkova ; K. M. Amosova, O.Ya. Babak, I. P. Katerenchuk at al. ; Ministry of health of Ukraine, National Pirogov Memorial Medical University, Vinnytsya. - Vinnytsya : Nova Knyha, 2019. - 407 p.
6. Internal medicine [Текст] : textbook for English-speaking students of hinger medical educational establishments. Part 2. Pulmonology, Gastroenterology, Nephrology. Diseases of the internal organs in countries with hot climate / ed. M. A. Stanislavchuk and V. K. Sierkova ; K. M. Amosova, O. Ya. Babak, I. P. Katerenchuk at al. ; Ministry of health of Ukraine, National Pirogov Memorial Medical University, Vinnytsya. - Vinnytsya : Nova Knyha, 2019. - 359 p

Supplementary

1. Internal Medicine: in 2 books. Book 1. Diseases of the Cardiovascular and Respiratory Systems: textbook /[N. M. Seredyuk, I. P. Vakaliuk, R. I. Yatsyshyn et al.]. – Kyiv: AUS Medicine Publishing, 2019. – 664 p.
2. Gliklich RE, Leavy MB, Dreyer NA, editors. Registries for Evaluating Patient Outcomes: A User's Guide [Internet]. 4th edition. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020 Sep. Available: <https://www.ncbi.nlm.nih.gov/books/NBK208616/?report=printable>

Informational resources:

www.moz.gov.ua

www.pdmu.edu.ua

Centers of diseases control and prevention

<https://www.cdc.gov>

<https://sph.unc.edu/hpm/health-policy-and-management-home/>

Institute for Health Metrics and Evaluation

<http://www.healthdata.org>

https://info.odmu.edu.ua/chair/internal_diseases/files/146/ua

<https://encyklopedia.pwn.pl/haslo/;3915125.html>

<https://thes.bncf.firenze.sbn.it/termine.php?id=17158>

Developer

Docent O.A. Borzykh

Docent N.I. Digtar

Assistant Y.M. Avramenko