
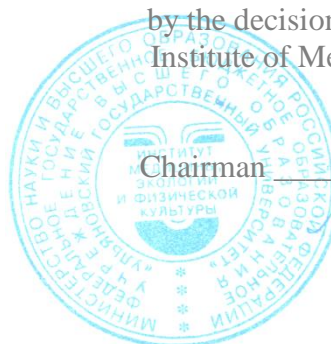


Ministry of science and high education RF Ulyanovsk State University	Form	
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**APPROVED BY**

by the decision of the Academic Council of the USU  
Institute of Medicine, Ecology and Physical Culture  
17.05.2023 Record No. 9/250



Chairman

  
V. I. Midlenko  
"17 " May 2023

### EDUCATIONAL PLAN

Discipline	Endocrinology
Faculty	Medical faculty of T.Z. Biktimirov
Name of department	Department of Faculty Therapy
Course	5 course

Direction (specialty) \_\_\_\_\_ 31.05.01 "General Medicine " \_\_\_\_\_

Orientation (profile/specialty) not provided

Form of training \_\_\_\_\_ full-time \_\_\_\_\_

Date of introduction into the academic process at Ulyanovsk State University 01.09.2023


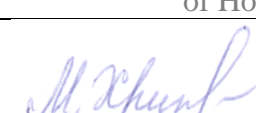
Revised at the Department meeting, Record No. 9 of 16.04.2024


Revised at the Department meeting, Record No. \_\_\_\_\_ of \_\_\_\_\_ « \_\_\_\_\_ » 20

Revised at the Department meeting, Record No. \_\_\_\_\_ of \_\_\_\_\_ « \_\_\_\_\_ » 20

Information about the authors:

Initials	Abbreviation of the department	Degree, scientific rank
Slobodniuk N.A.	Faculty Therapy	Docent, c.m.s.

Agreed:	Agreed:
Head of department, developing discipline of faculty therapy	Head of the Graduate Department of Hospital Therapy
 / Ruzov V. I. / «17» May 2023	 / Visa-Khripunova M. A. / «17» May 2023

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## 1. AIM AND OBJECTIVES OF THE DISCIPLINE

**The aims of the discipline:** the formation and development of an integral system of theoretical and practical knowledge and skills in endocrinology among students.

### **The objectives of mastering the discipline:**


- know the etiology, pathogenesis, clinical symptoms of endocrinological diseases, their complications and urgent conditions;
- to master the examination methodology, knowledge of the clinical symptoms of endocrinological diseases, their complications;
- to master the methods of diagnosis and differential diagnosis of endocrinological diseases, their complications;
- master the methods of treatment of endocrinological diseases and their complications;
- to master the methodology of organizing and conducting medical examinations of patients with endocrinological diseases.

## 2. PLACE OF THE SUBJECT IN THE STRUCTURE OF GEP

The discipline "Endocrinology" belongs to the mandatory part of block 1 of the specialty of the Curriculum of the specialty 31.05.01 "Medical business".

The study of this discipline is based on the knowledge, skills, competencies obtained during the development of the following disciplines: Immunology, Physiology of visceral systems, General Surgery. Introduction to the specialty, Physiology of visceral systems, Fundamentals of rational nutrition, Nanotechnology in medicine, Fundamentals of functional laboratory diagnostics, Pathological anatomy, Propaedeutics of internal diseases, Biopsychosocial approach to medical rehabilitation, Pharmacology. Pathophysiology of extreme conditions, Modern biomedical technologies, Pediatrics, Hygiene, Dentistry, Modern aspects of neurology, Otorhinolaryngology, Faculty Surgery, Faculty Therapy, Neurology, Medical Genetics, Neurosurgery, Dermatovenerology, Urology and Andrology, Psychiatry, Medical psychology, Clinical Psychology, Clinical pathological Anatomy, Occupational Diseases, Ophthalmology.


Subsequent disciplines: Diabetology and emergency endocrinology, Practical application of the International Classification of Functioning in rehabilitation for various pathologies, Infectious diseases, Traumatology, orthopedics, Modern problems of miscarriage, Forensic medicine, Hospital surgery, pediatric surgery, Obstetrics and gynecology, Anesthesiology, resuscitation and intensive care, Clinical pharmacology, Topical issues of hospital surgery, Topical issues of gynecology, Polyclinic therapy, Hospital therapy, Pathophysiology, Oncology and radiation therapy, Diagnosis and treatment of extrapulmonary tuberculosis, Palliative medicine, Topical issues of HIV infection, Radiation diagnostics, Modern aspects of oncology, Surgical gastroenterology and endoscopy, Clinical electrocardiography, Topical issues of internal diseases, Practice for obtaining primary professional skills, including primary skills and skills of research activities (Care of therapeutic and surgical patients (Part 1)), Clinical practice (Care of therapeutic and surgical patients. (Part 2)), Assistant to junior medical personnel, Assistant to a ward nurse, Assistant to a procedural nurse (part 1), Assistant to a procedural nurse (part 2), Clinical practice (Assistant to a hospital doctor), Practice for obtaining professional skills and professional experience (Assistant to a doctor of an outpatient polyclinic institution).

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### 3.LIST OF EXPECTED RESULTS OF INSTRUCTION ON THE SUBJECT (UNIT), CORELATED WITH PLANNED RESULTS OF COMPLETING THE PROGRAM

The study of the subject "Endocrinology" within the completion of the educational program is directed towards the formation of the following general and professional competences in students:

Code and name of the general professional competence	Code and name of the indicator of achievement of general professional competence
GPC -7 The ability to prescribe treatment and monitor its effectiveness and safety	<p><b>To know:</b> The student must know the classification and main characteristics of medicines, pharmacodynamics and pharmacokinetics indications and contraindications for the use of medicines, side effects; general principles of prescribing and composing prescription prescriptions of medicines; treatment methods and indications for their use; the mechanism of therapeutic action of physical therapy and physiotherapy, indications and contraindications to their appointment, features of their implementation; types and methods of modern general anesthesia (mask, endotracheal, intravenous), prevention of postoperative pulmonary complications, - clinical and pharmacological characteristics of the main groups of drugs and rational choice of specific drugs in the treatment of major pathological syndromes of diseases and emergency conditions in patients, including the basics of anti-doping legislation</p> <p><b>To be able to:</b> The student should be able to use physical, chemical and biological equipment; classify chemical compounds based on their structural formulas; predict the direction and result of physico-chemical processes and chemical transformations of biologically important substances; use the IUPAC nomenclature for compiling names according to the formulas of typical representatives of biologically important substances and medicines; analyze the effect of medicines on the totality of their pharmacological properties and the possibility of their use for therapeutic treatment; prescribe prescriptions for medicines, use various dosage forms in the treatment of certain pathological conditions, based on the characteristics of their pharmacodynamics and pharmacokinetics; apply basic antibacterial antiviral and biological drugs; evaluate possible manifestations of drug overdose and ways to eliminate them; to formulate indications for the chosen method of treatment, taking into account etiologic and pathogenetic agents, to justify pharmacotherapy in a particular patient with major pathological syndromes and urgent conditions, to determine the route of administration, regimen and dose of medications, to evaluate the effectiveness and safety of the treatment; to apply various methods of drug administration</p> <p><b>To own to:</b> The student must possess the methods of analyzing clinical, laboratory and instrumental data to determine the algorithm of patient management, drawing up drug and non-drug treatment regimens</p>

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PC -2 Readiness to collect and analyze patient complaints, his anamnesis data, examination results, laboratory, instrumental, pathologic-anatomical and other studies in order to recognize the condition or establish the fact of the presence or absence of the disease	<p><b>To know:</b> The student should know the diagnostic methods, diagnostic capabilities of methods of direct examination of the patient of therapeutic, surgical and obstetric-gynecological profile; modern methods of clinical, laboratory, instrumental examination of patients (including endoscopic, X-ray methods, ultrasound diagnostics)</p> <p><b>To be able to:</b> The student should be able to determine the patient's status: collect anamnesis, conduct a survey of the patient and/or his relatives, conduct a physical examination of the patient (examination, palpation, auscultation); conduct a primary examination of the systems and organs: respiratory, cardiovascular, blood and hematopoietic organs, digestive, endocrine and urinary; outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result</p> <p><b>To own to:</b> The student must possess the methods of general clinical objective examination (questioning, examination, palpation, percussion, auscultation) for diseases of internal organs; interpretation of the results of laboratory, instrumental diagnostic methods for pathology of internal organs</p>
PC -3 Readiness to manage and treat patients with various nosological forms in outpatient and day hospital conditions	<p><b>To know:</b> The student should know the criteria for the diagnosis of the most common diseases of internal organs. Features of the organization and scope of work of an outpatient doctor, modern diagnostic capabilities of the polyclinic service, methods of emergency measures, indications for planned hospitalization; features of the treatment of diseases of internal organs in outpatient conditions, including day hospital conditions</p> <p><b>To be able to:</b> The student should be able to formulate indications for the chosen method of treatment, taking into account etiologic and pathogenetic agents; develop an algorithm for the tactics of managing a patient with a therapeutic profile in a polyclinic</p> <p><b>To own to:</b> The student must have an algorithm for determining the tactics of managing a patient with a therapeutic pathology, conducting a differential diagnosis for therapeutic pathology</p>

#### 4. VOLUME OF THE SUBJECT

##### 4.1. Volume of the subject in credit points (total): 2 credit points

##### 4.2. On types of academic workload (in hours): - 72 hours

Type of academic work	Number of hours 72 (form of education)	
	Total according to the plan	№ semester
1	in total	5 course 9
		3
Work of students with a teacher	50/50*	50/50*
Classes:	50/50*	50/50*
lectures	14/14*	14/14*
practical classes and seminars	36/6*/36*	36/6*/36*

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lab classes (practical lessons)	-	-
Self-study work	22	22
Concurrent control (number and type: a test, a colloquium, a report)	Job interview, solving situational problems, testing, credit interview	Job interview, solving situational problems, testing, credit interview
Course paper	-	-
Types of intermediate attestation (examination, test)	credit	credit
Total number of hours on the subject	72 / 2 credit units	72 / 2 credit units

\* If it is necessary to use partially or exclusively distance learning technologies in the educational process, it should be noted that the total number of hours (c.u.) set by the Department of discipline/specialty for each discipline/practice remains unchanged and is implemented in full. In this case, in the corresponding section of the educational program the total number of hours of work with students in accordance with the educational plan is allocated and the number of hours for conducting classes in a remote format using e-learning (online courses, lectures and seminars in videoconference mode, virtual practical classes, laboratory work in the form of virtual analogues, calculation and graphic works, individual tasks in the electronic information and educational environment, etc.) Training and industrial practice for all areas of discipline/specialties of all forms of training can be partially or fully implemented in a remote format.

#### 4.3. Contents of the discipline (module). Distribution of hours on themes and kinds of study:

The form of training: full time

Name of sections and topic	Total	Types of training sessions					Current control form
		lect.	pract .cl.	lab oratory classes	includ ing interactive conten t.	ind epende nt wor k	
1	2	3	4	5	6	7	
<b>Section 1. Diabetes mellitus</b>							
Diabetes mellitus	24	6	12	-	2	6	Survey in the classroom, solving situational problems, testing
<b>Section 2. Diseases of the thyroid gland</b>							
Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter	12	2	6	-	1	4	Survey in the classroom, solving situational problems, testing
<b>Section 3. Neuroendocrinology</b>							

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Itsenko-Cushing's disease and syndrome. Acromegaly, gigantism. Diabetes insipidus	12	2	6	-	1	4	Survey in the classroom, solving situational problems, testing
<b>Section 4. Diseases of the adrenal glands</b>							
Chronic adrenal insufficiency. Pheochromocytoma	12	2	6	-	1	4	Survey in the classroom, solving situational problems, testing
<b>Section 5. Metabolic syndrome and obesity</b>							
Metabolic syndrome and obesity	12	2	6	-	1	4	Survey in the classroom, solving situational problems, testing, interview on the test
TOTAL	72	14	36	-	6	22	

## 5. COURSE CONTENT

### Section 1. Diabetes mellitus

**Topic 1.** Diabetes mellitus. Goals and objectives of the subject endocrinology. The endocrine glands and their regulation. Biological effects of insulin. Diabetes mellitus. Definition. Classification. Target levels of glycated hemoglobin. Epidemiology. Etiology. Pathogenesis. Clinical syndromes of various types of diabetes mellitus. Diagnostics. Treatment of type 1 diabetes mellitus. Classification of insulins. Insulin therapy. Treatment of type 2 diabetes mellitus. Groups of tableted hypoglycemic drugs: the mechanism of action, indications, contraindications. Treatment of prediabetes.

**Topic 2. Diabetes mellitus.** Comas in diabetes mellitus. Ketoacidotic coma. Hyperosmolar state. Lactic acidemic coma. Differential diagnosis of com. Hypoglycemic coma. Diabetic micro- and macroangiopathies. Diabetic nephropathy. Diabetic retinopathy. Diabetic neuropathy. Diabetic foot syndrome. Medical examination. Prevention. Questions of medical and social expertise.


### Section 2. Diseases of the thyroid gland

**Topic 3.** Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter. Anatomy and physiology of the thyroid gland. Biological effects of thyroid hormones. The degree of enlargement of the thyroid gland. Diagnosis of thyroid diseases. Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter. Epidemiology. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Complications. Differential diagnosis. Treatment. Prevention. Forecast. Medical examination. Medical and social expertise. Thyrotoxic and hypothyroid coma. Etiology. Clinic. Differential diagnosis. Emergency care.

### Section 3. Neuroendocrinology

**Topic 4.** Itsenko-Cushing's disease. Acromegaly, gigantism. Diabetes insipidus.. Anatomy and physiology of the pituitary gland. Biological effects of pituitary hormones. Diabetes insipidus: etiology and pathogenesis, clinic, diagnosis, treatment. Acromegaly, gigantism. Etiology and pathogenesis, clinic, diagnosis, treatment. Itsenko-Cushing's disease and syndrome. Diagnostic tests. Small and large dexamethasone samples. Differential diagnosis of ACTH dependent and independent syndrome. Hypothalamic syndrome of the puberty period in adolescents. Treatment:



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surgical, radiation, medication. Course. Prevention. Forecast. Medical examination. Medical and social expertise.

#### **Section 4. Diseases of the adrenal glands**

**Topic 5.** Pheochromocytoma. Chronic adrenal insufficiency. Anatomy and physiology of the adrenal glands. Biological effects of hormones of the adrenal cortex. Chronic adrenal insufficiency. Etiology and pathogenesis. Clinic. Diagnostics. Differential diagnosis. Treatment. Course. Forecast. Questions of medical and social expertise. Acute adrenal insufficiency. Etiology. Clinic. Emergency care. Biological effects of catecholamines. Pheochromocytoma. Etiology. Pathogenesis. Clinical variants. Diagnostics. Treatment. Prevention. Forecast. Medical examination. Medical and social expertise.

#### **Section 5. Metabolic syndrome and obesity**

**Topic 6.** Metabolic syndrome and obesity. Determination of metabolic syndrome and obesity. Classification of obesity. Physiology of adipose tissue. Epidemiology of obesity in an adult patient. Etiology. Pathogenesis, clinic. Complications. Treatment of obesity and metabolic syndrome. Diet therapy. Prevention. Drug therapy. Surgical treatment. Prevention. Forecast. Medical examination. Medical and social expertise.

### **6.TOPICS OF PRACTICAL CLASSES AND SEMINARS (FOR DISCUSSING AND SELF-PREPARING OF STUDENTS)**

#### **Section 1. Diabetes mellitus**

##### **Topic 1.** Diabetes mellitus

Questions on the topics of the section (for discussion at the lesson):

1. Definition and classification of diabetes mellitus.
2. Etiology, pathogenesis of type 1 diabetes mellitus, risk factors for its development.
3. Etiology and pathogenesis of type 2 diabetes mellitus, risk factors for development and prevention.
4. Criteria for diabetes mellitus, an algorithm for individualized selection of HbA1c therapy goals, biological effects of insulin.
5. Clinic and differential diagnosis of type 1 and type 2 diabetes mellitus.
6. Atypical forms of diabetes mellitus (diabetes mellitus type Mody, LADA).
7. Treatment of type 1 diabetes mellitus. Insulin therapy, characteristics of insulins.
8. Treatment of type 2 diabetes mellitus. The mechanism of action, indications and contraindications of groups of sugar-lowering tablet drugs.
9. Prevention, medical examination, medical and social expertise in diabetes mellitus.


##### **Topic 2.** Diabetes mellitus

Questions on the topics of the section (for discussion at the lesson):

1. Hypoglycemic coma: etiology, pathogenesis, clinic, diagnosis, emergency therapy.
2. Ketoacidotic coma: etiology, pathogenesis, clinic, diagnosis, emergency therapy.
3. Hyperosmolar state: etiology, pathogenesis, clinic, diagnosis, emergency therapy.
4. Lactic acidemic coma: etiology, pathogenesis, clinic, diagnosis, emergency therapy.
5. Differential diagnosis of com in diabetes mellitus.
6. Microvascular complications of diabetes mellitus (diabetic retinopathy and nephropathy): classification, clinic, diagnosis, treatment.
7. Diabetic polyneuropathy: classification, clinic, diagnosis, treatment.
8. Classification, clinic, diagnosis, treatment of microvascular complications of diabetes mellitus.
9. Diabetic foot syndrome: classification, clinic, diagnosis, treatment.

#### **Section 2. Diseases of the thyroid gland**

**Topic 3.** Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter

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Questions on the topics of the section (for discussion at the lesson):

1. Biological effects of thyroid hormones, hormonal regulation and the degree of enlargement of the thyroid gland.
2. Diffuse toxic goiter: etiology, pathogenesis, clinic, diagnosis, treatment.
3. Hypothyroidism: etiology, pathogenesis, clinic, diagnosis, treatment.
4. Thyroiditis (acute, subacute, chronic): etiology, pathogenesis, clinic, diagnosis, treatment.
5. Diffuse goiter: etiology, pathogenesis, clinic, diagnosis, treatment.
6. Nodular goiter: etiology, pathogenesis, clinic, diagnosis, treatment.
7. Thyrotoxic coma: etiology, clinic, emergency therapy.
8. Hypothyroid coma: etiology, clinic, emergency therapy.
9. Diagnosis and differential diagnosis of thyroid diseases.
10. Prevention, medical examination, medical and social examination of thyroid diseases.
11. Thyroid hormones and thyrostatic drugs: indications, contraindications.

### **Section 3. Neuroendocrinology**

**Topic 4.** Cushing's disease and syndrome. Acromegaly, gigantism

Questions on the topics of the section (for discussion at the lesson):

1. Biological effects and hormonal regulation of pituitary hormones, the principle of feedback.
2. Diabetes insipidus: etiology, pathogenesis, clinic, diagnosis, treatment.
3. Acromegaly, gigantism: etiology, pathogenesis, clinic, diagnosis, treatment.
4. ACTH-dependent and independent Cushing's syndrome: etiology, pathogenesis, clinic.
5. Iatrogenic Cushing's syndrome: etiology, pathogenesis, clinic.
6. Hypothalamic syndrome of puberty in adolescents.
7. Diagnostics, differential diagnostics (tests), diseases and Cushing's syndrome.
8. Treatment of Cushing's syndrome: surgical, radiation, medication.
9. Prevention, medical examination, medical and social examination of Cushing's syndrome.

### **Section 4. Diseases of the adrenal glands**

**Topic 5.** Pheochromocytoma. Chronic adrenal insufficiency

Questions on the topics of the section (for discussion at the lesson):

1. Biological effects of adrenal cortex hormones and catecholamines.
2. Pheochromocytoma: etiology, pathogenesis, diagnosis, treatment.
3. Classification and clinical manifestations of pheochromocytoma.
4. Chronic adrenal insufficiency: etiology, pathogenesis, clinic, diagnosis, treatment.
5. Differential diagnosis of primary and secondary adrenal insufficiency.
6. Differential diagnosis of pheochromocytoma and chronic primary adrenal insufficiency.
7. Hypoadrenal crisis: etiology, pathogenesis, clinic, diagnosis, emergency therapy, prevention of the crisis.
8. Catecholamine crisis: etiology, pathogenesis, clinic, diagnosis, emergency therapy.
9. Prevention, medical examination, medical and social examination of pheochromocytoma and chronic adrenal insufficiency.


### **Section 4. Metabolic syndrome and obesity**

**Topic 6.** Metabolic syndrome and obesity

Questions on the topics of the section (for discussion at the lesson):

1. Definition, etiology, epidemiology, obesity.
2. Risk factors for obesity and metabolic syndrome.
3. Pathogenesis of obesity.
4. Classification of obesity.
5. Clinical symptoms, features of heart damage in obesity and metabolic syndrome.



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6. Criteria of metabolic syndrome.
7. Principles of treatment of obesity and metabolic syndrome.
8. Surgical treatment, complications, prognosis of obesity and metabolic syndrome.
9. Prevention, medical examination, medical and social examination of obesity and metabolic syndrome.

### 7.LABORATORY CLASSES


This type of work is not provided by the plane.

### 8.SUBJECTS OF COURSE PAPERS, TESTS, ESSAYS

This type of work is not provided by the plane.

### 9.QUESTIONS FOR CREDIT ON DISCIPLINE


№	The formulation of the question
1	The mechanism of action of groups of tableted hypoglycemic drugs
2	Classification, effects of action and indications for insulin therapy
3	Emergency therapy and diagnosis of hypoglycemic conditions
4	Features of the diagnosis and emergency treatment of diabetic coma
5	Features of the therapy of the disease and the Itsenko-Cushing syndrome
6	Thyroid hormones and thyrostatic drugs: indications, contraindications, features of use
7	Classification, diagnosis of diabetes insipidus. Differential diagnosis of diabetes mellitus and diabetes insipidus
8	Etiology, pathogenesis, clinical picture, treatment of diffuse toxic goiter
9	Etiology, pathogenesis, clinical picture, treatment of hypothyroidism
10	Risk factors, prevention, medical examination, medical and social examination of Itsenko-Cushing's disease
11	Etiology, pathogenesis, clinical picture, treatment of chronic adrenal insufficiency
12	Etiology, pathogenesis, clinical picture, treatment of obesity
13	Diagnosis of chronic complications of diabetes mellitus
14	Diagnosis of various types of diabetes mellitus
15	Differential diagnosis of hyperglycemic com
16	Differential diagnosis of the disease and the Itsenko-Cushing syndrome
17	Hormonal, laboratory, instrumental diagnostics of thyroiditis
18	Differential diagnosis of diffuse toxic goiter and hypothyroidism
19	Diagnosis and clinical manifestations of pheochromocytoma
20	Differential diagnosis of primary and secondary adrenal insufficiency
21	Etiology, pathogenesis, clinic, treatment of diabetes insipidus
22	Etiology, clinical manifestations of hypoglycemic coma
23	Clinical manifestations of primary adrenal insufficiency
24	Etiology, pathogenesis, clinical picture, treatment of acromegaly
25	Clinical symptoms and differential diagnosis of hypoglycemic conditions
26	Features of laboratory, instrumental diagnostics and treatment of chronic complications of diabetes mellitus
27	Etiology, pathogenesis, clinical picture, treatment of gigantism
28	Classification of obesity, treatment of obesity and metabolic syndrome
29	Features of patient management and differential diagnosis of hyperglycemic com
30	Clinical manifestations and features of management of patients with autoimmune

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	thyroiditis
31	Management of patients with diffuse and nodular goiter
32	Biological effects of pituitary and adrenal hormones
33	Features of management of patients with obesity and metabolic syndrome
34	Management of patients with diabetes mellitus in hyperosmolar coma
35	Diagnosis and management of patients with atypical forms of diabetes mellitus (diabetes mellitus type Mody, LADA)
36	Tactics of emergency care in pheochromocytoma crisis.

### 10.SELF-STUDY WORK OF STUDENTS

Name of sections / subject	Type of SSW	Total number of hours	Current control
Diabetes mellitus	Study of the educational material, preparation for passing the test.	6	Survey in the classroom, solving situational problems
Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Itsenko-Cushing's disease and syndrome. Acromegaly, gigantism Diabetes insipidus	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Pheochromocytoma. Chronic adrenal insufficiency	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Metabolic syndrome and obesity	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems

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## 11. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF DISCIPLINE

### a) List of recommended literature

#### Core reading:

1 Diagnostics and treatment of internal diseases in outpatient department = Диагностика и лечение терапевтических заболеваний на амбулаторном этапе : пособие для студентов учреждений высшего образования, обучающихся по специальности 1-79 01 01 «Лечебное дело» : manual for students of higher education institutions studying in the specialty 1-79 01 01 / Е. Н. Кежун, Н. С. Слободская, Д. В. Пицко, К. В. Гончар. - Гродно : ГрГМУ, 2020. - 200 с. - ISBN 9789855953198. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/diagnostics-and-treatment-of-internal-diseases-in-outpatient-department-11950033/>

2 Сахарный диабет в таблицах и схемах = Diabetes mellitus in the tables and diagrams : учебное пособие / Т. Н. Панова, А. А. Демидов, О. Н. Дьякова, Е. М. Дьякова. - Астрахань : Астраханский ГМУ, 2017. - 72 с. - ISBN 9785442402186. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/saharnyj-diabet-v-tablicah-i-shemah-11261456/>

#### Supplementary reading:

1. Ивашкин, В. Т. Internal diseases propedeutics / В. Т. Ivashkin, A. V. Okhlobystin. - Moscow : GEOTAR-Media, 2020. - 176 p. - 176 с. - ISBN 978-5-9704-5555-5. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970455555.html>.

2. Internal diseases, endocrinology and physical medicine : manual : учебно-методическое пособие для студентов 4 и 5 курса, обучающихся по специальности «Лечебное дело», на английском языке-посреднике / А. А. Тарасов, Е. В. Калинина, А. Л. Емельянова, И. В. Лекарева. - Волгоград : ВолГМУ, 2018. - 80 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/vnutrennie-bolezni-endokrinologiya-i-fizioterapiya-12448531/>

#### Educational and methodical literature:

1 Slobodnyuk N. A.

Methodological recommendations for practical studies and independent work of students on the discipline «Endocrinology» for specialty 31.05.01 «General medicine» / N. A. Slobodnyuk, M. V. Frolova; Ulyanovsk State University. - Ulyanovsk : UISU, 2022. - 32 p. - Неопубликованный ресурс; На англ. яз. - URL:

<http://lib.ulsu.ru/MegaPro/Download/MObject/11544>. - Режим доступа: ЭБС УлГУ. - Текст : электронный.

#### Agreed:

Leading specialist of the scientific library of ULSU:

*Смоля*

/Stadolnikova D.R.

24.04.2023

### b) software

SPS Consultant Plus

NEB of the Russian Federation

EBS IPRbooks


AIBS "MegaPro"

OS Microsoft Windows

"MoyOfis Standard"





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## 12. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE

Classrooms for lectures, seminars, for conducting current control and intermediate certification, group and individual consultations

The classrooms are equipped with specialized furniture, an educational board. Lecture halls are equipped with multimedia equipment to provide information to a large audience. The premises for independent work are equipped with computer equipment with the ability to connect to the Internet and provide access to an electronic information and educational environment, an electronic library system. The list of equipment used in the educational process is indicated in accordance with the information on the material and technical support and equipment of the educational process posted on the official website of the UISU in the section "Information about the educational organization".

## 13. SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES

Training students with disabilities is carried out taking into account the peculiarities of psychophysical development, individual capabilities and health of such students. Education of students with disabilities can be organized in conjunction with other students, and separately. If necessary, students from among persons with disabilities (at the request of the student) may be offered one of the following options for the perception of information, taking into account their individual psychophysical characteristics:

- for persons with visual impairment: in printed form in large print; in the form of an electronic document; in the form of an audio file (translation of educational materials into audio format); in printed form in Braille; individual consultations with the involvement of a tiflosurdoperevodchika; individual tasks and consultations.
- for persons with hearing impairment: in printed form; in the form of an electronic document; video materials with subtitles; individual consultations with the assistance of a sign language interpreter; individual tasks and consultations.
- for persons with musculoskeletal disorders: in printed form; in the form of an electronic document; in the form of an audio file; individual tasks and consultations.

If it is necessary to use partially/exclusively distance educational technologies in the educational process, the organization of the work of teaching staff with students with disabilities and disabilities is provided in an electronic information and educational environment, taking into account their individual psychophysical characteristics.

Developer




signature




/ docent Slobodnyuk N.A.

position


full name

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**LIST OF CHANGES of  
Educational plan of discipline “Endocrinology”  
Speciality 31.05.01. «General medicine»**

<b>№</b>	<b>Content of the change or a link to the attached text of the</b>	<b>Full name of the head of the Department developing the discipline</b>	<b>Signature</b>	<b>Date</b>
1	Appendix 1. Introduction of changes to item A) List of recommended literature item 11 "Educational-methodological and information support of the discipline" with the design of appendix	Ruzov V.I.		16.04.2024г.
2	Appendix 2. Introduction of changes to item C) Professional databases, directory and search systems item 11 "Educational-methodological and information support of the discipline" with the design of appendix	Ruzov V.I.		16.04.2024г.
3	Appendix 3. Introduction of changes to item 10. Self-study work of students	Ruzov V.I.		16.04.2024г.



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Appendix 1

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## 11. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF DISCIPLINE

### Эндокринология

#### a) List of recommended literature

##### Core reading:

1. Symptoms and syndromes of endocrine diseases. Methods of examination and principles of treatment of patients with endocrine pathology P. 1 = Симптомы и синдромы эндокринных заболеваний. Методы обследования и принципы лечения больных с эндокринной патологией Ч. 1 : Учебное пособие / В. В. Антонян, А. А. Демидов, А. А. Воробьева и др. - Астрахань : Астраханский ГМУ, 2022. - 67 с. - ISBN 9785442406726. - Текст : электронный // ЭБС "Букар" : [сайт]. - URL : <https://www.books-up.ru/ru/book/symptoms-and-syndromes-of-endocrine-diseases-methods-of-examination-and-principles-of-treatment-of-patients-with-endocrine-pathology-p-1-16139222/>

2. Uryasev O. M. Diabetes mellitus type 1 and type 2: clinic, diagnosis, treatment : guide on discipline "endocrinology" for foreign students of general medicine faculty / O. M. Uryasev, S. V. Berstneva, S. B. Aksentiev ; Uryasev O. M., Berstneva S. V., Aksentiev S. B. - Рязань : РязГМУ, 2023. - 102 с. - Библиогр.: доступна в карточке книги, на сайте ЭБС Лань. - Книга из коллекции РязГМУ - Медицина. - URL: <https://e.lanbook.com/book/352361>

##### