MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION, MINISTRY OF SCIENCE, HIGHER EDUCATION AND INNOVATION OF THE KYRGYZ REPUBLIC

Kyrgyz-Russian Slavic University
named after the first President of the Russian Federation B.N. Yeltsin

УТВЕРЖДАЮ
декан факультета
Деканат медицинского факультета
20.09.2023

PROFESSIONAL CYCLE
Endocrinology

Work program of the discipline (module)

Assigned to the **Therapies No1 (Pediatrics and Dentistry)**

Qualification 310501_24_2 ld in.plx
Specialty 560001 - KR General Medicine (for international students)

Doctor

Form of study **Full-time**
Total labor intensity **2 ZET**

Hours according to the 72
including:
classroom classes 40
independent work 31,7

Types of control in semesters:
Test 6

Distribution of hours of the discipline by semesters

Semester (<Course>.<Semester of course>)	6 (3.2)		Total	
Weeks	18			
Type of classes	UP	WP	UP	WP
Lectures	16	16	16	16
Practical	24	24	24	24
Contact work during the period of theoretical training	0,3	0,3	0,3	0,3
Including int.	4	4	4	4
Total room.	40	40	40	40
Contact work	40,3	40,3	40,3	40,3
Himself. Work	31,7	31,7	31,7	31,7
Total	72	72	72	72

The program was compiled by: Uvaidillaeva
k.

Reviewer(s):

Doctor of Medical Sciences, Professor, Head of the Department of Hospital Therapy with a Course of Hematology of the KSMA, Mamatov S.M

Candidate of Medical Sciences, Associate Professor of the Department of Therapy2 of the LD specialty, Dzhailobaeva K.A.

Work program of the discipline

developed in accordance with the Federal State Educational Standard 3++:
Federal State Educational Standard of Higher Education - Specialist in the Specialty 31.05.01
General Medicine (Order of the Ministry of Education and Science of Russia dated 21.09.2021 No 1578/1)

Compiled on the basis of the curriculum:
Specialty 560001 - KR General Medicine
(for international students)
approved by the Academic Council of the University of ____ _____Minutes No _____

The work program was approved at the meeting of the department

Minutes of 29.08.2025 No 1
Program duration: 2025-2030 academic year.
Head. Head of the Department

Approval of the RPD for execution in the next academic year

Chairman of the International Council
__ _____ 2026

The work program was revised, discussed and approved for
in the 2026-2027 academic year at the meeting of the Department

Minutes of __ _____ 2026 № __
Head. Head of the Department

Approval of the RPD for execution in the next academic year

Chairman of the International Council
__ _____ 2027

The work program was revised, discussed and approved for
in the 2027-2028 academic year at the meeting of the Department

Minutes of __ _____ 2027 № __
Head. Head of the Department

Approval of the RPD for execution in the next academic year

Chairman of the International Council
__ _____ 2028

The work program was revised, discussed and approved for
in the 2028-2029 academic year at the meeting of the department

Minutes of __ _____ 2028 № __
Head. Head of the Department

Approval of the RPD for execution in the next academic year

Chairman of the International Council
__ _____ 2029

The work program was revised, discussed and approved for
in the 2029-2030 academic year at the meeting of the department

Minutes of __ _____ 2029 № __
Head. Head of the Department

1. OBJECTIVES OF MASTERING THE DISCIPLINE	
1.1	The purpose of the discipline is to form students' fundamental knowledge, skills and abilities in the specialty of endocrinology.

2. THE PLACE OF THE DISCIPLINE IN THE STRUCTURE OF THE EDUCATIONAL PROGRAM	
Cycle (section) of the PLO:	B1.O.03
2.1	**Requirements for the preliminary training of the student:**
2.1.1	Biochemistry
2.1.2	Normal physiology
2.1.3	Practicum in Physiology
2.1.4	Anatomy
2.1.5	Topographic Anatomy and Operative Surgery
2.1.6	Psychology of communication
2.1.7	Psychiatry, Medical Psychology
2.1.8	Practice in Emergency Medical Manipulations (Fundamentals of Emergency Care)
2.1.9	Latin
2.1.10	Bioethics
2.1.11	Pharmacology
2.1.12	General Surgery
2.1.13	Practical training to obtain professional skills and professional experience in the positions of paramedical personnel (Assistant procedural nurse)
2.1.14	Propaedeutics of Internal Diseases
2.1.15	Occupational diseases
2.1.16	Practical training to obtain professional skills and professional experience in the positions of paramedical personnel (Assistant ward nurse)
2.1.17	Faculty Therapy
2.1.18	Therapeutic Practice (Physician Assistant)
2.1.19	Pathological anatomy
2.1.20	Orientation Practice (General Care for Therapeutic Patients)
2.1.21	Immunology
2.1.22	Fundamentals of research work
2.1.23	Radiation diagnostics
2.1.24	Pathophysiology, clinical pathophysiology
2.2	**Disciplines and practices for which the development of this discipline (module) is necessary as a previous:**
2.2.1	Medical Rehabilitation
2.2.2	Sports Medicine
2.2.3	Immunoprophylaxis of infectious diseases
2.2.4	Infectious diseases
2.2.5	Practice in emergency medical manipulations (Assistant anesthesiologist - resuscitator)
2.2.6	Faculty Surgery
2.2.7	Hospital surgery
2.2.8	Anesthesiology, Resuscitation, Intensive Care
2.2.9	Surgical Profile Practice (Physician Assistant)
2.2.10	Outpatient surgery
2.2.11	Faculty Therapy
2.2.12	Hospital Therapy
2.2.13	Outpatient therapy with a course of gerontology
2.2.14	General Medical Practice (Outpatient Physician Assistant)
2.2.15	Research work
2.2.16	Family Medicine
2.2.17	Oncology, radiation therapy
2.2.18	Ophthalmology
2.2.19	Neurology, Medical Genetics, Neurosurgery

