

**THE MINISTRY OF HEALTH OF UKRAINE
DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF ENDOCRINOLOGY**



**COURSE SYLLABUS
INTERNAL MEDICINE
including endocrinology, medical genetics**

Module content:

Fundamentals of diagnosis, prevention and treatment of the major endocrine diseases.

For 4th-year students

**Training specialists of the second (master's) level of higher education
Subject area 22 - Healthcare
Majors 222 - Medicine
228 – Pediatrics**

1. General information:	
Name of the faculty	Medical faculty No.2
Educational program	22 "Healthcare", 222 "Medicine", second level of higher education (master's degree), full-time education
Academic year	2023/2024
Name of discipline, code (e-mail address on the website of Danylo Halytsky LNMU)	<i>Endocrinology, OK 29.</i> Internal medicine, including endocrinology, medical genetics. Content module: "Basics of diagnosis, prevention and treatment of major diseases of the endocrine system" Kaf_endocrinology@meduniv.lviv.ua
Department (name, address, telephone number, e-mail)	Department of Endocrinology, Lviv, 1 Ostrozkoho, tel.(032)2759510, (032) 2764673; Kaf_endocrinology@meduniv.lviv.ua
Head of the department (contact e-mail)	Prof. Alina Mechyslavivna Urbanovych urbanovych_alina@meduniv.lviv.ua
Studying year	4
Semester	7 або 8
Type of discipline / module	Mandatory
Teachers	
Oleksandr Serhiyenko, Ph.D., Professor	serhiyenko_aleksander@meduniv.lviv.ua
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Orysia Lishchuk, Ph.D., Assistant of Professor	lyschuk_orisya@meduniv.lviv.ua
Dunets Julia, teacher	juliaoliyarnyk@gmail.com
Erasmus+	no
The person responsible for the syllabus	Сафонова Оксана safonova.oks@gmail.com Safonova_Oksana@meduniv.lviv.ua
Number of credits ECTS	2

Number of hours	Lectures – 8 год. Practical classes – 32 год. Independent work – 20 год.
Language of study	Ukrainian, English
Information about consultations	Conducted according to the schedule of consultations, which is presented on the website of the department.
Address, phone number and regulations of the clinical base	№1: "Lviv Regional State Clinical Treatment and Diagnostic Endocrinology Center", 79010, Lviv, 1, Ostrozkoho str.; tel. 275-95-20, tel./ fax: 276-94-89, e-mail: lred@ua.fm , 24h/day №2: «Lviv city clinical hospital №4», 79007, Lviv, 3, Stetska str., tel. 260-21-03, e-mail: 4kmkl_uoz_lviv@ukr.net 24h/day

1. Short description for the course

According to the Curriculum the discipline "Internal Medicine" is taught to 4th -6th year students. The organization of the educational process is carried out under the European Credit Transfer and Accumulation System (ECTS)

The syllabus of "Internal medicine, including endocrinology, medical genetics" for the 4th year students includes the basics of internal medicine and its main subjects (endocrinology, medical genetics, gastroenterology, pulmonology, hematology, general issues of internal medicine) with the emphasis being on the study of etiology, pathogenesis, clinic, diagnosis, treatment and prevention of major and most common diseases of internal organs.

Teaching of the basics of endocrinology to the 4th year students is carried out in the form of a module 1. Duration of the practical classes - 4.0 hours. The main purpose of this course is to study the basics of internal medicine. The emphasis is on developing the skills of conducting a patient's interview and clinical examination of a patient, carrying out diagnosis and differential diagnosis, treating and preventing diseases of the internal organs, diagnosing and providing emergency medical care as well as performing medical manipulations. Students participate in the diagnosing and therapeutic treatment of the patients under the teachers' guidance. Getting acquainted with and mastering the most common procedures in endocrinology are also included. Practical classes, participating in clinical rounds with assistant professors, associate professors and professors of the department are the main part of this course. Each student records and reports clinical data on the examined patients and writes their anamnesis morbi on a daily basis.

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

Thematic unit plans of lectures, practical classes and independent work reveal the problematic issues pertaining to different sections of internal medicine. Didactic tools (multimedia presentations, slides, educational videos, demonstration of patients) are used throughout the course of lectures. The lectural and practical parts of the course are made so that the lectures precede the relevant practical activities.

Practical classes are held on the clinical bases of the department. Practical classes on internal medicine have goal to:

- make the student part of the process of providing medical care to the patients from the moment of their hospitalization throughout their examination, making a diagnosis and the process of treatment until they are discharged from the hospital;
- master professional practical skills and teamwork skills in a group of students, doctors, other participants in the process of providing medical care;
- For the students, as future medical professionals, to pay attention to and develop a sense of responsibility for the importance of the quality of their professional qualifications, their improvement during training and professional activities.

To implement mentioned above, it is necessary to provide the students with a detailed plan of work in the clinic and provide conditions for its implementation on the first lesson of the appropriate module. This plan should include:

- studies to be learned by the students (or to get acquainted with);
- algorithms (protocols) of examinations, diagnostics, treatment, prevention in accordance with the standards of evidence-based medicine;
- management of the patients carried out by the students during while studying the discipline;
- reports of the patients' anamnesis morbi in their students group, during clinical rounds, on practical conferences.

Managing of the patients involves:

- finding out the patient's complaints, his/her anamnesis morbi and anamnesis vitae, conducting questioning on different organs and systems;
- physical examination of the patient and determination of the main symptoms/syndromes of the disease;
- analysis of the laboratory and instrumental research results;
- making a diagnosis;
- advising treatment;
- determining primary and secondary prevention measures;
- making a report on the patient's examination results by a team of students in their group, analysing the correctness of the diagnosis, differential diagnosis, advised examination, chosen therapeutic tactics, prognosis and work productivity assessment and preventive measures under the guidance of the teacher.

It is recommended that practical classes include:

- measuring the students' level of knowledge using multiple-choice tests with 5 options with only one of which being correct and checking their workbooks;
- treating 1-2 patients with diseases and conditions relevant to the topic of the lesson, followed by discussion of the correctness of diagnosis, differential diagnosis and therapeutic measures using the principles of evidence-based medicine and in accordance with National and European guidelines and protocols;
- analysis of the results of some additional tests pertaining to the topic of the practical class (laboratory and instrumental) used in establishing the diagnosis and differential diagnosis
- measuring the students' level of knowledge using tests of the same format.

On their practical classes, students are advised to keep protocols in which they should write down brief information on the patients, established diagnosis, examination plan and prescribed treatment.

Independent and individual work of the students makes up 21% of the curriculum, it is an integral part of the educational activities and is included in the credits of each module and discipline. It includes:

- preparation for the practical classes;
- practicing ICPC;
- preparation and writing up the history of the disease;
- mastering practical skills;
- preparation for final test;
- making notes in the workbook regarding the topic of the class.

The department's medical professionals provide students with the opportunity to carry out independent work which they supervise and assess during the practical classes and the final test.

Departments of endocrinology have the right to make changes to the curriculum within 15%.

Understanding of the current topic is controlled at each practical class and internalising of the content module (final test) is assessed at the last practical final class. It is recommended to use the following means of assessing the level of the students' knowledge: test tasks, solving situational problems, conducting laboratory tests and assessing their results, analysing and evaluation of the results of instrumental studies and parameters that characterize the functions of the human body, controlling mastering of the practical skills and medical manipulations.

The final test is taken place at the last practical class and is supervised by the teacher of the department according to the schedule approved at the methodological meeting of the department. The students achievements are assessed by a multi-point scale.

For those students who want to improve their mark in a discipline upon completion of the study, the curriculum allows to retake the final test within a certain period of time.

1. Course Goals and Learning Objectives

1. The purpose of teaching the discipline "Internal medicine, including endocrinology, medical genetics" is to teach students to apply the acquired knowledge and skills to solve tasks defined by a typical lists of syndromes and symptoms of diseases, urgent conditions and diseases requiring special tactics of patient management; laboratory and instrumental research, medical manipulations.

- Study goals:
- conduct questioning and clinical examination of patients with major diseases of the endocrine system and analyze their results;
- determine the etiological and pathogenetic factors of the most common diseases of the endocrine system;
- analyze a typical clinical picture, identify clinical options and complications of the most common diseases of the endocrine system;
- to establish a preliminary diagnosis of the most common diseases of the endocrine system;
- prescribe laboratory and instrumental examination of patients with the most common diseases of the endocrine system and their complications;
- based on assessment of laboratory and instrumental examination results, differential diagnosis, justify and make clinical diagnosis of the most common diseases of the endocrine system;
- determine the necessary mode of work and rest in the treatment of the most common diseases of the endocrine system;
- determine the necessary medical nutrition in the treatment of the most common diseases of the endocrine system;
- determine the principles and nature of treatment in the treatment of the most common diseases of the endocrine system;
- prescribe treatment, including prognosis-modifying, the most common diseases of the endocrine system and their complications;
- determine the tactics of emergency medical care on the basis of an emergency diagnosis;
- provide emergency medical care on the basis of an emergency diagnosis;
- carry out primary and secondary prevention of the most common diseases of the endocrine system;
- to evaluate the prognosis and performance of patients with the most common diseases of the endocrine system;
- perform medical manipulations;
- maintain medical documentation;
- comply with the requirements of ethics, bioethics and deontology in their professional activities.

1. Competence and results of training, the formation of which provides the study of discipline (general and special competences).

According to the requirements of Educational and professional programs (EPP) , the discipline ensures the acquisition of competencies by students:

- *integral*: the ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health protection, or in the process of training, which involves the conduct of research and/or implementation of innovations and is characterized by the complexity and uncertainty of conditions and requirements.
- *загальні*:
 - - Ability to abstract thinking, analysis and synthesis.
 - The ability to learn and master modern knowledge.
 - - Ability to apply knowledge in practical situations.
 - - Knowledge and understanding of the subject area and understanding of professional activities.
 - - Ability to adapt and act in a new situation.
 - - Ability to make informed decisions.
 - - Ability to work in a team.
 - - Interpersonal interaction skills.
 - - Ability to communicate in the state language both orally and in writing.
 - - Ability to communicate in a foreign language.
 - - Skills in the use of information and communication technologies.
 - - Determination and perseverance regarding tasks and responsibilities.
 - - Ability to act socially responsibly and consciously.
 - - The desire to preserve the environment.
 - Ability to act on the basis of ethical considerations (motives).
- *special (professional, subject)*:
 - The skills of the survey and clinical examination of the patient.
 - Ability to determine the required list of laboratory and instrumental studies and evaluate their results.
 - Ability to establish a preliminary and clinical diagnosis of the disease.

- Ability to determine the necessary mode of work and rest in the treatment of diseases.
- Ability to determine the nature of nutrition in the treatment of diseases.
- Ability to determine the principles and nature of treatment of diseases.
- Ability to diagnose emergency conditions.
- Ability to determine the tactics of emergency medical care.
- Skills in providing emergency medical care.
- Skills of medical manipulation.
- Ability to carry out preventive measures.
- Ability to determine the tactics of conducting persons subject to dispensary supervision.
- Ability to maintain medical documentation.

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- to establish a preliminary diagnosis of the most common diseases of the endocrine system;
- prescribe laboratory and instrumental examination of patients with the most common diseases of the endocrine system and their complications;
- based on assessment of laboratory and instrumental examination results, differential diagnosis, justify and make clinical diagnosis of the most common diseases of the endocrine system;
- determine the necessary mode of work and rest in the treatment of the most common diseases of the endocrine system;
- determine the necessary medical nutrition in the treatment of the most common diseases of the endocrine system;
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- prescribe treatment, including prognosis-modifying, the most common diseases of the endocrine system and their complications;
- determine the tactics of emergency medical care on the basis of an emergency diagnosis;
- provide emergency medical care on the basis of an emergency diagnosis;
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- Ability to determine the nature of nutrition in the treatment of diseases.
- Ability to determine the principles and nature of treatment of diseases.
- Ability to diagnose emergency conditions.
- Ability to determine the tactics of emergency medical care.
- Skills in providing emergency medical care.
- Skills of medical manipulation.
- Ability to carry out preventive measures.
- Ability to determine the tactics of conducting persons subject to dispensary supervision.
- Ability to maintain medical documentation.

4. Course prerequisites

The information on the disciplines, basic knowledge and results of training required for the student (enrolled) For successful training and mastering of competencies in this discipline requires basic knowledge of the following disciplines:

1. Medical biology.
2. Normal anatomy.
3. Normal physiology.
4. Pathological physiology.
5. Pathological anatomy.
6. Histology, embryology, cytology.
7. Medical and biological physics.
8. Biological and bioorganic chemistry.
9. Microbiology, virology.
10. Pharmacology.
11. Propedeutics of internal medicine.

5. Program learning results (PLR)

Learning result code	Content of the learning result	Link to code matrices competence
<i>Kn</i> -1	Have deep knowledge of anatomy, physiology, pathophysiology, anatomy of the endocrine system.	PLR -19, 21, 23
<i>Kn</i> -2	Have knowledge of etiology, pathogenesis, clinic, diagnosis and treatment of endocrine diseases.	PLR -19, 21, 23
<i>Kn</i> -3	Know the clinical and pharmacological characteristics of drugs used in the treatment of endocrine diseases.	PLR -19, 21, 23
<i>Kn</i> -4	Have knowledge of etiology, pathogenesis, clinic, diagnosis and treatment of emergency conditions in endocrine diseases.	PLR -19, 21, 23
<i>Kn</i> -5	Have knowledge of etiology, pathogenesis, clinic, diagnosis and treatment of emergency conditions in endocrine diseases.	PLR -19, 21, 23
<i>Sk</i> -1	Conduct a survey and clinical examination of patients with major diseases of the endocrine system and analyze their results.	PLR -1-6
<i>Sk</i> -2	Determine the etiological and pathogenetic factors of the most common diseases of the endocrine system.	PLR -19, 21, 23

Sk -3	Analyze a typical clinical picture, identify clinical options and complications of the most common diseases of the endocrine system.	PLR -1-3
Sk -4	Advise laboratory and instrumental examination of patients with the most common diseases of the endocrine system and their complications.	PLR -3
Sk -5	Based on the assessment of the results of laboratory and instrumental examination, to make a differential diagnosis, justify and establish a clinical diagnosis of the most common diseases of the endocrine system.	PLR -1, 2, 3
Sk -6	Determine the necessary mode of work and rest, medical nutrition, the basic principles and nature of treatment in the treatment of the most common diseases of the endocrine system.	PLR -4, 5, 6
Sk -7	Prescribe treatment, including prognosis-modifying, the most common diseases of the endocrine system and their complications, using unified and local clinical protocols.	PLR -4, 5, 6, 19
Sk -8	Determine the tactics of emergency medical care on the basis of an emergency diagnosis.	PLR -7
Sk -9	Provide emergency medical care on the basis of an emergency diagnosis.	PLR -8
Sk -10	Perform medical manipulations.	PLR -11
Sk -11	To conduct primary, secondary prevention and screening of the most common diseases of the endocrine system, to form dispensary groups of patients.	PLR -12, 14, 17
Sk -12	To assess the prognosis and performance of patients with the most common diseases of the endocrine system.	PLR -15
Sk -13	Keep medical documentation.	PLR -16
Sk -14	The ability to prescribe prescriptions of medicines.	PLR -16
C -1	To form rational medical routes of patients, to organize interaction with colleagues, to form goals and to determine the structure of personal activities.	PLR -20, 21
C -2	Processing of medical information from different sources using knowledge of state and foreign languages.	PLR -23
AR-1	To adhere to a healthy lifestyle, to improve the general educational and professional level, to organize the necessary level of individual safety.	PLR -22, 23, 25
AR -2	Adhere to the requirements of ethics, bioethics and deontology in their professional activities.	PLR -24
AR -3	The ability to act socially responsibly and consciously.	PLR -17, 19, 21, 23, 24
AR -4	Ability to work in a team.	PLR -19, 21

6. Format and volume of the course

Formats	full-time	
Type of classes	Number of hours	Number of groups
lectures	8	
practical	32	
seminars	-	
independent work	20	

1. Topics and content of the course

Type of lesson	Topic	Content	Learning result	Teacher
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code			code	
L-1	Diabetes. Modern classification, etiology, pathogenesis, clinic, diagnosis. Chronic complications of diabetes.	The concept of diabetes: modern classification, etiology, pathogenesis, clinic, diagnosis. Chronic complications of diabetes: etiology, pathogenesis, classification, prevention, treatment.	Kn -1, 2, 3; Sk -1-5; C-2; AR -1.	Associate Professor Safonova O.V.
L-2	The latest methods of treatment of patients with DM. Oral sugar medications, modern insulin preparations and its analogues. Acute complications of diabetes.	Modern approaches to the treatment of diabetes: diet therapy, self-control training, insulin therapy, oral mellitus. Treatment regimens. Etiology, pathogenesis, clinic, diagnosis, treatment of acute complications of diabetes mellitus.	Kn -1-5; Sk -1-14; C -2; AR -1.	Associate Professor Safonova O.V.
L-3	Diseases of the thyroid gland. Diagnosis, differential diagnosis, prevention and treatment of goiter.	Etiology, pathogenesis, clinic, diagnosis, treatment of thyroid diseases.	Kn -1-5; Sk -1-14; C -2; AR -1.	Associate Professor .Гоцко М.Є.
L-4	Diseases of the adrenal glands. Chronic adrenal insufficiency. Hormonal-active tumors. Diseases of the hypothalamic-pituitary system. Clinic, diagnosis, treatment.	Etiology, pathogenesis, clinic, diagnosis, treatment of adrenal diseases and hypothalamic pituitary system.	Kn -1-5; Sk -1-14; C -2; AR -1.	Professor Сергієнко B.O.
W-1	Diabetes, classification, etiology, pathogenesis, clinic, diagnosis.	Determination of diabetes. Epidemiology of diabetes in Ukraine and the world, prognosis of morbidity, 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. Type 2 diabetes mellitus: the role of genetic predisposition, obesity, external factors. Insulin resistance and insulin secretion disorders. Classification of glycemia disorders (WHO, 1999), clinical types of diabetes. Characteristics of internal organs lesions in diabetes mellitus: cardiovascular system,	Kn -1-4; Sk -1-5; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD,

		hepatobiliary system, urinary organs, diabetic osteoarthropathy. Diagnosis of diabetes. Criteria for diagnosis of diabetes and other categories of hyperglycemia (WHO, 1999). Indications and rules of the glucosotolerant test. Diagnostic value of determination of glycated hemoglobin, fructosamine, C-peptide, glucosuria, ketonuria.		Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
W-2	Diabetes mellitus type 1, modern methods of therapy.	General principles of diabetes therapy. Criteria for compensation of carbohydrate metabolism in patients with type 1 DM. Insulin therapy. Characteristics of the main drugs of insulin including domestic production Indications for their use. Classification of insulin preparations of ultrashort, short, intermediate and long-term action, analogues of insulin. Calculation of the daily need for insulin. Correction of insulin dose using bread units. Insulin therapy: traditional, intensified and pump insulin therapy. Cell Therapy. Complications of insulin therapy: hypoglycemic conditions, insulin allergy, post-injection lipodystrophy, insulin resistance, chronic insulin overdose (Somoji syndrome), insulin edema. Sanatorium treatment. Protocols for helping patients with type 1 diabetes mellitus.	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
W-3	Type 2 diabetes mellitus, modern methods of therapy.	Algorithm of treatment of type 2 diabetes mellitus. The main methods of treatment of type 2 diabetes mellitus: rational nutrition, dosed physical activity, drug therapy, self-control training of the patient. Diet therapy of diabetes mellitus. Rational nutrition: physiology, energy value, restriction of refined carbohydrates, consumption of dietary fibers, trace elements, vitamins. Dosed physical activity and rules of its purpose. Drug therapy: insulin sensitizers (metformin, thiazolidindions), insulin secretagogues (sulfonyl derivatives, glinids), incretine preparations (analogues of glucagon-like peptide 1 (GLP -1), inhibitors of dipeptidylpeptidase (DPP - 4), inhibitors of b-glucosidase, glyphosins (blockers of reabsorption of glucose in the	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant

		kidneys), insulinotherapy. Protocols for providing medical care to patients with type 2 diabetes mellitus.		Assistant Dunets Yu.V.
W-4	Acute and chronic complications of diabetes. Features of the course and treatment of diabetes in surgical patients, during pregnancy.	Ketoacidotic conditions with diabetic (hyperketonemic) coma. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment. Hyperosmolar (non-acytotic) diabetic coma. Lactic acid acidosis and coma. Hypoglycemic coma, hypoglycemic states. Etiology, pathogenesis, clinic, diagnosis, treatment. Chronic complications of diabetes. Microvascular lesions (diabetic retinopathy, nephropathy, neuropathy); macro-vascular lesions (coronary heart disease, cerebral circulation disorders, diabetic foot). Classification, diagnosis and treatment. Principles of treatment of pregnant women with diabetes. Features of urgent and planned surgical interventions in patients with diabetes.	Kn -1-5; Sk -1-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
W-5	Iodine deficiency diseases of the thyroid gland. Signs of an endemic area according to WHO. Clinic, diagnosis, prevention and treatment. Hypothyroidism and thyroiditis. Classification, diagnosis, clinic, treatment.	Definition of the concept of "iodine deficiency states." Manifestations of iodine deficiency. Determination of iodine deficiency areas by the prevalence of goiters in different age groups and iodine data. Determination of the size of the thyroid gland. The concept of simple non-toxic and nodular forms of the goiter. Influence of exogenous environmental factors and technogenic disasters at atomic energy facilities on the state of the thyroid gland and prevalence of its pathology. Iodine prevention: mass, group, individual. The value of the use of iodized salt in the prevention of iodine deficiency diseases. Limitations for the use of potassium iodide-based drugs. Hypothyroidism, etiology, pathogenesis, clinic, diagnosis. Primary hypothyroidism, central, peripheral, subclinical, transient. Timely diagnosis of congenital hypothyroidism. Age features of hypothyroidism. Hypothyroidism against the background of	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR 1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.

		<p>autoimmune polyendocrinopathies. Subclinical Hypothyroidism. Treatment of hypothyroidism. Pregnancy and Hypothyroidism. Medical and social examination of patients with hypothyroidism. Thyroiditis. Clinic, diagnosis and treatment.</p>		
W-6	<p>Thyrotoxicosis. Clinical forms. Diagnosis, treatment. Thyroid cancer. Classification, clinic, diagnosis, treatment. Diseases of the thyroid glands.</p>	<p>Diseases accompanied by thyrotoxicosis. Etiology, pathogenesis, clinical manifestations of diffuse toxic goiter, thyrotoxic and endocrine ophthalmopathy. Age peculiarities of the course of toxic goiter in children and the elderly. Clinical differences of nodular toxic goiter. Justification of diagnosis of thyrotoxicosis. Drug, surgical treatment of toxic goiter, use of ¹³¹I-iodine for therapeutic purposes. Complications of treatment of goiter. Medical and social examination of patients with toxic goiter. Nodular shapes of the goiter. Monitoring with nodes in the thyroid gland. Pathomorphological classification of thyroid tumors. Substantiation of the diagnosis of thyroid cancer. The role of the Chernobyl accident in the development of thyroid cancer. Modern treatment, rehabilitation and dispensary monitoring of patients with thyroid cancer. Anatomical and physiological data. Diseases of the thyroid glands. Hyperparathyroidism. Etiology. Pathogenesis. Classification. Clinic, clinical forms of hyperparathyroidism. Diagnosis. Differential diagnosis. Treatment. Indications for surgical treatment.</p>	<p>Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.</p>	<p>Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.</p>

		Postoperative period and rehabilitation of patients. Drug therapy. Hypoparathyroidism. Etiology. Pathogenesis. Classification. Clinic. Diagnosis. Differential diagnosis. Forecast. Prevention. Treatment. Clinical forms.		
W-7	Diseases of the adrenal glands. Chronic adrenal cortex failure. Etiology, pathogenesis, clinic, diagnosis, prevention and treatment. Hormonal-active tumors of the adrenal glands.	Hormones of the cortex and cerebral adrenal glands. Definition of the concept, prevalence of acute and chronic insufficiency of the adrenal cortex. 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 adrenal tumors. Icenko-Cushing syndrome (corticosteroma, glucosteroma). Clinic, diagnosis and differential diagnosis, treatment. Androsteroma, corticosteroma. Clinic, diagnosis and differential diagnosis, treatment. Primary hyperaldosteronism (Cone syndrome). Clinic, diagnosis and differential diagnosis, treatment. Pheochromocytoma. Clinic, diagnosis and differential diagnosis, treatment. Determination of congenital adrenal hyperplasia. Clinical forms, diagnosis, treatment.	Kn -1-5; Sk -1-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
W-8	Diseases of the hypothalamic-pituitary system. Obesity. Diseases of the genital glands.	Classification of hypothalamic-pituitary diseases. Acromegaly. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnostics. Treatment. Icenko-Cushing's disease. Etiology and pathogenesis. Classification. Clinic. Diagnosis and differential diagnostics. Treatment. Hyperprolactinemia syndrome. Classification. Etiology and pathogenesis. Clinic. Diagnosis, differential diagnosis. Treatment. Hypopituitarism. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnosis. Treatment. Diabetes. Etiology and pathogenesis. Clinic. Diagnosis and differential diagnostics. Treatment. Somatotrophic insufficiency. Hypopituitarism. Classification. Etiology and pathogenesis. Clinic. Diagnosis, differential diagnosis. Treatment.	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant

		Obesity. Etiology and pathogenesis. Classification. Clinic. Diagnosis. Treatment. Obesity in children and adolescents. Sex glands in men and women. Hormones. Congenital violations of sexual differentiation. Agenesis gonadal. Shereshevsky-Turner syndrome. Hermaphroditism syndrome. Cryptorchism. Mono- and anorchism syndrome. Klinefelter syndrome. Violation of sexual development in boys and girls. Menopause in women and men.		Assistant Dunets Yu.V.
IW-1	Preparation for practical training on the topic of №1. Mastering skills to analyze data of laboratory research methods (glucose tolerance test, glycemic profile, C-peptide, HbA1c, lipids).	In-depth study of etiology, pathogenesis, clinic, diagnosis of diabetes mellitus	Kn -1-4; Sk -1-5; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
IW-2	Preparation for practical training on the topic of №2. Mastering the skills of interpreting the glycemic profile, the level of glycated hemoglobin, prescriptions for basic sugar-lowering drugs.	In-depth study of the principles and methods of treatment of type 1 diabetes mellitus.	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD,

				<p>Professor's Assistant</p> <p>Khrystyna Kozlovska, PhD, Professor's Assistant</p> <p>Assistant Dunets Yu.V.</p>
IW-3	<p>Preparation for practical training on the topic of №3.</p> <p>Mastering the skills of interpreting the glycemic profile, the level of glycated hemoglobin, prescriptions for basic sugar-lowering drugs.</p>	<p>In-depth study of the principles and methods of treatment of type 2 diabetes mellitus.</p>	<p>Kn -1-4;</p> <p>Sk -1- 7, 10-14;</p> <p>C -1, 2;</p> <p>AR -1-4.</p>	<p>Eugene Pleshanov, Ph.D., Professor,</p> <p>Victoria Serhiyenko, Ph.D., Professor,,</p> <p>Oleksandr Serhiyenko, Ph.D., Professor,</p> <p>Marta Hotsko, PhD, Associate Professor</p> <p>Khrystyna Moskva, PhD, Associate Professor</p> <p>Orysia Lischuk, PhD, Professor's Assistant</p> <p>Mykhailo Krasnyi, PhD, Professor's Assistant</p> <p>Khrystyna Kozlovska, PhD, Professor's Assistant</p> <p>Assistant Dunets Yu.V.</p>
IW-4	<p>Preparation for practical training on the topic of №4.</p> <p>Mastering the skills of providing medical care to patients with ketoacidosis, diabetic ketoacidotic and hypoglycemic insects and conducting patients with diabetes during pregnancy and surgical interventions.</p>	<p>In-depth study of diagnosis and treatment of acute and chronic complications of diabetes mellitus and management of patients with diabetes during pregnancy and surgical interventions.</p>	<p>Kn -1-5;</p> <p>Sk -1-14;</p> <p>C -1, 2;</p> <p>AR -1-4.</p>	<p>Eugene Pleshanov, Ph.D., Professor,</p> <p>Victoria Serhiyenko, Ph.D., Professor,,</p> <p>Oleksandr Serhiyenko, Ph.D., Professor,</p> <p>Marta Hotsko, PhD, Associate Professor</p> <p>Khrystyna Moskva, PhD, Associate Professor</p> <p>Orysia Lischuk, PhD, Professor's Assistant</p> <p>Mykhailo Krasnyi, PhD, Professor's Assistant</p> <p>Khrystyna Kozlovska, PhD, Professor's Assistant</p> <p>Assistant Dunets Yu.V.</p>

IW-5	<p>Preparation for practical training on the topic of №5.</p> <p>Mastering the skills of treating thyroid hormonal examination data (TSH, T3, T4, TPO).</p>	In-depth study of etiology, pathogenesis, clinic, diagnosis of diabetes and treatment of thyroid pathology.	<p>Kn -1-4;</p> <p>Sk -1- 7, 10-14;</p> <p>C -1, 2;</p> <p>AR -1-4.</p>	<p>Eugene Pleshanov, Ph.D., Professor,</p> <p>Victoria Serhiyenko, Ph.D., Professor,..</p> <p>Oleksandr Serhiyenko, Ph.D., Professor,</p> <p>Marta Hotsko, PhD, Associate Professor</p> <p>Khrystyna Moskva, PhD, Associate Professor</p> <p>Orysia Lischuk, PhD, Professor's Assistant</p> <p>Mykhailo Krasnyi, PhD, Professor's Assistant</p> <p>Khrystyna Kozlovska, PhD, Professor's Assistant</p> <p>Assistant Dunets Yu.V.</p>
IW-6	<p>Preparation for practical training on the topic of №6.</p> <p>Mastering the skills of treating data from hormonal examination of the thyroid gland (TSH, T3, T4, calcitonin, TPO, antibodies to TSH receptors, thyroglobulin).</p>	In-depth study of etiology, pathogenesis, clinic, diagnosis of diabetes and treatment of thyroid pathology.	<p>Kn -1-4;</p> <p>Sk -1- 7, 10-14;</p> <p>C -1, 2;</p> <p>AR -1-4.</p>	<p>Eugene Pleshanov, Ph.D., Professor,</p> <p>Victoria Serhiyenko, Ph.D., Professor,..</p> <p>Oleksandr Serhiyenko, Ph.D., Professor,</p> <p>Marta Hotsko, PhD, Associate Professor</p> <p>Khrystyna Moskva, PhD, Associate Professor</p> <p>Orysia Lischuk, PhD, Professor's Assistant</p> <p>Mykhailo Krasnyi, PhD, Professor's Assistant</p> <p>Khrystyna Kozlovska, PhD, Professor's Assistant</p> <p>Assistant Dunets Yu.V.</p>
IW-7	Preparation for practical training on the topic of №7.	In-depth study of etiology, pathogenesis, clinic, diagnosis of diabetes and treatment of adrenal	<p>Kn -1-5;</p> <p>Sk -1-14;</p>	<p>проф. Плешанов Є.В.,</p> <p>проф. Сергієнко В.О.,</p>

	Mastering the skills of treating the data of hormonal examination of the adrenal glands (ACTH, cortisol, aldosterone, renin, blood electrolytes and methanephrine in urine).	gland pathology.	C -1, 2; AR -1-4.	доц. Гоцко М.С., доц. Москва Х.А., ас. Лішук О.З., ас. Красний М.Р., ас. Козловська Х.Ю., викл. Дунець Ю.В.
IW-8	Preparation for practical training on the topic of №8. Mastering the skills of determining the degree of obesity by BMI. Mastering the skills of treating hormonal examination data (STH, IGF-1, prolactin, gonadotropins, vasopressin) and urine analysis by Zimnitsky.	In-depth study of etiology, pathogenesis, clinic, diagnosis of diabetes and treatment of hypothalamic-pituitary system pathology.	Kn -1-4; Sk -1- 7, 10-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.
IW-9	Preparation and execution of individual tasks.	Independent study of theoretical material, study of literary sources, solving test problems and clinical problems from the methodological base, training of writing recipes for certain medicines, writing abstracts, preparation of presentations.	Kn -1-5; Sk -1-14; C -1, 2; AR -1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's

				Assistant Assistant Dunets Yu.V.
IW-10	Preparation for the differentiated score.	Repeating theoretical material, solving test tasks and clinical problems from the methodological base, training of writing recipes for certain medicines.	Kn -1-5; Sk -1-14; C -1, 2; AR-1-4.	Eugene Pleshanov, Ph.D., Professor, Victoria Serhiyenko, Ph.D., Professor,, Oleksandr Serhiyenko, Ph.D., Professor, Marta Hotsko, PhD, Associate Professor Khrystyna Moskva, PhD, Associate Professor Orysia Lischuk, PhD, Professor's Assistant Mykhailo Krasnyi, PhD, Professor's Assistant Khrystyna Kozlovska, PhD, Professor's Assistant Assistant Dunets Yu.V.

8. Verification of learning results

Current control

<i>Learning results code</i>	<i>Code of the type of classes</i>	Method of verification of learning results	Assessment criteria

<p>Kn -1-5; Sk -1-14; C -2; AR -1.</p>	<p>Prl-- 1 Prl-- 2 Prl-- 3 Prl-- 4</p>	<p>The types of educational activities of students according to the curriculum are: a) lectures, b) practical classes,</p> <p>c) independent work of students (ISW), the organization of which has a significant role in the consultation of teachers. Thematic plans of lectures, practical lessons, ISW provide implementation in the educational process of all topics that are part of the content of the program.</p> <p>The lecture course consists of 4 lectures. The topics of the lecture course reveal the problematic issues of the relevant sections of endocrinology. During the lectures, students develop theoretical basic knowledge, provide a motivational component and a general-oriented stage of mastering scientific knowledge during the independent work of students. The lecture course uses a variety of tools - multimedia presentations, slides, demonstration of thematic patients.</p> <p>Practical classes are clinical, aimed at controlling the assimilation of theoretical material and the formation of practical skills, as well as the ability to analyze and apply the obtained knowledge to solve practical problems, are conducted in the departments of clinical bases of the department.</p> <p>• Each lesson starts with test control to assess the initial level of knowledge and determine the degree of readiness of students for the lesson. The teacher determines the purpose of the lesson and creates a positive cognitive motivation; answers questions of students who arose during the SRS on the topic of the lesson.</p>	<p>Excellent ("5") – the student answered correctly 90-100% of the A format test (from the database "Step-2"). Correctly, clearly, logically corresponds to all standardized questions of the current topic. Closely binds theory with practice and demonstrates the correct implementation of practical skills. Fluent in interpretation of the laboratory test results, adept at prescribing appropriate examination methods. Makes differential diagnosis. Solves clinical case with higher level of difficulty and knows how to compile the material.</p> <p>Good ("4") - the student answered correctly 70-89% of the of A format test (from the database "Step-2"). Correctly and essentially responds to all standardized questions of the current topic. Demonstrates knowledge of practical skills. Correctly uses theoretical knowledge in solving practical problems, conducts a differential diagnosis. Capable to solve easy and medium complexity clinical cases. Possesses all necessary practical skills and techniques to perform their uses, more than the required minimum.</p> <p>Satisfactory ("3") - the student answered correctly 50-69% of the A format test (from the database "Step-2"). Incomplete, with the help of additional questions answers all the standardized questions on the current topic. Cannot independently makes a clear logical answer. While the student is answering and demonstrating practical skills, he makes mistakes. Can solve only the easiest situational tasks. Has knowledge of only the minimum methods of investigations.</p> <p>Unsatisfactory ("2") - the student answered correctly 50% of the test of A format. Does not know the material of the current topic, cannot build a logical response, does not respond to additional questions, and does not understand the content of the material. Makes significant, gross mistakes when answering and demonstrating practical skills. The student can work off the missed topics or reassign them to the teacher during his consultations (individual work with students) no more than 3 times during the study of the discipline, thus gaining a number of points not less than the minimum to be admitted to the final control.</p>
<p>Kn -1-5; Sk -1-14; C -1, 2; AR -1-4.</p>	<p>SS -1 SS -2 SS -3 SS -4 SS -5 SS -6 SS -7 SS -8</p>	<p>• The main stage of the lesson is the practical work of the student at the bed of the patient. The teacher and students bypass the sick. Students examine patients, collect history, examine them, perform diagnostic manipulations, etc. Control of the main stage of the lesson is carried out by assessing the performance of practical skills by the student, the ability to solve typical situational problems. The teacher discusses and gives an explanation, emphasizes the peculiarities of the course of the disease in a particular child, aims at a more rational conduct of</p>	

	<p>a particular method of examination, etc.</p> <p>In addition, practical classes include:</p> <ul style="list-style-type: none"> - planning of the patient's examination; - interpretation of laboratory and instrumental research data; - differential diagnosis of the main diseases of the endocrine system in a typical or complicated course; - determination of preliminary clinical diagnosis; - definition of therapeutic tactics; - prescription of medical nutrition; - emergency medical care; - solution of situational problems; - working out practical skills at the bed of the patient; <ul style="list-style-type: none"> - maintenance of medical documentation. <ul style="list-style-type: none"> • At the final stage of the lesson to assess the student's mastering of the topic, he is invited to answer situational problems. The teacher summarizes the lesson, gives students tasks for independent work, points to the nodal issues of the next topic and offers a list of recommended literature for self-study. <p>The duration of one practical lesson topic is 4.0 academic hours.</p> <p>Independent work of students, which is provided in the topic along with the audit, including filling in workbooks, is evaluated during the current control of the topic at the appropriate lesson</p> <p>Individual work is taken into account when evaluating for practical lessons under conditions of successful implementation and protection.</p>	
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Kn -1-5; Sk-1-14; C-1, 2; AR-1-4.	IW-1 IW -2 IW -3 IW -4 IW -5 IW -6 IW -7 IW -8 IW -9 IW - 10		
Final control			
General evaluation system	Participation in the work during the semester / exam - 60%/40% on a 200-point scale		
Rating scales	Traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale		
Admission to final credit	The student attended all practical (laboratory, seminar) classes and received at least 72 points for current performance		
Type of final control	Methods of final control	Enrollment criteria	
Differentiated credit	Test control, tasks, prescriptions	<i>Maximum score - 80</i> <i>Minimum score - 50</i>	
Differential score evaluation criteria			
Differentiated credit	Stage 1 - Test control - 50 test tasks, carried out	Maximum score - 50 (1 score for 1 correct answer).	

	within 50 minutes.	
	Stage 2 - Solving 4 situational problems - 30 min.	Maximum score - 20 (1 problem - 5 points).
	Stage 3 - writing 10 prescriptions for medicines, which are prescribed for the treatment of endocrine diseases - is carried out 10 minutes.	Maximum score - 10 (1 correct prescription - 1 point).

Evaluation is one of the final stages of educational activity and determining the success of learning.

Evaluation of current educational activities.

Current control is carried out at each audit lesson in the curriculum in accordance with the approved working training programs and taking into account the assessment of the independent work of the student. During the evaluation of the assimilation of each topic of the module, students are given grades on a 4-point (traditional) scale and on a multi-point scale using the grading criteria adopted at the university and approved for the relevant subject. This takes into account all types of work provided for by methodological development for the study of the topic. The student should get a score on each topic. Testing of missed classes takes place according to the schedule of testing. The reassignment of the topic of the lesson, for which the student received an unsatisfactory assessment, is carried out at a convenient time for the teacher and the student outside the classes, the maximum assessment is the "good" reassignment of the topic during the current learning and final control in order to improve the assessment is not allowed

The grades exhibited at each lesson on the traditional scale are summed up at the last lesson, the average traditional score is calculated, which is converted to points.

The weight of each theme within one module in points is the same. Forms of evaluation of current educational activities should be standardized and include control of theoretical and practical training.

The final score for the current activity is defined as the arithmetic sum of points for each lesson and for individual work.

The maximum score a student can have for the current educational activity for admission to the differentiated score is 120 points.

The minimum score a student must have for the current educational activity for admission to the differentiated score is 72 points.

The calculation of the number of points for the current training is carried out on the basis of the grades received by the student on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic (CA) mean, rounded to 2 characters after the decimal point. The resulting value is converted to points on a multi-point scale as follows:

$$x =$$

Evaluation of individual tasks of the student.

The implementation of individual tasks is taken into account when deriving an assessment for a

practical lesson in the conditions of their successful execution and protection.

In no case can the total score for the current training activity not exceed 120 points.

Evaluation of independent work of students.

The independent work of students, which is provided by the topic of the lesson along with the audit work, is evaluated during the current control of the topic at the appropriate lesson.

The final control of the content module 1 is made at the last practical lesson for the teacher of the department in accordance with the schedule approved at the educational and methodological meeting.

In case of completion of the course by drawing up the final control, 60% of the points on the 200-point scale the student receives for the current educational activity, and 40% - for the final control. Final control is considered enrolled if the student scored at least 60% of the maximum score (for the 200-point scale - **at least 50 points**).

The score of the discipline on a 200-point scale is formed by adding the amount of points for the current student's educational activity and final control. The score on the 200-point scale is transformed into an estimate on the traditional (four-point) scale and after ranking - in assessment on the ECTS scale.

Objectivity of evaluation of students "educational activity should be checked by statistical methods (correlation coefficient between current success and results of final control).

According to the decision of the Academic Council of the University to the number of points scored by the student from the discipline "Internal Medicine, including endocrinology, medical genetics," encouraging points (not more than 12 points) for taking prizes at international and all-Ukrainian subject Olympiads can be added, but in no case the total score for the discipline can not exceed 200 points.

Conversion of the number of points for semester control in the evaluation on the ECTS scale and on the four-point (traditional) scale.

Points for semester control are independently converted to both the ECTS scale and the four-point scale. Points of the ECTS scale to the four-point scale are not converted and vice versa.

Students who study in one course in one specialty, based on the number of points scored for semester control, are ranked on the ECTS scale as follows:

ECTS Score	Statistical indicator
«A»	Top 10% of students
«B»	Next 25% of students
«C»	Next 30% of students
«D»	Next 25% of students
«E»	Last 10% of students

Ranking with the assignment of grades "A," "B," "C," "D," "E" is carried out by deans or other structural subdivision by the decision of the academic council educational department for students of this course who study in one specialty and have successfully completed the study of the discipline. Ranking of students - citizens of foreign countries is recommended by the decision of the Academic Council to conduct in the same array with students - citizens of Ukraine who study in the same specialty.

Students who have received "FX" and "F" ("2") grades are not included in the list of students who are graded even after the module has been reassigned. Such students automatically receive an "E" score after overpayment.

Grades in the discipline "FX," "F" ("2") are presented to students who are not enrolled at least one module in the discipline after completing its study.

The score "FX" is given to students who have scored the minimum number of points for the current educational activity, but who are not credited with the final control of the module. This category of students

has the right to re-assign the final control over the approved schedule (but not later than the beginning of the next semester). Re-drawing of the final control is allowed no more than two times.

The grade "F" is given to students who have attended all audit classes from the module, but have not scored a minimum number of points for current educational activities and are not allowed to complete control. This category of students has the right to re-study the module.

With the permission of the rector, the student can increase the assessment of the discipline by reassigning the final control (no more than three times for the entire period of study).

Semester control scores for students who have successfully completed the discipline program are also converted by the department to a traditional four-point scale according to the absolute criteria as below in the table.

Score on a multi-point (200) scale	Score on a four-point scale
From 170 to 200 points	«5»
From 140 to 169 points	«4»
From 139 to 122	«3»
Below 121	«2»

Note 1. According to the decision of the Academic Council, universities can set the criteria of 180-200 points for assessment "5," for the assessment of "4" - criteria of 140-179 points.

Note 2. When using other multibal scales, proportional criteria are used

Note 3. These criteria are also used when determining the module evaluation if necessary.

The evaluation of ECTS to the traditional four-point scale is NOT converted because the ECTS scale and the four-point scale are independent.

The multibal and four-point scales characterize the actual success of each student in assimilating the discipline. The ECTS scale is a relative, comparative, rating that determines the student's belonging to the group of the best or the worst among the reference group of classmates (faculty, specialty). Therefore, the score "A" on the scale can not be equal to the estimate "excellent," and the score "B" - the assessment "good," etc. As a rule, when converting from a multibal scale, the boundaries of grades "A," "B," "C," "D," "E" on the ECTS scale do not coincide with the boundaries of the grades "5," "4," "3" on the traditional scale.

9. Course Policy

The policy of the course is determined by the system of requirements for the student in the study of the content module "Basics of diagnosis, prevention and treatment of major diseases of the endocrine system" within the discipline "Internal Medicine" and is based on the principles of academic integrity. Students are explained by the value of acquiring new knowledge, academic norms that need to be followed, why they are important, what is academic integrity, what are its values and functions, how students can contribute to its development by their actions; the essence, peculiarities and causes of inadmissibility of academic plagiarism are explained, they encourage higher education applicants to independently perform educational tasks, correctly refer to sources of information in case of borrowing ideas, statements, information.

The policy of the discipline is:

compulsory observance of academic integrity by students, namely:

- independent execution of all types of jobs, tasks, forms of control provided for by the working program of this discipline;
- links to sources of information in case of use of ideas, developments, statements, information;
- compliance with copyright and cyatic law;
- - providing reliable information about the results of their own educational (scientific) activities, methods of research and sources of information used.

adherence to the principles and norms of ethics and deontology by applicants of higher education:

- actions in professional and educational situations from the position of academic integrity and professional ethics and deontology;
- compliance with the rules of the internal procedure of the clinical base of the department, to be tolerant, friendly and balanced in communication with students and teachers, patients, medical staff of healthcare institutions;
- awareness of the significance of examples of human behavior in accordance with the norms of academic integrity and medical ethics.

attendance of classes by students of higher education:

- attendance at all classes is mandatory for the purpose of current and final assessment of knowledge (except for cases for a valid reason).

10. References**Mandatory**

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Additional

1. Зак К.П., Тронько М.Д., Попова В.В., Бутенко А.К. Цукровий діабет, імунітет і цитокіни. Київ: Книга-плюс, 2014. – 500 с.
2. Наказ МОЗ України від 21.12.2012 №1118 «Уніфікований клінічний протокол первинної та вторинної (спеціалізованої) медичної допомоги «Цукровий діабет 2 типу».
3. Стандарти надання медичної допомоги хворим з патологічними станами щитоподібної та прищитоподібних залоз в умовах дії негативних чинників довкілля (видання третє, розширене) / За ред. О.В. Камінського. – Харків: «Юрайт», 2017. – 312 с.
4. Тронько Н.Д., Соколова Л.К., Ковзун Е.И., Пастер И.П. Инсулинотерапия: вчера, сегодня, завтра. К.: Медкнига, 2014. – 192 с.
5. 100 избранных лекций по эндокринологии. / Под ред. Ю.И. Караченцева, А.В. Казакова, Н.А. Кравчун, И.М. Ильиной. – Х: 2014. – 948 с.
6. *International Textbook of Diabetes Mellitus*, 2 Volume Set. Ed. by R.A. Defronzo, E. Ferrannini, P. Zimmet, G. Alberti. 4th Edition, 2015. – 1228 p.
7. *Harrison's Endocrinology*. Ed. by J. Larry Jameson, Mc Graw – Hill., New York, Chicago, Toronto. e.a. 4rd edition, 2016. - 608 p.
8. *Williams Textbook of Endocrinology*. Ed. by Henry M. Kronenberg, Shlomo Melmed, Kenneth S. Polonsky, P. Reed Larsen. Saunders. 13 edition, 2015. – 1936 p.

Information resources

1. <https://www.diabetes.org>
2. <http://www.oxfordmedicaleducation.com/>
3. <https://www.thyroid.org>

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

1. Multimedia projector
2. Computers
3. Overhet
4. Glucometers
5. Work program of the discipline
6. Plans of lectures, practical classes and independent work of students
7. Abstracts of lectures
8. Multimedia presentations of lectures
9. Methodical instructions for practical classes for students
10. Methodical instructions for practical classes for teachers
11. Methodical materials that provide independent work of the student
12. Test and control tasks for practical classes
13. Situational tasks for practical classes
14. Virtual history of diseases
15. List of medicines for study
16. List of issues submitted for final control
17. Methodological support of final control:
 - List of questions to the final control
 - List of standardized methods for performing practical skills
 - Test tasks
 - List of medicines for writing prescriptions

12. Additional information

In charge for academic work: Oksana Safonova, tel. (032)2759510

In charge for students scientific circle: Orysia Lischuk, tel. (032) 2759510.

Materials related to the educational and organizational process (thematic plan, schedule of classes, schedules of consultations and work up of missed classes) are available on the website of the department: (<https://new.meduniv.lviv.ua/kafedry/kafedra-endokrynologiyi/>). Besides, all materials are on platform MISA (<http://misa.meduniv.lviv.ua/login/index.php>).

Adresses of the practical classes locations:

№1: "Lviv Regional State Clinical Treatment and Diagnostic Endocrinology Center", 79010, Lviv, 1, Ostrozkoho str.; tel: (032) 276-46-73; 275-95-10 (main base), teachers: Oleksandr Serhiyenko, Olesia Kikhtiak, Victoria Serhiyenko, Eugene Pleshanov, Oksana Safonova, Khrystyna Moskva, Halyna Suslyk, Orysia Lischuk, Dunets Julia Viktorivna.

Lviv city clinical hospital №4», Endocrinology department, 79011, Lviv, st. Svetsitsky, 3, tel. (032) 276-02-74, teachers: Eugene Pleshanov, Mykhailo Krasnyi, Khrystyna Kozlovska, Julia Dunets.

Lectures are held on the basis of the department at: Lviv, Ostrozkoho, 1 str.

Safonova O.V., Ph.D., Associate Professor

Head of Department

Urbanovich A.M., Doctor of Medical Sciences, Professor