PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of internal medicine with a course in psychiatry and narcology

WORKING PROGRAM EDUCATIONAL DISCIPLINE

" Internal medicine (including endocrinology)"

LEVEL OF HIGHER EDUCATION Second (master's) level
DEGREE OF HIGHER EDUCATION Master
FIELD OF KNOWLEDGE 22 Health care
SPECIALTY 222 Medicine

Reviewed and approved
at the meeting of the Academic Council
Protocol No. 1, dated August 31, 2018

Kiev 2018

Work program in the discipline "**Internal medicine (including endocrinology)**" for the training of applicants for a second (master's) higher education level of higher education in specialty 222 Medicine.

Description of the academic discipline

<table>
<tr><td rowspan="2">Name of indicators</td><td rowspan="2">Field of knowledge, direction of training, educational qualification level</td><td>Characteristic academic discipline</td></tr>
<tr><td>Full-time teaching</td></tr>
<tr><td rowspan="2">Number of credits 8,0</td><td>Branch of knowledge
22 "Health care"</td><td rowspan="2">Full course</td></tr>
<tr><td>Specialty :
222 "Medicine"</td></tr>
<tr><td>Modules 3</td><td rowspan="5">Qualifications of the educational "Master of Medicine"</td><td>A year of training</td></tr>
<tr><td></td><td>IV</td></tr>
<tr><td>ECTS credits - 8.0</td><td>Semester</td></tr>
<tr><td>the total number of 240 hours</td><td>VII, VIII</td></tr>
<tr><td></td><td>Lectures</td></tr>
<tr><td rowspan="10"></td><td rowspan="10">Form of education:
daytime

Type of discipline:
mandatory</td><td>40 hours</td></tr>
<tr><td>Practical</td></tr>
<tr><td>130 hours</td></tr>
<tr><td>Laboratory</td></tr>
<tr><td>-</td></tr>
<tr><td>Individual work</td></tr>
<tr><td>70 hours</td></tr>
<tr><td>Type of control:</td></tr>
<tr><td>Diff. settlement</td></tr>
</table>

CONTENTS OF THE CURRICULUM

2. EXPLANATORY NOTE

The internal medicine program for students of higher medical institutions of III-IV levels of accreditation is drawn up for the specialties "Treatment" 7.110104, "Pediatrics" 7.110104, "Medical-prophylactic case" 7.110105 of the field of training 1101 "Medicine" in accordance with current regulatory documents. According to the curriculum, the training of doctors at the educational and qualification level "Specialist" studying the academic discipline "Internal medicine (including endocrinology)" is carried out in the IV courses (7-8 semesters).

The program is based on the following regulatory documents:

- educational and qualification characteristics (OKH) and educational and professional programs (OPP) of training specialists, approved by the order of the Ministry of Education and Culture of Ukraine No. 239 dated 04.16.03 "On approval of the constituent industry standards of higher education in the field of training 1101 - Medicine";
- recommendations on the development of educational programs of educational disciplines, approved by the order of the Ministry of Health of Ukraine No. 152 dated 24.03.2004 "On approval of recommendations on the development of educational programs of educational disciplines" with changes and additions introduced by the order of the Ministry of Health of Ukraine No. 492 dated 12.10.2004 "On introduction of changes and additions" to recommendations on the development of educational programs of educational disciplines";
- Order of the Ministry of Health of Ukraine No. 148 dated 31.01.03 "On measures to implement the provisions of the Bologna Declaration in the system of higher medical and pharmaceutical education";
- an experimental curriculum developed on the principles of the European Credit Transfer System (ECTS) and approved by the Order of the Ministry of Health of Ukraine No. 52 dated January 31, 2005.
- Order of the Ministry of Health of Ukraine No. 52 of 31.01.2005 "On the approval and introduction of a new curriculum for the training of specialists of the educational and qualification level "specialist" qualification "doctor" in higher educational institutions of the III-IV accreditation levels of Ukraine in the specialties "medical affairs", "pediatrics" ", "medical and preventive care"

Internal medicine as an educational discipline :

a) is based directly on students' study of propaedeutics of internal medicine, propaedeutics of other clinical disciplines (pediatrics, general surgery), as well as other basic disciplines (medical biology, medical and biological physics, bioorganic and biological chemistry, histology, cytology and embryology, human anatomy, pathomorphology, physiology and pathophysiology, microbiology, virology and immunology, radiology) and integrates with these disciplines;

b) lays the foundation for students' assimilation of knowledge in specialized clinical professional-practical disciplines.

c) forms the ability to apply knowledge of the pathology of internal organs in the process of further education and professional activity in accordance with the principles of evidence-based medicine.

According to the curriculum for the training of specialists (Order No. 52 of the Ministry of Health of Ukraine, 31.01.2005), the discipline "Internal Medicine" is studied by students in the IV-V-VI courses.

The educational process is organized according to the credit-module system in accordance with the requirements of the Bologna process.

The goal (**ultimate goals)** of studying internal medicine established on the basis of OKH and OPP training of a doctor by specialty and is the basis for building the content of the educational discipline. The description of goals is formulated through skills in the form of target tasks (actions). On the basis of the final goals for each module or content module, **specific goals are formulated** in the form of certain skills (actions), target tasks that ensure the achievement of the final goal of studying the discipline.

Final goals of the discipline student :

Know:

- symptoms and course of diseases;
- development, structure and functions of the human body in normal and pathological conditions;
- methods of diagnostic and therapeutic procedures appropriate for specific disease states;
- ethical, social and legal conditions for practicing the medical profession and the principles of health promotion, based on scientific evidence and accepted standards;
- methods of conducting scientific research;
- principles for the development of databases for patient care and research;
- principles for the operation and use of electronic patient records;
- principles of proper nutrition of a healthy and sick person and methods of assessing the state of nutrition;
- elements of the hospital patient service system;
- selected online sources of medical information, with particular emphasis on genetic diseases, available on the Internet;
- the types of observational and interventional studies and the rules governing their conduct;
- the principles for assessing the power and credibility of the recommendations in the guidelines for action;
- basic principles of disinfection, sterilization and aseptic management;
- basic of development and mechanisms of immune system action, including specific and non-specific mechanisms of humoral and cellular immunity;
- types of hypersensitivity reactions, types of immunodeficiency and basicss of immunomodulation;
- definition and pathophysiology of shock, with particular emphasis on differentiation of the causes of shock and multi-organ failure;
- aetiology of haemodynamic disorders, regressive and progressive changes;
- individual groups of therapeutic agents;
- the main mechanisms of drug action, and their changes in the system depending on age;
- the influence of disease processes on the metabolism and elimination of medicines;
- basic rules of pharmacotherapy;
- more important side effects of medicines, including those resulting from their interaction;
- the problem of drug resistance, including multi-drug drug resistance;
- basic concepts of general toxicology;
- environmental and epidemiological determinants of the most frequent diseases;
- the causes, symptoms, principles of diagnosis and therapeutic management of the most common internal diseases and their complications in adults: cardiovascular diseases, including ischemic heart disease, heart defects, endocarditis, myocardial infarction, pericardial infarction, heart failure (acute and chronic), diseases of arteries and venous vessels, arterial hypertension - primary and secondary, pulmonary hypertension, respiratory system diseases, including respiratory tract diseases, chronic obstructive pulmonary disease, bronchial asthma, bronchial dilatation, cystic fibrosis, respiratory infections, interstitial diseases of the lungs, pleura, mediastinum, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory tumors, diseases of the digestive system, including diseases of the mouth, esophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder, 4) diseases of the internal secretion system, including diseases of the hypothalamus and pituitary gland, thyroidism, parathyroidism, adrenal cortex and medulla, ovaries and testicles, and neuroendocrine tumors, polyglandular syndromes, various types of diabetes and metabolic syndrome – hypoglycaemia, obesity, dyslipidemia, diseases of the kidneys and the urinary tract, including acute and chronic renal failure, glomerulonephrine and interstitial kidney diseases, kidney cysts, kidney stones, urinary tract infections, urinary tract neoplasms, in

particular of bladder and kidney neoplasms, hematopoietic diseases, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemia, myeloproliferative and myelodysplastic-myeloproliferative tumours, myelodysplastic syndromes, mature B and T lymphocytes tumors, bleeding diatheses, thrombophilia, life-threatening conditions in hematology, blood disorders in other organ diseases, rheumatic diseases, including systemic connective tissue diseases, systemic vasculitis, joint inflammations involving spinal cord, metabolic bone diseases, osteoporosis and osteoarthritis in particular, gout, allergic diseases, including anaphylaxis and anaphylactic shock and angioedema, water-electrolyte and acid-base disorders: dehydration conditions, overhydration conditions, electrolyte, acidic and alkaline disorders;

- the indications and rules for performing liver biopsy and assists in performing procedure;
- processes: cell cycle, cell proliferation, differentiation and aging, apoptosis and necrosis and their importance for the functioning of the body;
- activity and mechanisms of regulation of all organs and systems of the human body, including the cardiovascular system, respiratory system, digestive system, urinary tract and skin layers, and the interrelations existing between them;
- basic quantitative parameters describing the capacity of particular systems and organs, including the range of norms and demographic factors influencing the value of these parameters;
- the relationship between factors disturbing the balance of biological processes and physiological and pathophysiological changes;
- the mechanism of hormone actions;
- the consequences of inadequate nutrition, including prolonged hunger, excessive food intake and unbalanced diet, and disorders of digestion and absorption of digestive products;
- the consequences of human body exposure to various chemical and biological agents and the principles of prevention;
- groups of medicines, the abuse of which can lead to poisoning;
- symptoms of the most common acute poisoning, including alcohol, drugs and other psychoactive substances, heavy metals and selected groups of drugs;
- basic principles of diagnostic procedures in poisoning;
- computer-aided decision support for medical decisions with particular emphasis on clinical pathway techniques;
- morphological changes in the most important non-cancer diseases affecting the entire organism (e.g. atherosclerosis, hypertension, diabetes, cardiopulmonary insufficiency, systemic infectious and immunological diseases, the most frequent hormonal disorders, the most frequent genetic diseases), and is able to link them with already acquired knowledge of anatomy, biochemistry and pathological physiology in order to deduce clinical symptoms;
- basic neurological symptom syndromes;
- pathomechanisms of regulation disorders of all organs and systems of the human body, including: circulatory, respiratory, urinary and digestive systems, nervous system (central, peripheral and autonomous);
- the concept of impairment and disability;
- specific diseases related to physical activity and competitive sports, also in the sports of the disabled and in girls and women;
- principles of nutrition of physically active persons and athletes. Describes the difference between doping and support;
- the role of medical rehabilitation and methods used in it;
- basics of microbiological and parasitological diagnostics basics of disinfection, sterilization and aseptic management;

Is able to:

- determine the etiological and pathogenetic factors of the most common therapeutic diseases according to list 1 of the OKH;
- analyze the typical clinical picture of the most common therapeutic diseases;
- identify different clinical variants and complications of the most common diseases of internal organs;
- carry out differential diagnosis, substantiate and formulate a preliminary diagnosis of the most common diseases of internal organs;
- determine the management tactics (recommendations regarding the regime, diet, drug treatment, rehabilitation measures) of the patient with the most common diseases of internal organs and their complications;
- identify medical problems and prioritize medical management;
- identify life-threatening conditions that require immediate medical intervention;
- plan the diagnostic procedure and interpret its results;
- implement appropriate and safe therapeutic treatment and predict its effects;
- plan own learning activities and constantly learn in order to update own knowledge;
- inspire the learning process of others;
- communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient;
- communicate and share knowledge with colleagues in a team;
- critically evaluate the results of scientific research and adequately justify the position;
- use databases, including online databases, and search for the necessary information using the available tools;
- assess the reliability of the clinical trial;
- understand the concepts describing the strength of the intervention in the study;
- use computer simulators to support the medical decision-making process;
- protect clinical data against unauthorized access;
- assess toxicological hazards in specific age groups and in conditions of hepatic and renal failure, and prevent drug poisoning;
- interpret the results of microbiological tests;
- carry out a medical history with an adult patient;
- conduct a full and targeted physical examination of an adult patient;
- assess the general condition, state of consciousness and awareness of the patient;
- perform differential diagnosis of the most common diseases of adults and children;
- evaluate and describe the somatic and mental state of the patient;
- recognize immediate life-threatening conditions;
- recognize the condition after drinking alcohol, after using drugs and other substances;
- plan diagnostic, therapeutic and prophylactic procedures;
- analyze the potential adverse reactions of individual medicines and the interactions between them;
- propose individualization of existing therapeutic guidelines and other methods of treatment in the face of ineffectiveness or contraindications to standard therapy;
- recognize the symptoms of drug dependence and propose treatment;
- qualify the patient for home and hospital treatment;
- recognize states in which the duration of life, functional state or patient preferences limit the conduct in accordance with the guidelines specified for a given disease;
- make a functional assessment of a patient with a disability;
- interpret the results of laboratory tests and identify the causes of abnormalities;
- apply nutritional treatment, including enteral and parenteral nutrition;
- plan the management of exposure to blood-borne infections;

- qualify the patient for vaccination;
- collect and retain test material for use in laboratory diagnostics;
- perform basic procedures and medical procedures including: 1) body temperature measurement, heart rate measurement, non-invasive blood pressure measurement, 2) monitoring of vital signs by means of a patient monitor, pulse oximetry, 3) spirometric examination, oxygen therapy, assisted ventilation and replacement ventilation, 4) introduction of the oropharyngeal tube, 5) intravenous, intramuscular and subcutaneous injections, cannulation of peripheral veins, collection of peripheral venous blood, collection of blood for culture, collection of arterialized capillary blood, collection of arterialized capillary blood, 6) taking nasal, throat and skin swabs, puncturing of the pleural cavity, 7) bladder catheterization in women and men, gastric tube, gastric lavage, gastric lavage, enema, 8) standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation, 9) simple strip tests and blood glucose measurements
- assist in the performance of the following procedures and medical procedures: 1) transfusion of blood and blood-derived products, 2) drainage of the pleural cavity, 3) puncture of the pericardial sac, 4) puncture of the peritoneal cavity, 5) lumbar puncture, 6) fine-needle biopsy, 7) epidermal tests, 8) intradermal and scarification tests and interpret their results;
- plan specialist consultations;
- implement basic treatment for acute poisoning;
- assess pressure ulcers and use appropriate dressings;
- proceed in case of injuries (dress or immobilize, dress and suture the wound);
- maintain patient's medical records;
- assist in the performance of the following procedures and medical procedures: (i) bone marrow aspiration biopsy;
- offer appropriate nutritional management to people in developmental age and adults with intensive exercise Interprets measures prohibited in sport. Identifies types and support measures;
- conduct an approximate hearing and field of vision examination, and an otoscopic examination
- propose a rehabilitation program for the most common diseases;
- perform and interpret anthropometric measurements of nutritional status, is able to gather nutritional history and make a quantitative and qualitative assessment of intake (taking into account dietary supplements) using a nutritional computer program;
- perform a pathophysiological analysis of selected clinical cases according to the PBCA (Problem Based Case Analysis) rule;
- interpret the results of toxicological tests;
- monitor the condition of a patient poisoned with chemicals or drugs;
- assess bedsores and apply appropriate dressings;
- recognize the agony of the patient and determine his death;
- recognise the state of overtraining and overloading of internal organs and motor organs associated with practicing sport. Is able to prevent and manage dehydration and physical exercise disorders in various conditional environments;
- describe the changes in function of the organism in homeostasis disorder, determine its integrated reaction to physical effort, high and law teperature, blood or water loss, sudden verticalization, transition from sleep to wakefulness;
- prepare a patient examination plan and analyze the data of laboratory and instrumental examinations in the typical course of the most common therapeutic diseases and their complications;
- assess the prognosis of life and working capacity in the most common therapeutic diseases;
- diagnose and provide medical care for emergency conditions in the internal medicine clinic;
- carry out primary and secondary prevention of the most common diseases of internal organs;
- carry out medical manipulations according to the list of 5 OKH;

- demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination in therapy.

Is ready to:

- to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures;
- to be guided by the well-being of a patient;
- respect medical confidentiality and patients' rights;
- take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease;
- perceive and recognize own limitations and self-assessing educational deficits and needs;
- promote health-promoting behaviors;
- use objective sources of information;
- formulate conclusions from own measurements or observations;
- implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment;
- formulate opinions on the various aspects of the professional activity;
- assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others.

Chapter 1 (4th course).
Basics of internal medicine (endocrinology, gastroenterology, pulmonology, hematology)

Total hours: 240 / 8.0 credits (lectures – 40, practical classes – 130, SRS – 70)

Content modules:

1. **Content section 1. (Education in the VIII semester of the academic year).** Basics of diagnosis, treatment and prevention of endocrine diseases systems
2. **Content section 2. (Education in the VII semester of the academic year).** Fundamentals of diagnosis, treatment and prevention of diseases of the digestive organs
3. **Content section 3. (Education in the VII semester of the academic year).** Fundamentals of diagnosis, treatment and prevention of diseases of the blood and hematopoietic organs
4. **Content section 4. (Education in the VIII semester of the academic year).** Fundamentals of diagnosis, treatment and prevention of respiratory diseases

The IV year internal medicine program (I module) involves studying the basics of internal medicine in its main sections (endocrinology, gastroenterology, pulmonology, hematology), which includes studying the basics of diagnosis, treatment and prevention of the main and most common diseases of internal organs.

The teaching of the basics of internal medicine in the IV course is conducted in the form of rotations of content modules. Approximate duration of practical classes - 5 hours. The main goal of this course is to acquaint the student with various aspects of adult medicine. Emphasis is placed on the skills of taking an anamnesis, performing a physical examination, and performing differential diagnosis of common clinical manifestations and diseases.

Students take part in the diagnostic and treatment process of outpatients (mainly) and inpatients under the guidance of assistants and associate professors of the department. Familiarity with the procedures that are most often encountered in the practice of internal medicine is also provided.

Practical classes, clinical visits with assistants and associate professors of the department are the most important part of this course.

Types of educational activities of students according to the curriculum are:

a) lectures,

b) practical classes,

c) independent work of students (SRS).

Thematic plans **of lectures** , practical classes and SRS ensure the implementation of all topics included in content modules in the educational process. The topics of the lecture course reveal the problematic issues of the relevant sections of internal medicine. The lecture course uses didactic tools as much as possible (multimedia presentations, slides, educational films, demonstration of thematic patients). The lecture stage of students' education consists mainly in such a way that the lectures precede the relevant practical classes and are read in one block.

Practical classes (approximately 5 hours) are held at the department's clinical facilities.

Treatment of the patient involves:

1) elucidation of the patient's complaints, disease and life history, conducting a survey of organs and systems;
2) conducting a physical examination of the patient and determining the main symptoms of the disease;
3) analysis of laboratory and instrumental patient examination data;
4) formulation of the patient's diagnosis;
5) appointment of treatment;
6) determination of primary and secondary prevention measures;
7) report on the results of the patient's examination, analysis under the guidance of the teacher of the correctness of the diagnosis, differential diagnosis, scope of the prescribed examination, treatment tactics, assessment of prognosis and work capacity;

SRS and individual work of students makes up 60% of the classroom load. It contains:

- study of topics that are not part of the classroom lesson plan
- the work of students in departments of clinical bases of departments, including in laboratories and departments (cabinets) of functional diagnostics, interpretation of laboratory data and instrumental methods of research in internal pathology outside classroom time
- learning practical skills using phantoms and working with patients (according to the list)
- individual SRS (speech at the clinic's scientific and practical conference, writing articles, presenting an abstract at a practical session, etc.).

Teachers and auxiliary staff of the department provide the opportunity to carry out SRS, during practical classes and final module control, they control and evaluate its implementation. The topics submitted for independent study are evaluated only during the final module control.

The exam is held during the session according to the exam schedule.

Types of educational activities of students according to the curriculum are:

a) practical classes,

b) independent work of students (SRS).

The methodology for organizing **clinical practical classes** in internal medicine requires the following:

- to make the student a participant in the process of providing medical care to patients from the moment of their hospitalization, examination, diagnosis , treatment until discharge from the hospital;

- master professional practical skills; skills of working in a team of students, doctors, other participants in the provision of medical care;

- to form the student's responsibility as a future specialist for the level of his training, its improvement during training and professional activity.To implement the above, it is necessary to

provide the student with a detailed plan of his work in the clinic at the first lesson of the corresponding module and ensure the organization of its implementation. This plan should include:

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

Treatment of the patient involves:

1) elucidation of the patient's complaints, disease and life history, conducting a survey of organs and systems;

2) conducting a physical examination of the patient and determining the main symptoms of the disease;

3) analysis of laboratory and instrumental patient examination data;

4) formulation of the patient's diagnosis;

5) appointment of treatment;

6) determination of primary and secondary prevention measures;

7) report on the results of the examination of the patient by a team of students in the study group, analysis under the guidance of the teacher of the correctness of the diagnosis, differential diagnosis, scope of the prescribed examination, treatment tactics, assessment of prognosis and work capacity;

SRS and individual work of students makes up 60% of the classroom load .

It contains:

- study of topics that are not part of the classroom lesson plan
- the work of students in departments of clinical bases of departments, including in laboratories and departments (cabinets) of functional diagnostics, interpretation of laboratory data and instrumental methods of research in internal pathology outside classroom time
- learning practical skills using phantoms and working with patients (according to the list)
- individual SRS (speech at the scientific and practical conference of the clinic, writing articles, presenting an abstract at a practical session, etc.)
- work in the computer class in preparation for Step-2.

Teachers and auxiliary staff of the department provide the opportunity to carry out SRS, during practical classes and final module control, they control and evaluate its implementation. The topics submitted for independent study are evaluated only during the final module control.

The types of student educational activities, according to the Curriculum, are lectures, practical classes, independent student work (SRS).

Practical classes lasting 5-7 academic hours take place in a therapeutic clinic and consist of four structural parts:

1)mastering the theoretical part of the topic,

2)demonstration by the teacher of the research methodology of the thematic patient,

3) work of students to practice practical skills at the bedside of a patient under the supervision of a teacher,

4) solving situational tasks and test-control of mastering the material.

When conducting practical classes, mastery of practical skills in physical examination of a patient and working directly with patients is the main focus.

On the basis of mastering clinical methods of examining the patient, the ability to synthesize, evaluate and analyze them, the student develops clinical thinking and the ability to establish a syndromic diagnosis, which is the main task of propaedeutic therapy, and the subsequent appointment of treatment.

3. PROGRAM CONTENT

Basics of internal medicine
(endocrinology, gastroenterology, pulmonology, hematology)

The ultimate goals of the chapter

Students must:

- Demonstrate the ability to diagnose and present a treatment plan for the most common conditions in the field of endocrinology, gastroenterology, pulmonology, and hematology.
- To demonstrate the ability to apply diagnostic methods that help in making a decision (treatment plan) in the management of various diseases in the field of endocrinology, gastroenterology, pulmonology, hematology .
- Apply the principles of evidence-based medicine in making diagnostic and therapeutic decisions for internal diseases in the field of endocrinology, gastroenterology, pulmonology, and hematology .
- Demonstrate the ability to perform a medical examination and physical examination according to the patient's chief complaints and medical history.
- Demonstrate ability to take medical histories and perform physical examinations.
- Compile and justify a list of twenty indications for referring the patient to the emergency department or direct hospitalization.
- Write a referral for hospitalization for the 10 most frequent medical problems in endocrinology, gastroenterology, pulmonology, hematology .
- Write 10 hospital discharges.
- Demonstrate the ability to assess the health status of adults and apply appropriate prevention recommendations.
- Demonstrate ease of application of medical information technology and critical peer review of medical literature in diagnosis and treatment in an internal medicine clinic.
- Demonstrate the ability to justify and apply clinical methods to understand disease manifestations.
- Demonstrate a basic understanding of ethical principles and their application in patient care.

Students must conduct curation of patients (new or those already treated) with the following diseases:

- Gastroenterological diseases (dyspepsia, peptic ulcers, gastritis, GERD, chronic hepatitis and liver cirrhosis, pancreatitis, intestinal diseases) - 8
- Endocrinology (diabetes, thyroid disease, adrenal disease, obesity) - 5
- Pulmonology (COPD, asthma, community-acquired pneumonia, pleurisy) - 5
- Hematology (anemia, leukemia) - 2

The organization of the educational process should ensure the participation of students in the management of at least 2/3 of hospitalized patients. If it is not possible to access patients in any category, students complete a medical history with the diagnoses/problems of the appropriate category. The necessity of writing such a history is determined by the assistant/associate professor (head of the department) on the basis of a weekly review of data on the availability of relevant patients in the departments.

Daily reports on the admission/examination of patients by students are kept and provided weekly to the assistant/associate professor to control the required number of patient examinations and display the set of patients with the most frequent internal diseases without unnecessary repetition.

Didactic classes are held during morning tests, lectures and classes. Assistants ensure that each student acquires the necessary competence in the following areas: physical examination and questioning of the patient, oral presentation, filling out documentation, making diagnostic decisions (critical thinking).

In addition, assistants monitor the students' activity in order to be sure that they have mastered practical skills.

Content section 1 ***Basics of diagnosis, treatment and prevention of the main diseases of the endocrine system***

Specific goals:

Students must:

- Conduct surveys and physical examinations of patients with diseases of the endocrine system
- To justify the use of the main invasive and non-invasive diagnostic methods used in endocrinology, to determine indications and contraindications for their implementation, possible complications
- To determine the etiological and pathogenetic factors of endocrine diseases
- Identify the typical clinical picture of endocrine diseases
- Identify the main variants of the course and complications of endocrine diseases
- Draw up a plan for examination of patients with major endocrine diseases
- Carry out a differential diagnosis, justify and formulate a diagnosis for the main endocrine diseases
- Prescribe treatment, carry out primary and secondary prevention for major endocrine diseases
- Diagnose and provide assistance in emergency situations in endocrinology
- Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination

Topic 1. **Diabetes mellitus, etiology, pathogenesis, clinic, diagnosis. Classification.**

Definition of diabetes. Epidemiology of diabetes in Ukraine and the world, disease forecast, prevalence of diabetes in different age groups. Etiology and pathogenesis of diabetes. Type 1 diabetes mellitus: the role of viral infection and autoimmune processes, genetic predisposition. Diabetes mellitus type 2: the role of genetic predisposition, obesity, external factors. Immunoresistance and impaired insulin secretion. Classification of glycemic disorders (WHO, 1999), clinical forms of diabetes. Diabetes clinic. The main clinical symptoms of diabetes. Signs of different types of diabetes. Characteristics of internal organ damage in diabetes: cardiovascular system, hepatobiliary system, urinary organs, diabetic osteoarthropathies. Diagnosis of diabetes. Diagnostic criteria for diabetes and other categories of hyperglycemia (WHO, 1999). Indications and rules for the glucose tolerance test. Diagnostic value of determination of glycated hemoglobin, fructosamine, C-peptide, glucosuria, ketonuria.

Topic 2. **Diabetes type 1 and 2, modern methods of therapy.**

Basic principles of treatment of type 2 diabetes. Criteria for compensation of metabolism, achievement of normoglycemia. The main methods of treatment of diabetes, diet therapy, dosed physical activity, sugar-lowering pharmacotherapy, teaching the patient self-control. Diet therapy of diabetes. Modern principles of diet therapy: physiological, energy value, restriction of refined carbohydrates, use of dietary fibers, trace elements, vitamins. Dosed physical activity and rules for its appointment. Oral hypoglycemic drugs. Derivatives of sulfonylureas, non-sulfonylurea insulin secretogens, biguanides, glitazones, acarbose. Characteristics of drugs, their mechanism of action, side effects, indications and contraindications. Criteria for compensation of carbohydrate metabolism in patients with type 1 diabetes mellitus. Insulin therapy. Characteristics of the main insulin preparations, including of domestic production by CJSC "Indar" and "Farmak". Indications, contraindications. Classification of insulin preparations, short- and long-acting

preparations, analogues of ultra-short and long-acting insulin. Calculation of the daily need for insulin. Correction of the dose of insulin with the help of bread units. Regime of insulin therapy: traditional and intensified insulin therapy. Complications of insulin therapy: hypoglycemic states, insulin allergy, post-injection lipodystrophy, insulin resistance, chronic insulin overdose (Somoji syndrome), insulin edema. Sanatorium-resort treatment.

Topic 3. **Chronic complications of diabetes: diabetic retinopathy, nephropathy, neuropathy and diabetic foot. Peculiarities of the course and treatment of diabetes in surgical patients and during pregnancy.**

Diabetic angiopathies and neuropathies. Classification. Diabetic nephropathy, stages of development, diagnosis, differential diagnosis, treatment and prevention. Diabetic retinopathy: stages of the process, diagnosis, prevention and treatment. Diabetic neuropathy, classification, diagnosis and treatment. Diabetic foot syndrome: classification, diagnosis, treatment algorithm. Principles of treatment of pregnant women with diabetes. Diagnosis and surgical treatment of diabetic angiopathy of the lower extremities. Diabetic gangrene. Peculiarities of urgent and planned surgical interventions in patients with diabetes.

Topic 4. **Emergency conditions in diabetes. Comatose states in diabetes.**

Hypoglycemic coma, hypoglycemic states. Etiology, pathogenesis, clinic, diagnosis, treatment. Ketoacidotic states with diabetic (hyperketonemic) coma. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment. Hyperosmolar (non-acidotic) diabetic coma. Lactic acidosis and coma.

Topic 5. **Iodine deficiency diseases of the thyroid gland. Thyrotoxicosis. Clinical forms. Diagnosis and treatment.**

Definition of the concept of "iodine deficiency states". Manifestations of iodine deficiency. Determination of iodine-deficient areas according to the prevalence of goiter in different age groups and ioduria data. Determination of the size of the thyroid gland. Age dynamics of gland volume. The definition is "goiter". The concept of simple non-toxic and nodular forms of goiter. The impact of exogenous environmental factors and man-made disasters at nuclear energy facilities on the state of the thyroid gland and the prevalence of its pathology. Iodine prevention: mass, group, individual. The importance of using iodized salt in the prevention of iodine deficiency diseases. Restrictions on the use of preparations based on potassium iodide. Diseases accompanied by thyrotoxicosis. Etiology, pathogenesis, clinical manifestations of diffuse toxic goiter, thyrotoxic and endocrine ophthalmopathy. Age characteristics of the course of toxic goiter in children and the elderly. Clinical differences of nodular toxic goiter. Justification of the diagnosis of thyrotoxicosis. Medicinal and surgical treatment of toxic goiter, use of 131-iodine for therapeutic purposes. Complications of goiter treatment. Medical and social examination of patients with toxic goiter.

Topic 6. **Hypothyroidism. Classification, diagnosis, clinic, treatment. Thyroiditis.**

Hypothyroidism, etiology, pathogenesis and clinical signs. Justification of the diagnosis. Primary, central, peripheral, subclinical, transient hypothyroidism. Timely diagnosis of congenital hypothyroidism. Age characteristics of the course of hypothyroidism. Hypothyroidism on the background of autoimmune polyendocrinopathies. Subclinical hypothyroidism. Treatment of hypothyroidism. Pregnancy and hypothyroidism. Medical and social examination of patients with hypothyroidism. Thyroiditis, classification, etiology, clinical course, diagnosis, treatment. Differential diagnosis of thyroiditis with an acute clinical course. Chronic thyroiditis. Justification of the diagnosis of autoimmune thyroiditis. Nodular forms of goiter. Monitoring of patients with thyroid nodules.

Topic 7. **Cancer of the thyroid gland and diseases of the parathyroid glands.**

Pathomorphological classification of tumors of the thyroid gland. Justification of the diagnosis of thyroid cancer. The role of the accident at the Chernobyl AEC in the increase in the incidence of thyroid cancer. Modern scheme of treatment, rehabilitation and dispensary observation of patients with thyroid cancer. Anatomical and physiological data. Parathyroid hormone. Mechanism of action. Hyperparathyroidism. Etiology. Pathogenesis. Classification.

Clinic, clinical forms of hyperparathyroidism. Diagnostics. Differential diagnosis. Treatment. Indications for surgical treatment. Postoperative period and rehabilitation of patients. Drug therapy. Hypoparathyroidism. Etiology. Pathogenesis. Classification. Clinic. Diagnostics. Differential diagnosis. Forecast. Prevention. Treatment. Clinical forms.

Topic 8. **Chronic insufficiency of the cortex of the adrenal glands. Etiology, pathogenesis, clinic, diagnosis, prevention and treatment. Acute adrenal insufficiency. Hormonally active tumors of the adrenal glands.**

Anatomical and physiological data. Hormones of the adrenal cortex and medulla. Definition of the concept, prevalence of acute and chronic adrenal insufficiency. Chronic adrenal insufficiency (Addison's disease). Etiology, pathogenesis, clinic, diagnosis, prevention and treatment. Acute adrenal insufficiency. Etiology, pathogenesis, clinic, diagnosis, prevention and treatment. Classification of tumors of the adrenal glands. Itsenko-Cushing syndrome (corticosteroma, glucosteroma). Clinic, diagnosis and differential diagnosis, treatment. Androsteroma, corticosteroma. Clinic, diagnosis and differential diagnosis, treatment. Primary hyperaldosteronism (Kohn's syndrome). Clinic, diagnosis and differential diagnosis, treatment. Pheochromocytoma. Clinic, diagnosis and differential diagnosis, treatment. Determination of congenital hyperplasia of the adrenal cortex. Clinical forms, diagnosis, treatment.

Topic 9. **Diseases of the hypothalamic-pituitary system, growth disorders. Adiposity. Mechanism of action of hypothalamus and pituitary hormones. Diseases of the gonads.**

Classification of hypothalamic-pituitary diseases. Acromegaly. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Itsenko-Cushing's disease. Etiology and pathogenesis. Classification. Clinic. Diagnosis and differential diagnosis. Treatment. Hyperprolactinemia syndrome. Classification. Etiology and pathogenesis. Clinic. Diagnosis, differential diagnosis. Treatment. Hypopituitarism. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Diabetes insipidus. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Causes of short and tall stature. Hypopituitarism with predominant somatotropic insufficiency (pituitary dwarfism). Classification. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Pituitary gigantism. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Adiposity. Etiology and pathogenesis. Classification. Clinic. Diagnostics. Treatment. Obesity in children and adolescents.

Gonads in men and women. Hormones. Congenital disorders of sexual differentiation. Gonadal agenesis. Shereshevsky-Turner syndrome. Hermaphroditism syndrome. Cryptorchidism. Syndrome of mono- and anarchism. Klinefelter syndrome. Disorders of sexual development in boys and girls. Climax in women and men.

THEMATIC PLAN OF LECTURES

Content section 1: *" Basics of diagnosis, treatment and prevention of major diseases of the endocrine system "*

No. z/p	***Topic***
1	Diabetes. Modern classification, etiology, clinic, diagnosis.
2	Diabetes. Modern classification, etiology, clinic, diagnosis.
3	Actual issues of angio- and neuropathies.
4	The latest methods of treatment of patients with diabetes mellitus.
5	Oral hypoglycemic agents, modern insulin preparations and their analogues.
6	Disease of the thyroid gland.
7	Diagnosis, differential diagnosis, prevention and treatment of goiter.
8	Adrenal gland disease. Chronic adrenal insufficiency .

9	Hormonally active tumors.
10	Diseases of the hypothalamic-pituitary system. Its participation in the correction of the functional activity of the glands of internal secretion.
11	Metabolic syndrome.

THEMATIC PLAN OF PRACTICAL LESSONS

Content section 1: *" Basics of diagnosis, treatment and prevention of major diseases of the endocrine system "*

No. z/p	*Topic*
1	Diabetes mellitus, classification, etiology, pathogenesis, clinic, diagnosis.
2	Diabetes mellitus, classification, etiology, pathogenesis, clinic, diagnosis.
3	Diabetes type 1 and 2, modern methods of therapy.
4	Chronic complications of diabetes: diabetic retinopathy, nephropathy, neuropathy and diabetic foot. Peculiarities of the course and treatment of diabetes in surgical patients and during pregnancy.
5	Emergency conditions for diabetes .
6	Iodine deficiency diseases of the thyroid gland. Signs of an endemic area according to WHO. Clinic, diagnosis, prevention and treatment. Thyrotoxicosis. Clinical forms. Diagnosis, treatment. Hypothyroidism. Classification, diagnosis, clinic, treatment. Thyroiditis. Thyroid cancer and thyroid diseases.
7	Chronic adrenal insufficiency. Etiology, pathogenesis, clinic, diagnosis, prevention and treatment. Acute adrenal insufficiency. Hormonally active tumors of the adrenal glands.
8	Diseases of the hypothalamic-pituitary system, growth disorders. Adiposity. Diseases of the gonads. **Test control of knowledge according to the meaningful module " Fundamentals of diagnosis, treatment and prevention of diseases of the endocrine system "**

TYPES OF STUDENTS' INDEPENDENT WORK

Content section 1: *" Basics of diagnosis, treatment and prevention of major diseases of the endocrine system "*

No s/p	*Topic*
1	Preparation for practical classes, including: - mastering the skills to analyze the data of laboratory research methods (glucose tolerance test, glycemic and glucosuric profile, C-peptide, HvA1c) - mastering the skills of providing medical assistance to patients with ketoacidosis, diabetic and hypoglycemic coma. - mastering the skills of determining the degree of goiter - mastering the skills of interpreting the data of ultrasound examination and dopplerography of the thyroid gland - mastering the skills of interpreting the results of ECG and reflexometry to characterize the function of the thyroid gland - mastering the skills of interpretation of hormonal examination data, ultrasound examination, arteriography of adrenal glands - mastering the skills of interpretation of computer tomography data, MRI of adrenal glands

	- mastering the skills of interpretation of craniogram data and CT, MRI data of the skull - mastering the skills of determining the degree of obesity by BMI - mastering the skills of assessing sexual development - mastering the skills of interpretation of "bone age" according to X-ray data
2	Curation of the patient with the writing of the medical history.
3	Individual work: • Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles

Content section 2: ***Basics of diagnosis, treatment and prevention of the main diseases of the digestive organs***

Specific goals:

Students must:

- Conduct interviews and physical examinations of patients with diseases of the digestive tract, hepatobiliary system and pancreas
- To justify the use of the main invasive and non-invasive diagnostic methods used in gastroenterology, to determine indications and contraindications for their implementation, possible complications
- Determine the etiological and pathogenetic factors of diseases of the alimentary canal, hepatobiliary system and pancreas
- Identify the typical clinical picture of diseases of the alimentary canal
- Identify the main variants of the course and complications of diseases of the digestive tract, hepatobiliary system and pancreas
- Draw up a plan for the examination of patients with the main diseases of the digestive tract, hepatobiliary system and pancreas
- Carry out a differential diagnosis, substantiate and formulate a diagnosis for the main diseases of the digestive tract, hepatobiliary system and pancreas based on the analysis of laboratory and instrumental examination data
- Prescribe treatment, carry out primary and secondary prevention for the main diseases of the digestive tract, hepatobiliary system and pancreas
- Diagnose and provide assistance in emergency conditions in gastroenterology
- Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination

Topic 10. **Main symptoms of gastroenterological pathology. Research methods in gastroenterology.**

Main gastroenterological complaints. Determination of the main gastroenterological symptoms (pain, heartburn, dyspepsia, nausea, vomiting, bleeding, hepatomegaly, ascites, jaundice, diarrhea, constipation, etc.). General and alarming symptoms. Physical symptoms of gastroenterological pathology. Methods of physical examination of patients with gastroenterological pathology. Symptomatic treatment.

Endoscopic methods: diagnostic possibilities of esophagogastroduodenoscopy, colonoscopy, biopsy, indications, contraindications and limitations to their implementation, possible complications. Intragastric and intraesophageal pH-metry, duodenal sounding - informativeness and clinical evaluation of results. X-ray and isotopic methods of diagnosis of diseases of the alimentary canal and liver. Ultrasound examination of abdominal organs. Immunoenzymatic and biochemical research methods. Diagnosis of H.pylori infection and other infectious agents.

Topic 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.

Topic 12. **Gastric dyspepsia. Chronic gastritis.**

Definition. Etiology and pathogenesis. The role of H.pylori in the occurrence of gastroduodenal pathology. Classification. Unexamined and functional dyspepsia. Diagnosis criteria. Differential diagnosis with organic pathology. Modern approaches to the treatment of functional dyspepsia. Primary and secondary prevention. Forecast and performance.

Definition, etiology and pathogenesis of chronic gastritis. The role of H.pylori in the occurrence of chronic gastritis. Classification. Non-atrophic and atrophic gastritis. Significance 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. Forecast and performance.

Topic 13. **Ulcer disease and other peptic ulcers of the stomach and duodenum.**

Definition. The role of H.pylori, acid-peptic factor and medications in the development of peptic ulcers and their recurrences. Peculiarities of the course of Hr-positive and Hr-negative ulcers. Complications (perforation, penetration, bleeding, impaired evacuator-motor function). The value of instrumental and laboratory diagnostic methods. Methods of diagnosing Hr-infection. Modern tactics of managing a patient with an ulcer. Eradication therapy. Eradication control. Drug therapy of Hr-negative ulcers. Indications for surgical treatment. Primary and secondary prevention. Forecast and performance.

Topic 14. **Diseases of the small intestine: celiac disease and other enteropathies.**

Definition. Etiology, pathogenesis. The role of food component intolerance, enzymopathies and immune factors. Syndromes of malabsorption and maldigestion. Diagnostic criteria, differential diagnosis. Complication. Differentiated therapy. Primary and secondary prevention. Forecast and performance.

Topic 15. **Chronic colon diseases.**

Irritable bowel syndrome, definition, Roman diagnostic criteria. Etiology and pathogenesis. Classification. Clinical manifestations of different options. Diagnostic criteria and criteria for excluding the diagnosis. Differential diagnosis. Treatment of various forms. Primary and secondary prevention. Forecast and performance. 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, spondylitis, arthritis, dermatoses).

Topic 16. **Gallstone disease, chronic cholecystitis and functional biliary disorders.**

Definition. Etiology, pathogenesis. The importance of infection, motility disorders and dyscholia in the development of chronic non-calculous cholecystitis, cholangitis and gallstone disease. Features of the clinical course. The role of instrumental methods in diagnostics. Differential diagnosis. Complication. Differentiated treatment depending on the clinical variant and the presence of complications Indications for surgical treatment. Primary and secondary prevention. Forecast and performance.

Topic 17. **Chronic hepatitis.**

Definition. Classification. The role of viral persistence, 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. Importance of morphological, biochemical and radioisotope methods. Differential diagnosis. Complication. Features of treatment of various forms. Primary and secondary prevention. Forecast and performance.

Topic 18. **Cirrhosis of the liver.**

Definition. Importance of viral infection, nutritional factors, alcohol, toxic substances and immunological disorders. Classification. Peculiarities of clinical manifestations and diagnosis of various variants. Differential diagnosis. Liver failure and other complications. Differentiated therapy. Emergency treatment of complications. Primary and secondary prevention. Forecast and performance.

Topic 19. **Chronic pancreatitis.**

Definition. The importance of various etiological factors. Classification. Features of the clinical course, diagnosis and differential diagnosis depending on the form and localization of the pathological process. Complication. Research methods in the diagnosis of pancreatitis. Differentiated treatment. Primary and secondary prevention. Forecast and performance.

THEMATIC PLAN OF LECTURES

Content section 2: *" Basics of diagnosis, treatment and prevention of the main diseases of the digestive organs"*

No. z/p	***Topic***
1	The main symptoms of gastroenterological pathology and research methods in gastroenterology Gastroesophageal reflux disease Gastric dyspepsia and chronic gastritis Ulcer disease and other ulcers of the stomach and duodenum
2	Gallstone disease, chronic cholecystitis and functional biliary disorders Chronic pancreatitis
3	Chronic hepatitis Liver cirrhosis

THEMATIC PLAN OF PRACTICAL CLASSES

Content section 2: *" Basics of diagnosis, treatment and prevention of the main diseases of the digestive organs"*

No s/p	***Topic***
1	10. The main symptoms of gastroenterological pathology. Research methods in gastroenterology. 11. Gastroesophageal reflux disease.
2	12. Gastric dyspepsia. Chronic gastritis.
3	13. Ulcer disease and other ulcers of the stomach and duodenum.
4	14. Chronic diseases of the small intestine: celiac disease and other enteropathies. 15. Chronic colon diseases: non-specific colitis and irritable bowel syndrome.
5	16. Gallstone disease, chronic cholecystitis and functional biliary disorders.
6	17. Chronic hepatitis.
7	18. Liver cirrhosis.
8	19. Chronic pancreatitis. **Test control of knowledge according to the meaningful module " Fundamentals of diagnosis, treatment and prevention of the main diseases of the digestive organs"**

TYPES OF INDEPENDENT WORK OF STUDENTS

Content section 2: " Basics of diagnosis, treatment and prevention of major diseases of the digestive organs"

No. z/p	*Topic*
1.	Preparation for practical classes, including: - Mastering the skills of interpreting the data of endoscopic examination of the digestive tract - Mastering the skills of interpretation of radiological (x-ray and sonographic) examination data of the digestive tract and organs of the abdominal cavity - Mastering the skills of interpretation of the data of the study of the secretory function of the stomach (pH-metry) - Mastering the skills of interpreting the data of microbiological and biochemical research of bile - Mastering the skills of interpretation of biochemical (functional liver tests) blood analysis data - Mastering the skills of interpreting the data of enzyme immunoassays of blood and feces
2.	Curation of the patient with a written justification of the diagnosis
3.	Individual work: • Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles

Contents of chapter 3: ***Basics of diagnosis, treatment and prevention of major respiratory diseases***

Specific goals:

Students must:

- Conduct interviews and physical examinations of patients with respiratory diseases
- To justify the use of the main invasive and non-invasive diagnostic methods used in pulmonology, to determine indications and contraindications for their implementation, possible complications
- To determine the etiological and pathogenetic factors of the main diseases of the respiratory organs
- Identify the typical clinical picture of the main diseases of the respiratory organs
- Identify the main variants of the course and complications of the main diseases of the respiratory organs
- Draw up a plan for examination of patients with respiratory diseases
- On the basis of the analysis of laboratory and instrumental examination data, carry out a differential diagnosis, substantiate and formulate a diagnosis for the main diseases of the respiratory organs
- Prescribe treatment, carry out primary and secondary prevention for the main diseases of the respiratory organs
- Diagnose and provide assistance in acute respiratory failure
- To justify the necessity of pleural puncture
- Perform peak flowmetry
- Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination

Topic 20. **Main symptoms of pulmonary pathology and research methods in pulmonology.**

Main pulmonary complaints. Determination of the main symptoms of respiratory diseases (shortness of breath, wheezing, cough, chest pain, etc.). General and specific symptoms. Physical symptoms of pulmonary pathology. Methods of physical examination of patients with pulmonary pathology. X-ray examination of the lungs, computer tomography, diagnostic possibilities of bronchoscopy. Functional methods of external breathing research, microbiological research of sputum.

Topic 21. **Chronic obstructive lung diseases.**

Definition. The importance of smoking, environmental, professional factors and infection in the development of chronic bronchitis. Classification. Clinical manifestations, changes in the data of additional instrumental research methods depending on the stage (degree of severity). Differential diagnosis. Complication. Treatment depends on the degree of severity. Primary and secondary prevention. Forecast and performance..

Topic 22. **Bronchial asthma.**

Definition. Etiology, features of pathogenesis. Classification. Clinical manifestations and changes in these instrumental research methods depending on the degree of severity. Differential diagnosis. Complication. Treatment depends on the degree of severity. The role of peak flowmetry. Emergency care for an attack of bronchial asthma. Primary and secondary prevention. Forecast and performance

Topic 23. **Pneumonia** .

Definition. On the most widespread etiological factors. Classification. Clinical manifestations and their features in non-hospital, nosocomial, aspiration pneumonia and pneumonia in persons with severe immune defects. Changes in instrumental and laboratory research methods. Differential diagnosis. Complications (multiorgan damage syndrome, respiratory distress syndrome and respiratory failure). Differentiated treatment. Primary and secondary prevention. Forecast and performance.

Topic 24. **Pleurisy and pleural effusion.**

Definition. Etiological factors. Classification . Clinical manifestations, changes in instrumental and laboratory data and 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. Forecast and performance.

Topic 25. **Infectious and destructive diseases of the bronchopulmonary system and pulmonary insufficiency.**

Bronchiectatic disease, abscess and gangrene of lungs. Definition. Factors that contribute to development. Clinic, diagnosis of various options. The value of X-ray and endoscopic examination. Differential diagnosis. Complication. Treatment. Indications for surgical treatment. Primary and secondary prevention. Forecast and performance

Pulmonary failure.

Definition. Classification. Causes of occurrence. Features of the clinical course of various forms. Diagnosis, the role of research on the function of external breathing. Differential diagnosis. Treatment tactics. Primary and secondary prevention. Forecast and performance.

THEMATIC PLAN OF LECTURES

Content section 3: *"Fundamentals of diagnosis, treatment and prevention of major respiratory diseases"*

No. z/p	*Topic*
1	The main symptoms of pulmonary pathology and examination methods in pulmonology.
2	Pneumonia.

No. z/p	*Topic*
3	Chronic obstructive lung diseases.
4	Bronchial asthma.

THEMATIC PLAN OF PRACTICAL CLASSES

Content section 3: *"Fundamentals of diagnosis, treatment and prevention of major respiratory diseases"*

No. z/p	*Topic*
1.	The main symptoms of pulmonary pathology and examination methods in pulmonology
2.	Chronic obstructive pulmonary diseases: chronic bronchitis and pulmonary emphysema
3.	Bronchial asthma
4.	Pneumonia
5.	Pleuritis and pleural effusion
6.	Infectious and destructive lung diseases and pulmonary insufficiency

TYPES OF INDEPENDENT WORK OF STUDENTS

Content section 3: *"Fundamentals of diagnosis, treatment and prevention of major respiratory diseases"*

No. z/p	*Topic*
1.	Preparation for practical classes, including: - Mastering the skills of interpreting the data of X-ray studies of the chest cavity - Mastering the skills of interpreting the data of endoscopic examination of the bronchi - Mastering the skills of interpretation of indicators of the function of external breathing - Mastering the skills to analyze laboratory data (general blood analysis, total protein and protein fractions, coagulogram, general and microbiological examination of sputum, general and microbiological examination of pleural fluid) - Mastering the skills of providing medical assistance in case of acute respiratory failure
2.	Curation of the patient with a written justification of the diagnosis
3.	Individual work: • Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles

Content section 4: *Fundamentals of diagnosis, treatment and prevention of major diseases of the blood and hematopoietic organs*

Specific goals:

Students must:

- Conduct surveys and physical examinations of patients with major diseases of the blood and hematopoietic organs
- To justify the use of the main invasive and non-invasive diagnostic methods used in hematology, indications and contraindications for their use, possible complications

- To determine the etiological and pathogenetic factors of the main diseases of the blood and hematopoietic organs
- Identify the typical clinical picture of the main diseases of the blood and hematopoietic organs
- Identify the main options for the course and complications of the main diseases of the blood and hematopoietic organs
- Draw up a plan for the examination of patients with major diseases of the blood and hematopoietic organs
- Based on the analysis of laboratory and instrumental examination data, carry out a differential diagnosis, justify and formulate a diagnosis in the main diseases of the blood and hematopoietic organs
- Prescribe treatment, carry out primary and secondary prevention for the main diseases of the blood and hematopoietic organs
- Diagnose and provide assistance for bleeding due to diseases of the blood and hematopoietic organs
- Determine the blood group
- Transfuse blood components and blood substitutes
- Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination

Topic 26 **. Anemias** (iron deficiency, B $_{12}$ deficiency, folic acid deficiency, hemolytic, hypoplastic, posthemorrhagic).

Definition. 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. Transfusion of blood components and components. Primary and secondary prevention. Forecast and performance.

Topic 27. **Acute and chronic leukemias** .

Definition. Modern views on etiology and pathogenesis. Classification. Main clinical and hematological syndromes. Clinical manifestations. Diagnosis criteria. Differential diagnosis. Complication. Principles of treatment. Bone marrow transplantation Supportive therapy. Primary and secondary prevention. Forecast and performance.

Topics 28 **Lymphomas and myeloma disease.**

Definition and classification. Hodgkin's and non-Hodgkin's lymphomas. Clinical manifestations and their features in different variants of the course. Diagnosis criteria. Differential diagnosis. Complication. Principles of treatment. Prevention. Forecast and performance.

Topic 29. **Thrombocytopenic purpura and hemophilia.**

Definition. Etiology and pathogenesis, main clinical syndromes. Diagnosis criteria. Differential diagnosis. Treatment. Therapy of various hemophilias. Prevention of bleeding. Primary and secondary prevention. Forecast and performance.

THEMATIC PLAN OF LECTURES

Content section 4: ***"Fundamentals of diagnosis, treatment and prevention of the main diseases of the blood and hematopoietic organs"***

No. z/p	*Topic*
1	Anemia
2	Acute and chronic leukemias

THEMATIC PLAN OF PRACTICAL CLASSES

Content section 4: *"Fundamentals of diagnosis, treatment and prevention of the main diseases of the blood and hematopoietic organs"*

No. z/p	*Topic*
1	Anemia
2	Acute and chronic leukemias
3	Lymphomas and myeloma disease
4	Hemophilia and thrombocytopenic purpura

TYPES OF INDEPENDENT WORK OF STUDENTS

Content section 4: " *Basics of diagnosis, treatment and prevention of major diseases of the blood and hematopoietic organs"*

No. z/p	*Topic*
1.	Preparation for practical classes, including: - Mastering the skills of providing medical aid in case of external bleeding - Mastery of blood group determination skills - Mastering the skills of transfusion of blood components and blood substitutes - Mastering the skills of conducting and evaluating general blood analysis, bone marrow punctate
2.	Curation of the patient with a written justification of the diagnosis
3.	Individual work: • Report at clinical conferences of department bases • Presentation of the essay at the practical session • A report on the medical history of a patient at a practical session • Writing theses, articles

"Fundamentals of internal medicine (endocrinology, gastroenterology, pulmonology, hematology)"

Topic	Lectures	Practical training	Independent work of students	
			SRS	Individual work
Content section 1 ***Basics of diagnosis, treatment and prevention of the main diseases of the endocrine system***				
1. Diabetes mellitus, classification, etiology, pathogenesis, clinic, diagnosis.	4	10	2	• Presentation of the essay at the practical session
2. Diabetes type 1 and 2, modern methods of therapy.	4	5	3	

3. Chronic complications of diabetes: diabetic retinopathy, nephropathy, neuropathy and diabetic foot.	2	5	2	• Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles
4. Emergency conditions due to diabetes		5	2	
5. Iodine deficiency diseases of the thyroid gland. Clinic, diagnosis, prevention and treatment. Thyrotoxicosis. Clinical forms. Diagnosis, treatment.	4	3	2	
6. Hypothyroidism. Classification, diagnosis, clinic, treatment. Thyroiditis.		1	2	
7. Cancer of the thyroid gland and diseases of the thyroid glands.		1	2	
8. Chronic insufficiency of the cortex of the adrenal glands. Acute adrenal insufficiency. Hormonally active tumors of the adrenal glands.	4	5	2	
9. Diseases of the gonads. Diseases of the hypothalamic-pituitary system, growth disorders. Adiposity.	4	5	2	
Individual work			19	1
Total hours – 82	**22**	**40**	**20**	
Content section 2. ***Basics of diagnosis, treatment and prevention of the main diseases of the digestive organs***				
10. The main symptoms of gastroenterological pathology . Research methods in gastroenterology	0.5	2.5	2	• Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles
11. Gastroesophageal reflux disease	0.5	2.5		
12. Gastric dyspepsia and chronic gastritis	0.5	5	3	
13. Ulcer disease and other ulcers of the stomach and duodenum	0.5	5	2	
14. Chronic diseases of the small intestine: celiac disease and other enteropathies		2.5	2	
15. Chronic colon diseases: irritable bowel syndrome and non-specific colitis		2.5	2	
16. Gallstone disease, chronic cholecystitis and functional biliary disorders	1	5	2	
17. Chronic hepatitis	1	5	2	
18. Liver cirrhosis	1	5	2	
19. Chronic pancreatitis	1	5	2	
Individual work			19	1

Total hours – 66	**6**	**40**	**20**	
Content section 3. ***Basics of diagnosis, treatment and prevention of major respiratory diseases***				
20. Main symptoms of pulmonary pathology and examination methods in pulmonology	2	5	3	• Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles
21. Chronic obstructive lung diseases	2	5	2	
22. Bronchial asthma	2	5	2	
23. Pneumonia	2	5	2	
24. Pleuritis and pleural effusion		5	3	
25. Infectious and destructive lung diseases and respiratory failure		5	2	
Individual work			14	1
Total hours - 53	**8**	**30**	**15**	
Content section 4. ***Basics of diagnosis, treatment and prevention of the main diseases of the blood and hematopoietic organs***				
26. Anemia		5	5	• Presentation of the essay at the practical session • Report at clinical conferences of department bases • A report on the medical history of a patient at a practical session • Writing theses, articles
27. Acute and chronic leukemias	2	5	3	
28. Lymphomas and myeloma disease	2	3	3	
29. Hemophilia and thrombocytopenic purpura		2	3	
Individual work			14	1
Total hours - 34	**4**	**15**	**15**	
Final control of credit assimilation (exam)		**5**		
Together	**40**	**130**	**70**	

List of questions
to prepare students for the exam
Basics of internal medicine
(endocrinology, gastroenterology, pulmonology, hematology)

1. Etiology and pathogenesis of diabetes.
2. Type 1 diabetes mellitus: the role of viral infection and autoimmune processes, genetic predisposition.
3. Diabetes mellitus type 2: the role of genetic predisposition, obesity, external factors. Classification of glycemic disorders (WHO, 1999), clinical forms of diabetes. Diabetes clinic.
4. The main clinical symptoms of diabetes.
5. Characteristics of internal organ damage in diabetes: cardiovascular system, hepatobiliary system, urinary organs, diabetic osteoarthropathies. Diagnostic criteria for diabetes and other categories of hyperglycemia (WHO, 1999).
6. The main methods of treatment of diabetes, diet therapy, dosed physical activity, sugar-lowering pharmacotherapy, teaching the patient self-control.
7. Oral hypoglycemic drugs.
8. Insulin therapy.
9. Classification of insulin preparations, short- and long-acting preparations, analogues of ultra-short and long-acting insulin.
10. Calculation of the daily need for insulin.
11. Regime of insulin therapy: traditional and intensified insulin therapy.
12. Complications of insulin therapy: hypoglycemic states, insulin allergy, post-injection lipodystrophy, insulin resistance, chronic insulin overdose (Somoji syndrome), insulin edema.
13. Diabetic nephropathy, stages of development, diagnosis, differential diagnosis, treatment and prevention.
14. Diabetic retinopathy: stages of the process, diagnosis, prevention and treatment.
15. Diabetic neuropathy, classification, diagnosis and treatment.
16. Diabetic foot syndrome: classification, diagnosis, treatment algorithm. Hypoglycemic coma, hypoglycemic conditions. Etiology, pathogenesis, clinic, diagnosis, treatment.
17. Ketoacidotic states with diabetic (hyperketonemic) coma. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment.
18. Hyperosmolar (non-acidotic) diabetic coma.
19. Lactic acidosis and coma.
20. Manifestations of iodine deficiency.
21. Determination of the size of the thyroid gland. Age dynamics of gland volume.
22. The definition is "goiter". The concept of simple non-toxic and nodular forms of goiter.
23. Iodine prevention: mass, group, individual.
24. Etiology, pathogenesis, clinical manifestations of diffuse toxic goiter, thyrotoxic and endocrine ophthalmopathy.
25. Medicinal and surgical treatment of toxic goiter, use of 131-iodine for therapeutic purposes.
26. Hypothyroidism, etiology, pathogenesis and clinical signs. Justification of the diagnosis.
27. Treatment of hypothyroidism.
28. Thyroiditis, classification, etiology, clinical course, diagnosis, treatment. Pathomorphological classification of tumors of the thyroid gland.
29. Modern scheme of treatment, rehabilitation and dispensary observation of patients with thyroid cancer.
30. Hyperparathyroidism. Clinic, clinical forms. Indications for surgical treatment. Drug therapy.
31. Hypoparathyroidism. Clinic. Diagnostics. Differential diagnosis. Treatment.

32. Chronic adrenal insufficiency (Addison's disease). Etiology, pathogenesis, clinic, diagnosis, prevention and treatment.
33. Acute adrenal insufficiency. Etiology, pathogenesis, clinic, diagnosis, prevention and treatment.
34. Itsenko-Cushing syndrome (corticosteroma, glucosteroma). Clinic, diagnosis and differential diagnosis, treatment.
35. Androsteroma, corticosteroma. Clinic, diagnosis and differential diagnosis, treatment.
36. Primary hyperaldosteronism (Kohn's syndrome). Clinic, diagnosis and differential diagnosis, treatment.
37. Pheochromocytoma. Clinic, diagnosis and differential diagnosis, treatment.
38. Acromegaly. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment.
39. Itsenko-Cushing's disease. Etiology and pathogenesis. Classification. Clinic. Diagnosis and differential diagnosis. Treatment.
40. Hyperprolactinemia syndrome. Classification. Etiology and pathogenesis. Clinic. Diagnosis, differential diagnosis. Treatment.
41. Hypopituitarism. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment.
42. Diabetes insipidus. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment.
43. Hypopituitarism with predominant somatotropic insufficiency (pituitary dwarfism). Pituitary gigantism. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment.
44. Adiposity. Etiology and pathogenesis. Classification. Clinic. Diagnostics. Treatment.
45. Shereshevsky-Turner syndrome.
46. Hermaphroditism syndrome.
47. Cryptorchidism.
48. Syndrome of mono- and anarchism.
49. Klinefelter syndrome.
50. Disorders of sexual development in boys and girls.
51. Climax in women and men.
52. The main symptoms of gastroenterological pathology.
53. Research methods in gastroenterology.
54. Gastroesophageal reflux disease. Diagnostic criteria, differential diagnosis. Complication. Differentiated therapy.
55. Chronic gastritis. Definition. Etiology and pathogenesis. The role of H.pylori in the occurrence of gastroduodenal pathology. Diagnosis criteria.
56. Modern approaches to the treatment of various types of chronic gastritis.
57. Unexamined and functional dyspepsia.
58. Modern approaches to the treatment of functional dyspepsia.
59. Ulcer disease and other peptic ulcers of the stomach and duodenum. Definition.
60. The role of H.pylori, acid-peptic factor and medications in the development of peptic ulcers and their recurrences.
61. Complications of peptic ulcers (perforation, penetration, bleeding, impaired evacuator-motor function).
62. The value of instrumental and laboratory methods of diagnosing peptic ulcers. Methods of diagnosing Hr-infection.
63. Modern tactics of managing a patient with an ulcer.
64. Eradication therapy.
65. Drug therapy of Hr-negative ulcers. Indications for surgical treatment.
66. Diseases of the small intestine: celiac disease and other enteropathies.
67. Syndromes of malabsorption and maldigestion.

68. Irritable bowel syndrome, definition, Roman diagnostic criteria. Treatment of various forms.
69. Nonspecific colitis (nonspecific ulcerative colitis and Crohn's disease. Diagnostic criteria. Treatment.
70. Gallstone disease, chronic cholecystitis and functional biliary disorders. Definition. Etiology, pathogenesis. The role of instrumental methods in diagnostics. Complication. Differentiated treatment depending on the clinical variant and the presence of complications Indications for surgical treatment.
71. Chronic hepatitis. Definition. Classification. The role of viral persistence, drug agents, immune disorders, and alcohol. Methods of diagnosis of viral infection.
72. Autoimmune hepatitis, chronic viral, drug-induced hepatitis.
73. Alcoholic liver disease. Basic clinical and biochemical syndromes. Features of the clinical course and diagnosis of individual forms.
74. Liver cirrhosis. Definition. Importance of viral infection, nutritional factors, alcohol, toxic substances and immunological disorders. Classification. Differential diagnosis. Liver failure and other complications. Differentiated therapy. Emergency treatment of complications.
75. Chronic pancreatitis. Definition. Classification. Features of the clinical course, diagnosis and differential diagnosis. Complication. Differentiated treatment.
76. Main symptoms of pulmonary pathology and research methods in pulmonology.
77. Chronic obstructive lung diseases. Definition. Classification. Clinical manifestations, changes in the data of additional instrumental research methods depending on the stage (degree of severity). Differential diagnosis. Complication. Treatment depends on the degree of severity.
78. Bronchial asthma. Definition. Classification. Clinical manifestations and changes in these instrumental research methods depending on the degree of severity. Differential diagnosis. Complication. Treatment depends on the degree of severity.
79. Emergency care for an attack of bronchial asthma.
80. Pneumonia. Definition. Classification. Clinical manifestations and their features in non-hospital, nosocomial, aspiration pneumonia and pneumonia in persons with severe immune defects. Changes in instrumental and laboratory research methods. Complications (multiorgan damage syndrome, respiratory distress syndrome and respiratory failure). Differentiated treatment.
81. Pleuritis and pleural effusion. Definition. Clinical manifestations, changes in instrumental and laboratory data. Complication. Indications for pleural puncture and drainage of the pleural cavity. Treatment.
82. Bronchiectatic disease, abscess and gangrene of lungs. Definition. Clinic, diagnosis of various options. The value of X-ray and endoscopic examination. Complication. Treatment. Indications for surgical treatment.
83. Pulmonary failure. Classification. Causes of occurrence. Features of the clinical course of various forms. Diagnosis, the role of research on the function of external breathing. Differential diagnosis. Treatment tactics.
84. Anemias (iron deficiency, B_{12} deficiency, folic acid deficiency, hemolytic, hypoplastic, posthemorrhagic). Etiological factors and pathogenesis. Features of clinic and laboratory diagnostics of various forms. Differential diagnosis. Complication. Treatment of various forms.
85. Acute and chronic leukemias. Definition. Modern views on etiology and pathogenesis. Classification. Main clinical and hematological syndromes. . Diagnosis criteria. Complication. Principles of treatment.
86. Bone marrow transplantation.
87. Lymphomas and myeloma disease. Definition and classification.

88. Hodgkin's and non-Hodgkin's lymphomas. Clinical manifestations and their features in different variants of the course. Diagnosis criteria. Complication. Principles of treatment.
89. Thrombocytopenic purpura, clinical manifestations, principles of treatment.
90. Hemophilia. Definition. Etiology and pathogenesis, main clinical syndromes. Diagnosis criteria. Therapy of various hemophilias.

Literature , which is recommended when studying the discipline "Internal Medicine":
Mandatory:

1. V. G. Perederii, S. M. Tkach. Clinical lectures on internal diseases in 2 volumes. Kyiv, Manuscript, 2014.
2. Sh . M. Ganja, V. M. Kovalenko, N. M. Shuba and others. Internal diseases. K.: Health, 2012. - 992 p.
3. Dzyak G.V., Netyazhenko V.Z., Khomazyuk T.A. etc. Basics of examination of the patient and scheme of medical history (handbook). - Dnsk, Art-press, 2012.

Additional literature

4. N.I. Shvets, A.V. Pidaev, T.M. Benza and others. Benchmarks of practical skills in therapy. Kyiv, Glavmeddruk, 2005, 540 p.
5. N.I.Shvets, A.V.Pidaev, T.M.Benza, etc. Urgent conditions in the clinic of internal medicine. Kyiv, 2006. – 752 pages.
6. P.M. Bodnar, O.M. Prystupyuk, O.V. Shcherbak and others. Endocrinology. K.: Zdorov"ya, 2012. – 512 p.
7. K.M. Amosova. Cardiology (in 2 volumes). Kyiv, Health, 2002.
8. A. S. Svintsitskyi, O. B. Yaremenko, O. G. Puzanova and others. Rheumatic diseases and syndromes. Directory. K.: "Knyga-plus", 2013. - 680 p.
9. Internal diseases. The editor of the first edition was T.Harrison. In 10 books. Trans. with Eng./ Ed. E. Braunvalda et al. M: Medicine. - 2013.
10. Internal medicine. I. Cecil, Russell L. (Russell La Fayette), 1881–2015. II. Goldman, Lee, MD. III. Ausiello, DA IV. Title: Textbook of medicine.
11. Grigoryev P.Ya., Yakovenko E.P. Diagnosis and treatment of chronic diseases of the digestive organs. - M.: Medicine, 1990.
12. Danilov I.P., Makarevich A.E. Chronic bronchitis. – Minsk: Belarus 1989.
13. Degtyareva I.I. Pancreatitis. - K.: Health, 1992.
14. Doshchytsyn V.L. Clinical analysis of electrocardiograms. - M.: Medicine, 1982.
15. Kovalenko N.N. Handbook of differential diagnosis of respiratory diseases. - K.: Zdorovya, 1992.
16. Clinical gastroenterology / Ed. G. I. Burchinsky. - K.: Zdorovya, 1993.
17. Podymova S.D. Liver diseases. - M.: Medicine, 1992.
18. Paleev N.R. Lung disease. - M.: Medicine, 1992.
19. Peleshchuk A.P., Pyatak O.A., Chekman I.S. Handbook of clinical pharmacology and pharmacotherapy. - K.: Zdorovya, 1996.
20. Paleev N.R. The therapist's handbook. - M.: Medicine, 1992.
21. Taylor R.B. Difficult diagnosis. - In 2 volumes - Moscow: Medicine, 1992.
22. Khvorostynka V.N. Guide to practical classes in gastroenterology. - M.: Medicine, 1990.
23. Shved M.I., Grebenyk M.V. Basics of clinical electrocardiography. – Ternopil "Ukrmedknyga", 2002
24. Handbook of clinical endocrinology / Ed. N.T. Starkova. - St. Petersburg: Peter, 1996.

25. Okorokov A.N.. Diagnostics of diseases of internal organs: Practice. manual: In 3 vols. Vol. 2. - Vitebsk, 1998.
26. A.N. Okorokov. Diseases of internal organs: Practice. management: In 3 vols. Vol. 2.- Plural.: Vysh.shk. Belmedkniga, 1997.
27. Endocrinology. Textbook for foreign students / Ed. P.N. Bodnara. - K., 1999.

Forms of control and assessment of students from the academic discipline "Internal medicine (including endocrinology)"

Forms of control and the evaluation system are carried out in accordance with the requirements of the discipline program and instructions on the evaluation system of the student's educational activity under the credit-transfer system of the organization of the educational process, approved by the Ministry of Health of Ukraine.

The grade for the discipline is defined as the sum of the average converted score of the current educational activity and the exam grade (in points), which is assigned when evaluating theoretical knowledge and practical skills in accordance with the lists determined by the discipline program.

The maximum number of points assigned to students for mastering each module (credit) is 200, including for the current educational activity - 120 points (60%), according to the results of the final control of knowledge - 80 points (40%).

Current control is carried out in accordance with specific goals at each practical lesson, assimilation of content modules (interim control) - at the last lesson of each content module.

For control, it is recommended to use the following tools for diagnosing the student's level of training: tests, control of the implementation of practical skills in patient examination methods with further interpretation of the obtained data, analysis of the results of instrumental and laboratory tests.

Evaluation of current educational activities:

The current assessment of students on the relevant topics is carried out according to the traditional 4-point system (excellent, good, satisfactory, unsatisfactory).

The grade "excellent" is given in the case when the student knows the content of the class and the lecture material in full, illustrating the answer with various examples; gives exhaustively accurate and clear answers without any leading questions; teaches the material without errors and inaccuracies; freely solves problems and performs practical tasks of varying degrees of complexity.

The grade "good" is given on the condition that the student knows the content of the lesson and understands it well, answers the questions correctly, consistently and systematically, but they are not exhaustive, although the student answers additional questions without mistakes; solves all problems and performs practical tasks, experiencing difficulties only in the most difficult cases.

The grade "satisfactory" is given to the student on the basis of his knowledge of the entire content of the lesson and at a satisfactory level of his understanding. The student is able to solve modified (simplified) tasks with the help of leading questions; solves problems and performs practical skills, experiencing difficulties in simple cases; is not able to give a systematic answer on his own, but answers directly to directly asked questions correctly.

An "unsatisfactory" grade is given in cases where the student's knowledge and skills do not meet the requirements for a "satisfactory" grade.

Evaluation of independent work:

Assessment of independent work of students, which is provided for in the topic along with classroom work, is carried out during the current control of the topic in the corresponding classroom lesson.

The evaluation of topics that are assigned only to independent work and are not included in the topics of classroom training sessions is controlled during the final knowledge control.

One of the types of the student's current educational activity is **the writing** of **a medical history**, which is provided for when studying each of the two modules.

The criteria for evaluating the medical history is carried out as follows:

	Rating
written methodically correctly, without comments	5
it is written methodically correctly, but individual sections are not detailed enough	4
there are separate remarks regarding the detailing and sequence of the description of the sections	3
the scheme and rules of writing medical history are violated	2

In case of receiving a "2" for medical history, the student must rewrite it taking into account the comments.

The minimum number of points that a student can score while studying a discipline is 72

Discipline exam

Students who have completed the curriculum from the 1st and 2nd semesters of the academic year and have received at least 72 points for the current educational activity (the average current success rate is 3.00) are allowed to take the exam at the end of each module.

The exam involves:

1. answer to 2 theoretical questions ,
2. demonstration of practical skills (from the list indicated at the end of the module) ,
3. analysis of the results of instrumental examination of the patient (situational task).

The maximum number of points that a student can get during the module control is 80.

The final test is considered passed if the student scored at least 50 points.

Criteria for evaluating the performance of practical skills in the exam:

	Rating
performed without errors	5
performed with minor deficiencies corrected during performance by the student himself	4
performed with deficiencies corrected by the teacher	3
not done	2

Evaluation of the discipline "Propaedeutics of internal medicine"

The internal medicine propaedeutics grade is given to students who have completed the curriculum from both academic semesters, have a current grade point average in the discipline of at least 3.00, and passed the discipline exam with a traditional grade of "3", "4", "5" .

The objectivity of the assessment of students' educational activity should be checked by statistical methods (correlation coefficient between current academic performance and exam results).

Assessment of discipline
(excerpt from the Regulation on the organization of the educational process)

1. For all credits except the last one

The current success rate (PU) is calculated according to *a 120-point scale* - from 72 points (grade 3) to 120 points (grade 5).

Points for the exam correspond to the scale:

Grade "5" - 80-71 points
Grade "4" - 70-61 points
Grade "Z" - 60-50 points

the current academic record (PU) and the exam **in the relevant information of the dean's office** (Form No. H-5.03)

Points (the sum of current performance and final control) for midterm tests are entered by the teacher on the right side of the student's record book.

The current success rate for all *practical classes in the discipline* should be entered in the examination report (differential credit) (Form No. H-5.03) **without changes** according to *the 120-point system* (from 72 points (grade 3) to 120 points (grade 5))

2. The differential assessment should be carried out at the last lesson according to the schedule.

3. The exam is taken by the examination committee consisting of: the examiner (by order), members of the committee (representative of the dean's office or department) and the teacher who last taught in the given group.

4. The obtained points correspond to a fixed rating scale

Grade "5" - 200 - 180 points.
Grade "4" - 179-160 points.
Grade "3" - 159 - 122 points.

The results of the student passing the exam (differential credit) are recorded in the record of success (Form No. H-5.03)

In the score book, the points for the exam (differential score) are entered on the left side of the score book.

The grade in the discipline is assigned only to students who have been enrolled in all types of educational activities in the discipline (practical, classroom classes, semester exam or credit).

The number of points scored by the student in the discipline is defined as the arithmetic average of all current grades from practical classes in the discipline (the sum of current grades is divided by the number of practical classes in the discipline).

According to the decision of the academic council of the university, incentive points may be added to the number of points scored by the student in the discipline for the publication of scientific works, receiving prizes at Olympiads according to the profile of the discipline, etc.

Ranking according to the ECTS credit-transfer system and assignment of categories "A", "B", "C", "D, "E" is carried out for students of certain courses who are studying in one specialty and have successfully completed the study of the discipline.

Grades FX, F ("2") in the discipline are issued to students who did not receive the minimum number of points 72, which corresponds to the national scale "3" for the current performance after completing the study of the discipline and did not pass the exam.

The grade of FX is given to students who have scored the minimum number of points for the current educational activity, but have not passed the exam.

This category of students has the right to retake the semester exam according to the approved schedule during the winter or summer vacation (until July 1 of the current year) within two weeks after the end of the academic year.

According to the current regulatory framework of the Ministry of Education and Culture of Ukraine, retaking the semester exam is allowed no more than twice.

A grade of F is assigned to students who have attended all classroom classes in the discipline, but have not earned the minimum number of points for the current academic activity and are not admitted to the final examination. This category of students has the right to repeat the discipline.

Table

Distribution of points received by students
Grading scale: national on ECTS

The sum of points for all types of educational activities	ECTS assessment	Evaluation on a national scale	
		for an exam, course project (work), practice	for credit
180-200	A	perfectly	
170-179.99	B	fine	counted
160-169.99	C		
141-159.99	D	satisfactorily	
122-140.99	E		
	FX	unsatisfactory with the possibility of reassembly	not counted with the possibility of retaking
	F	unsatisfactory with mandatory repeated study of the discipline	not enrolled with mandatory repeated study of the discipline

The rating on the ECTS scale is included only in the supplement to the diploma of the European model "Diploma saplementa". In addition to the diploma of the national model, points are entered - an assessment for the discipline on a fixed scale.

Sample test questions for current controls.

1. Patient M., 38 years old, came to see a gastroenterologist with complaints of general weakness, fatigue, weight loss (20 kg in six months), dizziness, lack of appetite, nausea. Objectively: the skin is dry, dark in color, pigmentation is more pronounced around the lips, areolas of the nipples, on the elbows, knees, folds of the palms. Blood pressure - 90/60 mm Hg. Art. Laboratory: glycemia - 3.5 mmol/l, plasma potassium - 5.2 mmol/l, the level of adrenocorticotropic hormone in the blood is increased. What is the most likely diagnosis?

A. Pituitary insufficiency
B. Chronic adrenal insufficiency*
C. Anorexia nervosa
D. Chronic gastritis
E. Vegetative dystonia

A. Somoji syndrome.

2. Patient K., 50 years old, diabetes for six months. Receives glibenclamide 1t 3r/day. After the occurrence of furunculosis of the skin and the appointment of antibiotics, glibenclamide was discontinued. The patient's condition worsened, increased thirst, dryness, diuresis 4.5 l/day, fainted. Objectively: The skin is dry. Breathing is superficial, accelerated. RS – 100 bpm, A/T 90/40 mm Hg. Tones of the heart are deaf. The stomach is soft. Liver +5 cm. Glycemia 53 mmol/l, glucosuria 75 g/l. the reaction to acetone is negative. Determine the nature of the condition.

A. Ketoacidotic coma
B. Hyperosmolar coma *

C. Toxic infection
D. Lactoacidotic coma
E. Ketoacidosis

3. In a 30-year-old woman with influenza, fasting glycemia was found to be 11.3 mmol/l, and glucosuria was 25 g/l. Height - 168 cm. Weight - 67 kg. What research is most informative for clarifying the diagnosis?

A. A. Daily fluctuations of glucosuria
B. Daily fluctuations of glycemia
C. Determination of C-peptide*
D. Glycemia one hour after a meal
E. Glucose tolerance test

4. In a 30-year-old woman who was ill with the flu, fasting glycemia was found to be 11.3 mmol/l, and glucosuria was 25 g/l. Height - 168 cm. Weight - 67 kg. What research is most informative for clarifying the diagnosis?

A. Daily fluctuations of glucosuria
B. Daily fluctuations of glycemia
C. Determination of C-peptide*
D. Glycemia one hour after a meal
E. Glucose tolerance tes

"APPROVED"

Україна * м.Київ * Приватний заклад вищої освіти "МІЖНАРОДНА АКАДЕМІЯ ЕКОЛОГІЇ ТА МЕДИЦИНИ" Ідентифікаційний код 37857335

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