2.2.20	Gynecology
2.2.21	Outpatient Obstetrics and Gynecology
2.2.22	Clinical pathanatomy

3. COMPETENCIES OF THE STUDENT FORMED AS A RESULT OF MASTERING THE DISCIPLINE (MODULE)	
PC-5: Able and willing to conduct and interpret interviews, physical examinations, clinical examinations, results of modern laboratory and instrumental tests, write a medical record of an outpatient and inpatient adult and child.	
Know:	
Level 1	- Methods of conducting research to identify the main pathological conditions, symptoms, disease syndromes, nosological forms.
Level 2	- Specifics of identifying various types of pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the ICD X revision
Level 3	- The main syndromes of damage to organs and systems and their specificity in the differential diagnosis of various nosological forms in accordance with the ICD X revision.
Be able to:	
Level 1	- To comprehend the results of the study of the main nosological forms of diseases;
Level 2	- Analyze various types of pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the ICD.
Level 3	- To note the practical value in comparing specific pathological syndromes, symptoms of diseases
Own:	
Level 1	- Skills in identifying the main pathological conditions, symptoms, disease syndromes
Level 2	- Methods of searching, identifying and systematizing the main pathological conditions, symptoms of disease syndromes, nosological forms in accordance with the ICD X revision.
Level 3	- Skills of own substantiation of combining various symptoms, syndromes into nosological forms in accordance with (ICD X revision)

PC-8: Able and willing to apply up-to-date information on health indicators at the health care facility level.	
Know:	
Level 1	- Etiology, pathogenesis, clinical presentation of the main diseases with various nosological forms
Level 2	- Main types and methods of treatment of patients with various nosological forms.
Level 3	- Methods of management and treatment of patients with various nosological forms on an outpatient basis and in a day hospital
Be able to:	
Level 1	- Correctly identify this disease
Level 2	- To compare different types and methods of treatment of patients with different nosological forms, to develop a treatment plan for diseases.
Level 3	- Manage and treat patients on an outpatient basis and in a day hospital.
Own:	
Level 1	- Skills in analyzing various types of treatment of patients with different nosological forms
Level 2	- Methods of searching for and comparing different methods of treatment of patients with different nosological forms.
Level 3	- Skills in managing and treating patients with various diseases on an outpatient basis and in a day hospital.

PC-14: Able and ready to make a diagnosis based on the results of biochemical and clinical studies, taking into account the course of pathology in organs, systems and the body as a whole.	
Know:	
Level 1	- List and characteristics of accounting and reporting medical documentation in medical organizations of a medical profile;
Level 2	- Regulatory documentation adopted in healthcare, as well as documentation for assessing the quality and efficiency of medical organizations.
Be able to:	
Level 1	- To compare various types and methods of treatment of patients with different nosological forms, to develop a plan for the treatment of diseases;
Level 2	- Manage and treat patients on an outpatient and day hospital basis
Level 3	- Monitor the effectiveness and safety of the prescribed treatment at all stages of its implementation

Own:	
Level 1	- Work skills and methods of accounting
Level 2	- reporting documentation of various types in medical institutions;
Level 3	- Skills of comparative characterization of medical documentation of various nature in medical institutions

PC-15: Able and ready to analyze the patterns of functioning of individual organs and systems, use knowledge of anatomical and physiological features, basic methods of clinical and laboratory examination and assessment of the functional state of the body of an adult and children, for timely diagnosis of diseases and pathological processes.	
Know:	
Level 1	- Fundamentals of management in the field of public health and principles of organization in the field of health care
Level 2	- Principles of management in the field of public health by medical organizations and their structural divisions .
Be able to:	
Level 1	- Apply the principles of organization and management in the field of public health
Level 2	- Apply the principles of management of medical organizations and their structural divisions.
Own:	
Level 1	- Basic principles of organization and management, and their structural subdivisions in the field of public health .

PC-16: Able and ready to use the algorithm for making a diagnosis (main, concomitant, complications) taking into account the ICD, to perform basic diagnostic measures to identify urgent and life-threatening conditions.	
Know:	
Level 1	- The main directions of medical statistical indicators in the context of evidence-based medicine.
Level 2	- Basic principles and methods for assessing the quality of medical care using medical statistical indicators.
Be able to:	
Level 1	- Analyze medical indicators and their interpretation
Level 2	- Use medical indicators to assess the quality of medical care
Level 3	Assess the quality of medical care using the main medical statistical indicators, taking into account evidence-based medicine
Own:	
Level 1	- Basic skills of working with medical and statistical indicators
Level 2	- Skills of expressing and substantiating one's own position regarding the assessment of the quality of medical care based on medical and statistical indicators, taking into account evidence-based medicine
Level 3	- A set of measures to assess the quality of medical care using statistical indicators.

As a result of mastering the discipline, the student must

3.1	**Know:**
3.1.1	Medical documentation in endocrinology organizations.
3.1.2	Medical documentation in endocrinology organizations.
3.1.3	Pathological symptoms and syndromes in the most common endocrine diseases
3.1.4	Etiology, pathogenesis and classification of the most common forms of endocrine diseases
3.1.5	Clinical picture, diagnostic criteria and complications of diseases of the endocrine system.
3.1.6	Modern methods of clinical, laboratory, instrumental examination of patients with endocrine pathology.
3.1.7	The main groups of drugs used to treat endocrine diseases.
3.1.8	Modern principles of treatment of diseases of the endocrine system within the framework of the nosological forms under consideration
3.1.9	Features of emergency care for endocrine diseases.
3.1.10	Basic principles of prevention of typical forms of endocrine diseases
3.2	**Be able to:**
3.2.1	Use educational, scientific literature, the Internet for professional activities
3.2.2	Be able to work with medical documentation, fill out medical histories, write prescriptions

3.2.3	Conduct a survey, physical examination of the patient, assess his condition, examine the organs of the endocrine system
3.2.4	Identify the main pathological symptoms and syndromes of endocrine diseases
3.2.5	Draw up a plan of laboratory and instrumental methods of examining patients to confirm the suspected diagnosis, interpret their results.
3.2.6	To determine the algorithm for diagnosing an endocrine disease, taking into account ICD-10, to formulate a detailed clinical diagnosis
3.2.7	Develop a treatment plan taking into account the course of the disease, select and prescribe drug and non-drug therapy
3.2.8	Identify urgent and life-threatening conditions and provide emergency medical care for diseases of endocrine genesis
3.2.9	To use methods of primary and secondary prevention of endocrine diseases based on evidence-based medicine in medical activities
3.3	**Own:**
3.3.1	Skills in maintaining medical records, the technique of drawing up a medical history.
3.3.2	Algorithm of general clinical examination of a patient with endocrine pathology;
3.3.3	Algorithm of laboratory and instrumental examination in case of suspected endocrine pathology, interpretation of the results obtained during the study;
3.3.4	Skills in making a preliminary diagnosis with the formation of an examination plan
3.3.5	• Skills in formulating a clinical diagnosis of patients with diseases of the endocrine glands, proceeding in a typical form;
3.3.6	Skills in the management and treatment of patients with endocrine pathology and assessment of the effectiveness of treatment
3.3.7	Methods of emergency care for endocrine diseases.
3.3.8	• Skills in planning measures for the prevention and treatment of the most common endocrine diseases;

4. STRUCTURE AND CONTENT OF THE DISCIPLINE (MODULE)

Lesson code	Name of sections and topics /type of lesson/	Semester / Course	Hours	The competence	References	Inté Rakt.	Pr. podg.	Note
	Section 1. Diabetology (Diabetes Mellitus)							
1.1	Introduction to endocrinology. Diabetes mellitus: classification, etiology, pathogenesis, clinic, Diagnosis. Treatment of diabetes mellitus. /Lek/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16	L1.3 L1.5L2.1 L2.6			
1.2	Diabetes mellitus.Classification , etiology, pathogenesis, clinic, diagnosis. Supervision of a patient with diabetes mellitus. Treatment of type 1 and type 2 diabetes mellitus. Lifestyle changes. Principles of insulin therapy. Tableted hypoglycemic	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.2 L1.4 L1.9L2.1 L2.6	2		Students learn how to independently collect complaints, anamnesis, diagnose and prescribe treatment
1.3	Micro- and macrovascular complications of diabetes mellitus. /Lek/	6	2	PK-5 PK-8 PK-14 PK-15				
1.4	Patient Supervision	6	0,3	PK-5 PK-8				
1.5	Diabetes mellitus. Self-control and training in type 1 and 2 diabetes. Calculation of insulin therapy. Calculation of nutrition by bread units /Avg/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
1.6	Diabetes and pregnancy: management features and risks for the mother and fetus /Avg/	6	2	PK-5 PK-8 PK-14 PK-15				

1.7	Modern technologies in the treatment of diabetes mellitus: insulin pumps, glucose monitoring systems, artificial pancreas	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
1.8	Comas in diabetes mellitus /Lek/	6	2	PK-5 PK-8 PK-14 PK-				
1.9	Micro- and macrovascular complications of diabetes mellitus. Diabetic retinopathy, nephropathy, neuropathy. Features of coronary artery disease in diabetes mellitus. Arterial hypertension and	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.6 L1.11L2.2 L2.3 L2.4 L2.5 L2.7 L2.8			
1.10	Diabetes mellitus. Diabetic neuropathy. Diabetic Foot Syndrome /Wr/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
1.11	Acute complications of diabetes mellitus. Ketoacidosis, ketoacidotic coma. Hypoglycemia, hypoglycemic coma. Clinic, diagnostics, Differential diagnosis. Emergency care. Hyperosmolar hyperglycemic states, lactic acid acidosis. Boundary Control No1 /Pr/	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.6 L1.7			
1.12	Psychological aspects of diabetes mellitus: compliance, patient burnout syndrome, the role of motivational counseling /Sr/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
1.13	Cardiovascular complications of diabetes and cardioprotection strategy /Avg/	6	2	PK-5 PK-8 PK-14 PK-15				
1.14	Diabetes in Children and Adolescents: Clinical Features, Diagnosis and Approaches to	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
	Section 2. Other endocrine diseases in adults			PK-5 PK-8 PK-14 PK-15				
2.1	Thyroid diseases . Thyrotoxicosis syndrome. Etiopathogenesis, classification, clinic, diagnostics, methods of treatment /Lek/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16	L1.1 L1.10L2.2 L2.7			

2.2	Diffuse toxic goiter. Clinic, diagnosis, differential diagnosis. Treatment. Hypothyroidism. Classification. Etiology. Pathogenesis. Clinical manifestations. Diagnosis and treatment. Iodine deficiency diseases. Epidemiology, clinical Endemic goiter, etiopathogenesis, Clinic, diagnosis, treatment. Sporadic goiter. Diseases of the parathyroid glands. Hyperparathyroidism. Hypoparathyroidism. Etiopathogenesis, clinic, diagnosis, treatment. /Pr/	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.4 L1.8	2		Students will learn how to quickly orient themselves in endocrine symptoms and choose the right diagnostic and therapeutic approach.
2.3	Hypercortisolism syndrome. Etiopathogenesis, clinic, Diagnosis, Differential Diagnosis, Principles treatment. /Lek/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
2.4	Thyroid diseases. Thyroiditis /Sr/	6	2	PK-5 PK-8 PK-14 PK-				
2.5	Hypothyroidism syndrome. Iodine deficiency diseases. Epidemiology, etiopathogenesis, classification, clinic, Diagnosis. Treatment. Prevention /Lek/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16	L1.1 L1.10			
2.6	Hyperparathyroidism as part of endocrine syndromes /Sr/	6	2,5	PK-5 PK-8 PK-14 PK-				
2.7	Hypocorticism syndrome, etiopathogenesis, clinic, diagnosis and treatment. /Lek/	6	2	PK-5 PK-8 PK-14 PK-15	L1.8			
2.8	Chronic insufficiency of the adrenal cortex. Classification. Adisson's disease, etiology, pathogenesis, clinic, diagnosis, treatment. Secondary adrenal insufficiency . Acute Insufficiency of the adrenal cortex. Diagnosis, treatment. hypercortisolism. Etiopathogenesis, clinic, diagnosis, differential diagnosis, principles of treatment /PR/	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.8			
2.9	Diseases of the hypothalamic-pituitary region. Growth disorders in children and adults. Somatotropic	6	2,5	PK-5 PK-8 PK-14 PK-15 PK-16				
2.10	Diseases of the hypothalamus of the pituitary region. Etiopathogenesis, Clinic, Diagnosis, Treatment /Lek/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				

2.11	Acromegaly. Diabetes insipidus . Hypopituitarism. Clinic, diagnosis, differential diagnosis, treatment. Boundary Control No2 /Pr/	6	4	PK-5 PK-8 PK-14 PK-15 PK-16	L1.4 L1.8			
2.12	Hyperprolactinemia: differential diagnosis and treatment /Sr/	6	2,5	PK-5 PK-8 PK-14 PK-15				
2.13	Obesity. Epidemiology.Prevention. Metabolic syndrome. Healthy lifestyle /Wed/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
2.14	Polycystic ovary syndrome (PCOS): pathogenesis, clinic, modern approaches	6	2,2	PK-5 PK-8 PK-14 PK-15 PK-16				
2.15	Endocrine manifestations in tumors of other organs (paraneoplastic syndromes) /Sr/	6	2	PK-5 PK-8 PK-14 PK-15 PK-16				
2.16	Vitamin D and endocrine regulation of bone metabolism /Sr/	6	2	PK-5 PK-8 PK-14 PK-15				

5. FUND OF ASSESSMENT TOOLS

5.1. Control questions and tasks

1. Epidemiology and classification of DM
2. Risk factors of type 2 diabetes, diagnosis of carbohydrate metabolism disorders in the risk group.
3. Type 1 diabetes, etiology and pathogenesis.
4. Clinic, diagnosis of type 1 diabetes mellitus
5. Type 2 diabetes, etiology and pathogenesis.
6. Clinic, diagnosis of type 2 diabetes mellitus
7. Principles of treatment of type 2 diabetes mellitus: hypoglycemic oral drugs.
8. Indications for insulin therapy in type 2 diabetes mellitus
9. Etiology, pathogenesis, classification of macrovascular complications of diabetes mellitus.
10. Features of CHD in patients with diabetes mellitus.
11. Etiology, pathogenesis, classification of microvascular complications of diabetes mellitus.
12. Classification of diabetic retinopathy. Principles of diagnosis and treatment.
13. Classification of diabetic nephropathy. Principles of diagnosis and treatment.
14. Classification of diabetic neuropathy. Principles of diagnosis and treatment
15. Etiology and pathogenesis of diabetic ketoacidosis and coma.
16. Clinical variants of the course of diabetic ketoacidosis and coma.
17. Diagnosis, treatment of diabetic ketoacidosis and coma.
18. Hyperosmolar hyperglycemic states, diagnosis, principles of treatment.
19. Hypoglycemia, hypoglycemic coma, etiopathogenesis, clinic, diagnosis, emergency care.
20. Lactic acidosis, dagnostics, principles of treatment
21. Differential diagnosis of comatose states in diabetes mellitus.
20. Diffuse toxic goiter (Graves' disease), etiology, pathogenesis
22. Diffuse toxic goiter. Clinic, diagnosis, principles of treatment..
23. Hypothyroidism. Classification, etiology, pathogenesis, clinic, diagnosis, treatment.
24. Features of the clinic and diagnosis of secondary hypothyroidism.
25. Thyroiditis, classification, diagnosis, principles of treatment.
26. Hypoparathyroidism, diagnosis, principles of treatment.
27. Hyperparathyroidism, diagnosis, principles of treatment.
28. Iodine deficiency diseases. Classification. The role of iodine in the human body.
29. Prevention of IDD: mass, group, individual. Risk groups for IDD
30. Endemic and sporadic goiter, diagnosis and treatment
31. Chronic adrenal insufficiency. Etiology, pathogenesis, clinic, principles of diagnosis and treatment.
32. Differential diagnosis of primary and secondary CNN.
33. Acute adrenal insufficiency, Addisonian crisis, principles of diagnosis and treatment.
34. Itsenko-Cushing's disease, etiopathogenesis, clinic, principles of diagnosis and treatment
35. Differential diagnosis of disease and Itsenko-Cushing syndrome.
36. Acromegaly. Etiopathogenesis, clinic, principles of diagnosis and treatment
37. Diabetes insipidus. Etiopathogenesis, clinic, principles of diagnosis and treatment

38. Hypopituitarism. Etiopathogenesis, clinic, principles of diagnosis and treatment
39. Somatotropic insufficiency. Etiopathogenesis of diseases of the anterior pituitary gland.
40. Etiopathogenesis of obesity, classification, obesity as a risk factor of other diseases.
42. Clinical manifestations of obesity.
43. Prevention and treatment of obesity.

5.2. Topics of term papers (projects)

The curriculum does not provide for writing a term paper on the discipline

5.3. Fund of Assessment Tools

1. THEORETICAL TASK The list of theoretical questions from paragraph 5.1. according to the subject of the section.
2. SITUATIONAL TASKS
3. TEST. List of test questions according to the subject of the section in APPENDIX 2
4. CURATION OF THE PATIENT.
3.1 Each student receives one patient with endocrine pathology for supervision.
3.2. The curator conducts an interview and examination of the patient according to the attached scheme, gets acquainted with the results of the available
laboratory tests and images, with the treatment of patients.
3.3. Curation scheme:
• Passport details
• Complaints. First of all, complaints related to the disease that caused the
hospitalizations,
then - other complaints. Medical history. The onset of the disease, course, treatment in the past, causes, causes
hospitalization.
• Life history (brief). Diseases suffered in the past.
• Objective examination data containing a summary of pathological data by system and organ
Clinical description of the patient's endocrine system. Survey data.
• Diagnosis, conclusion on supervision.
5. MEDICAL HISTORY OF A PATIENT WITH DIABETES MELLITUS
During the training in the first section, the student is given a patient with diabetes mellitus to supervise, he works out his skills
by objective examination of the patient, learns to observe patients, develops clinical thinking and fills in the
medical history according to the given scheme (APPENDIX 3).
6. REPORT WITH PRESENTATION. The student independently chooses the topic of the report in accordance with the topic of the section
1. Self-control and training in type 1 and type 2 diabetes mellitus.
2. Insulin therapy and calculation of nutrition by bread units.
3. Diabetic foot syndrome
4. Thyroiditis.
1. Somatotropic insufficiency.
2. Hyperparathyroidism as part of endocrine syndromes.
3. Prevention of obesity. Healthy Lifestyle

5.4. List of types of assessment tools

1. Theoretical task
2. Patient Curation
3. Situational task
4. Report with presentation
5. Medical history

6. EDUCATIONAL, METHODOLOGICAL AND INFORMATION SUPPORT OF THE DISCIPLINE (MODULE)

6.1. Recommended Literature

6.1.1. References

	Authors, compilers	Title	Publisher, year
L1.2	Melmed S., Koenig R.,	Williams Textbook of Endocrinology, 14th Edition	Elsevier, 2020
L1.3	Feingold K.R., Anawalt	Endotext [Internet]	MDText.com, Inc., 2024
L1.4	Wass J.A.H., Stewart	Oxford Handbook of Endocrinology and Diabetes, 4th Edition	Oxford University Press, 2023
L1.5	Holt R.I.G., Hanley	Textbook of Diabetes, 6th Edition	Wiley-Blackwell, 2023
L1.6	American Diabetes	Standards of Care in Diabetes—2024	Diabetes Care, 2024
L1.7	Ross D.S., Burch H.B.,	2016 ATA Guidelines for Hyperthyroidism and Other Causes of	Thyroid, 2016; 26(10):1343-
L1.8	Garber J.R., Cobin	Clinical Practice Guidelines for Hypothyroidism in Adults	Endocrine Practice, 2012;
L1.9	Biondi B., Kahaly G.J.,	Thyroid Dysfunction and Diabetes Mellitus: An Update	European Journal of
R1.10	Fliers E., Biermasz	Epidemiology, Quality of Life, and Cost of Hypopituitarism	Frontiers in Endocrinology,

6.1.2. Further reading

	Authors, compilers	Title	Publisher, year

L2.1	Besser M., Thorner M.O.	Comprehensive Clinical Endocrinology, 5th Edition	Elsevier, 2022
L2.2	Greenspan F.S., Gardner D.G.	Basic and Clinical Endocrinology, 10th Edition	Lange Medical Books/McGraw-Hill, 2021
L2.3	De Groot L.J., Chrousos G., Dungan K., et al. (Eds.)	Endotext — Thyroid Disease Manager	MDText.com, Inc., 2024
L2.4	Kopp P.A.	Translational Thyroidology: Molecular, Translational, and Clinical Advances	Frontiers in Endocrinology, 2023; 14:1154723
L2.5	Paschou S.A., Anagnostis P., Goulis D.G., et al.	Diabetes Mellitus and Thyroid Disease: An Update	European Journal of Endocrinology, 2023; 188(6):R85-R97
L2.6	Biondi B., Wartofsky L.	Combination Treatment with T4 and T3 in Hypothyroidism	Journal of Clinical Endocrinology & Metabolism, 2012; 97(7):2256-2271
L2.7	Jonklaas J., White A.C., Bauer A.J., et	Guidelines for the Treatment of Hypothyroidism	Thyroid, 2014; 24(12):1670-1751
L2.8	Alexander E.K., Pearce E.N., Brent	2017 ATA Guidelines for Thyroid Disease During Pregnancy and the Postpartum	Thyroid, 2017; 27(3):315-389

6.3. List of Information and Educational Technologies

6.3.1 Competency-Oriented Educational Technologies

6.3.1.1	Competency-Oriented Educational Technologies
6.3.1.2	Traditional educational technologies are lectures, practical classes focused primarily on communicating knowledge and methods of action that are passed on to students in a ready-made form and are intended for reproducing the assimilation and analysis of specific samples. Lecture material is provided to students using multimedia equipment and periodic presentation of thematic
6.3.1.3	patients.
6.3.1.4	Practical classes are most often held directly on the basis of the endocrinology department of clinics with mandatory visits to patients, independent supervision of patients, with visits to "Diabetes Schools", where patients are taught to control their disease. Innovative educational technologies are classes that form systemic thinking and the ability to generate ideas when solving various creative tasks. These include practical classes, during which a case is used - methodology, problem-activity learning, role-playing games, brainstorming techniques.

6.3.1.5	Information educational technologies are the independent use of computer equipment and Internet resources by a student to perform practical tasks and independent work, as well as to familiarize themselves with Internet sources, photo and video materials in the relevant section. Preparation of lectures and presentations by the teacher.
6.3.2 List of information reference systems and software	
6.3.2.1	List of resources of the information and telecommunication network "Internet"
6.3.2.2	List of Information and Educational Technologies
6.3.2.3	Competency-Oriented Educational Technologies
6.3.2.4	Traditional educational technologies are lectures, practical classes focused primarily on the communication of knowledge and methods of action that are passed on to students in a ready-made form and are intended for the reproducing assimilation and analysis of specific samples. Lecture material is provided to students using multimedia equipment and periodic presentation of thematic patients.
6.3.2.5	Practical classes are most often held directly on the basis of the endocrinology department of the clinic with mandatory visits to patients, independent supervision of patients, with visits to "Diabetes Schools", where patients are taught to control their disease.
6.3.2.6	Innovative educational technologies are classes that form systematic thinking and the ability to generate ideas when solving various creative problems. These include practical classes that use a case methodology, problem-based learning, role-playing games, and brainstorming techniques.
6.3.2.7	Information educational technologies are the independent use of computer equipment and Internet resources by a student to perform practical tasks and independent work, as well as to familiarize themselves with Internet sources, photo and video materials in the relevant section.
6.3.2.8	Preparation of lectures and presentations by the teacher.
6.3.2.9	List of information reference systems and software
6.3.2.10	Electronic library system "ZNANIUM.COM"
6.3.2.11	Information system "Single Window of Access to Educational Resources" (http://window.edu.ru/) www.med-edu.ru/articles
6.3.2.12	State Central Scientific Medical Library / [Electronic resource]. – Mode of access: http://www.scsml.rssi.ru. http://medvuz.info/
6.3.2.13	Electronic Library System "Student's Consultant" / [Electronic resource]. – Mode of access:
6.3.2.14	http://www.studmedlib.ru.
6.3.2.15	Electronic catalogue OPAC-Global / [Electronic resource]. Available at: http://library.stgma.ru.
6.3.2.16	Electronic library of the KRSU www.lib.krsu.kg
6.3.2.17	Electronic Library of the Ministry of Health of the Republic of Kazakhstan

7. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE (MODULE)	
7.1	The discipline is taught on the basis of the City Clinical Hospital No1, where the Department of Therapy No1, a specialized department of endocrinology, the "School of Diabetes", a lecture hall, 8 classrooms, with a total area of 200 sq.m are located. (block of desks, couches, blackboards). The department is equipped with a multimedia complex (laptop, personal computer, projector). Students have access to information stands, posters, electronic library.
7.2	Practical training in the study of the program in pediatric endocrinology is carried out on the basis of the pediatric endocrinology department of the National Center for Maternal and Child Health (NCOMiD), where there is a classroom, a children's "School of Diabetes".
7.3	Presentations of lectures on all sections of the discipline (PowerPoint)
7.4	Computer classes (Leo Tolstoy's building, room 4/12, 4/15) with access to the Internet for independent work, familiarization with Internet sources, video materials.

8. METHODICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE (MODULE)
MODULAR CONTROL IN THE DISCIPLINE INCLUDES: 1. Current control: assimilation of educational material in classroom classes (lectures, practical, including attendance and activity), supervision of the patient, solving situational tasks and performing mandatory tasks for independent work

2. Midterm control: checking the completeness of knowledge and skills on the material of the module as a whole. The implementation of modular
control tasks is carried out in writing, in the form of tests
3. Intermediate control is a completed documented part of the academic discipline, carried out in the form
of summing up the medical history, solving situational problems.
BASIC REQUIREMENTS FOR INTERMEDIATE CONTROL
1. When appearing for tests, students are required to have record books with them, which they present to the examiner at the beginning of the exam or to the teacher at the test.
2. The teacher is given the right to give a credit without a survey to those students who scored more than 60 points for the current and midterm controls.
3. At the intermediate control, the student must correctly answer the theoretical questions of the ticket - (to know) and correctly complete the situational task (to be able, to possess).
4. During the intermediate control, the teacher sums up the results of the patient's supervision by students during the semester. Assessment of the intermediate control: - min 20 points - Questions to check the level of learning to know (if the student correctly formulates the basic concepts when answering the questions asked) - 20-25 points
Tasks to check the level of learning BE ABLE and POSSESS (if the student correctly formulates the essence of the problem set in the ticket and gives recommendations for its solution) - 25-30 points - Tasks to check the level of learning to BE ABLE and POSSESS (in case of complete completion of the control task).
I. BASIC REQUIREMENTS FOR CURRENT CONTROL.
• When building a practical lesson, teachers adhere to the following general orientation plan: 1) Organizational stage of the lesson (time – up to 2%): a) roll call; b) homework on the following topic; c) motivation of the topic of this practical lesson; d) familiarization of students with the goals and plan of the lesson;
• Control and correction of the initial level of knowledge (time – up to 20%): a) variants of test control; b) correction of students' theoretical knowledge by the teacher;
• Stage of demonstration of practical skills and/or thematic patients by the teacher (time – up to 15%);
• Stage of independent work of students at the bedside (time – up to 45%) or solving situational problems (in the absence of a thematic patient);
• Final stage of the lesson (time – up to 18%): a) final final control of the formed practical skills and abilities in the analysis of patients examined by students b) final final control of the formed theoretical knowledge and skills, including by solving situational clinical problems; c) summing up the results of the practical lesson (the teacher's characterization of the students' fulfillment of all the goals of the lesson, and individual assessment of knowledge and skills).
II. RECOMMENDATIONS FOR THE ORGANIZATION OF INDEPENDENT WORK OF THE STUDENT
1. Tips for planning and organizing the time necessary for studying the discipline. It is recommended to organize the time necessary for studying the discipline as follows: Study the lecture notes on the same day, after the lecture – 10-15 minutes. Study the lecture notes the day before the next lecture – 10-15 minutes. Study of theoretical material using the textbook and notes – 1 hour per week. Preparation for the practical lesson – 2 hours. week – 3 hours 30 minutes.
2. Description of the sequence of actions of the student for understanding the material and its qualitative assimilation is recommended the following sequence of actions: After listening to the lecture and finishing classes, when preparing for the next day's classes, you should first review and think about the text of the lecture listened to today (10-15 minutes). When preparing for the next day's lecture, you need to review the text of the previous lecture, think about what it can be topic of the next lecture (10-15 minutes). During the week, choose a time (1 hour) to work with the recommended literature in the library. When preparing for the next day's practical classes, you should first read the basic concepts and approaches to the topic of homework. When performing an exercise or task, you must first understand what is required in the problem, what theoretical material should be used, and outline a plan for solving the problem.
3. Recommendations for the use of materials of the educational and methodological complex. It is recommended to use the methodological instructions for the course and the text of the teacher's lectures.
4. Recommendations for working with literature. The theoretical material of the course becomes more understandable when, in addition to listening to the lecture and studying the notes, books are also studied. It is easier to master the course, adhering to one textbook and notes . It is recommended, in addition to "memorizing" the material, to achieve a state of understanding of the topic of the discipline being studied.
For this purpose, it is recommended to perform a few simple exercises for this topic. In addition, it is very useful to mentally ask yourself the following questions (and try to answer them): what is this paragraph about ?, what new concepts have been introduced, what is their meaning?, what will it give in practice?.
5. Tips for preparing for midterm and intermediate controls. In addition to studying the lecture notes , it is necessary to use a textbook. In addition to "memorizing" the material, it is very important to achieve a state of understanding of the topics studied in the discipline. For this purpose,

it is recommended to perform several exercises on this topic after studying the next paragraphon them): what is this paragraph about?, what new concepts have been introduced, what is their meaning?, what will it give in practice?. With
In preparation for intermediate control, it is necessary to study the theory: definitions of all concepts and approaches to assessment to the state of understanding the material and independently solve several typical problems from each topic. When solving problems, it is always necessary to be able to interpret the result of the solution qualitatively.
6. Instructions for organizing homework. When doing homework, you must first read the basic concepts and approaches to the topic of the task. When doing an exercise or task, you must first understand what is required in the task, what theoretical material should be used, outline a plan for solving the problem, and then proceed to calculations and make a high-quality conclusion.
7. In preparation for intermediate and midterm controls, you need to study the theory: definitions of all concepts and approaches to assessment to the state of understanding the material and independently complete several typical tasks.

is carried out systematically
A student who has received an unsatisfactory
grade in the current material is obliged to prepare this section and answer it to the teacher at an individual
interview. A lecture missed without valid reasons must be worked out by the method of oral questioning by the lecturer
or the preparation of an essay on the materials of the missed lecture within a month from the date of absence
methods of working out missed lectures (questioning at practical lectures, test control, etc.). Practicing practical
classes.-Each lesson missed by a student without a valid reason is practiced mandatory.
Missed classes must be
worked out within 10 days from the date of absence. Missed classes without a valid reason
are worked out no more than one lesson per day.
for a valid reason (illness, absences with the permission of the dean's office) are worked out according to the thematic material without
taking into account the hours.- A student who has not worked out the absence within the established time frame is allowed to attend the
next classes only with
the permission of the dean or his deputy in writing. It is not allowed to remove
students who are poorly prepared for these classes from the next seminar.- for students who have missed seminars
classes due to a long-term illness, the work should be carried out after the permission of the dean's office according to an individual
schedule
agreed with the department.- In exceptional cases (participation in interuniversity conferences, competitions,
Olympiads, duty, etc.), the dean and his deputy, in agreement with the department, can exempt students from
working out some missed classes.
RECOMMENDATIONS FOR PREPARING A PRESENTATION
Multimedia presentations are a type of independent work of students to create visual aids
made with the help of a multimedia computer program PowerPoint. This type of work requires
coordination of the student's skills in collecting, systematizing, processing information, designing it in the form of a selection of
materials that briefly reflect the main issues of the topic under study, in electronic form
Presentation
materials are prepared by the student in the form of slides using
Microsoft PowerPoint. Requirements for students to prepare a presentation and defend it in the classroom in the form of a report.
1. The topic of the presentation is chosen by the student from the proposed list of FOS and must be agreed with the teacher and
correspond to the topic of the lesson.
2. Stages of preparing a presentation Drawing up a presentation plan (setting a task; goals of this work) Thinking through
each slide (at first, this can be done manually on paper), while it is important to answer the questions: - how
does the idea of this slide reveal the main idea of the entire presentation? - what will be on the slide? - what will be said? - how will
the transition to the next slide be made?
3. Making a presentation using MS PowerPoint:
- It makes sense to be careful. Sloppily made slides (inconsistencies in fonts and indents, typographical
errors in formulas) raise suspicion that the student-speaker approached the substantive questions
half-heartedly.- The title page is necessary to introduce you and the topic of your report to the audience.-
The number of slides is no more than 30.- The optimal number of lines on a slide is from 6 to 11.
- A common mistake is to read the slide verbatim. It is best if detailed information
(definitions, formulas) is written on the slide, and the words tell their meaningful meaning. The information on the slide can be
more formal and strictly stated than in speech.- The optimal switching speed is one slide in 1-2 minutes.-
It is recommended to use more drawings, pictures, formulas, graphs, tables in the presentation.
animation effects.- When explaining tables, it is necessary to say what the rows correspond to and what the columns correspond to.-
Introduce only those notations and concepts without which it is impossible to understand the main ideas of the report.- In a short
speech, you cannot repeat the same idea, even in other words - time is precious.- Any phrase must
be said for some reason. Then the speech will be integral and leave a good impression.- The last slide with conclusions in
To
do this, it is convenient to make a blank
slide with one large Word object "Insert / Object / Microsoft Word Document", select its
size once and multiply it on the required number of
slidesor the like; the Times font looks bad from afar. Be sure to set the MathType to the basic font size equal to the
basic font size in the text. Never manually adjust the size of the formula by pulling it out by the corner.
4. A student is obliged to prepare and make a report at a strictly allotted time by the teacher, and on time.
5. Instructions to the speakers.- to communicate new information;- to use technical means; - to know and
be well versed in the topic of the entire presentation;- to be able to discuss and quickly answer questions;- to strictly follow
the established time limit: speaker - 10 min.; discussion - 5 min.; It should be remembered that the speech consists of three
parts: introduction, main part and conclusion
The introduction should contain:- the title of the presentation;- the message of the main idea;-
a modern assessment of the subject of presentation;- a brief list of the issues under consideration;- a lively interesting form
of presentation; The main part, in which the speaker must deeply reveal the essence of the topic raised, is usually built on the
principle of a report.
topic and wanted to get acquainted with the materials. At the same time, the logical structure of the theoretical block should not be given
without visual aids, audio-visual and visual materials. The conclusion is a clear and concise generalization and brief
conclusions that listeners are always waiting for.
RECOMMENDATIONS FOR WRITING AN ESSAY
It is important that the abstract: firstly, covers
both scientific and social aspects of the problem; and secondly, presents both general theoretical provisions and
specific examples. The abstract should be based on the study of several sources additional to the main literature
. As a rule, these are special monographs or articles.

popular science magazines: "Children's Surgery", "Bulletin of the KRSU", "Health Care
The plan of the abstract
should be the author's. It shows the author's approach, his opinion, analysis of the problem. All facts and borrowed considerations given in the abstract
should be accompanied by references to the source of information. It is unacceptable to simply
compose an abstract from pieces of borrowed text.
source and page brackets. The absence of quotation marks and references means plagiarism and, in accordance with the established scientific
ethics, is considered a gross violation of copyright. The abstract is drawn up in the form of text on standard sheets
It begins with the title page, which indicates the name of the university, academic discipline, the topic of the essay, the
surname and initials of the student, the number of the academic group, the year and geographical location of the university. This is followed by a table of contents indicating the pages of the sections. It is desirable to divide the text of the abstract into sections: chapters, subchapters and title them.
tables, diagrams, figures). The abstract ends with the sections "Conclusion" and "List of references". The
conclusion presents the main conclusions, clearly formulated in thesis form and, usually, numbered.
The list of references should be compiled in full compliance with the current standard (rules), including
a special arrangement of punctuation marks. To do this, it is enough to use as an example any book published by
large scientific publishing houses: "GEOTAR-Media", "Progress", "Mir", "Publishing House of Moscow State University", etc.

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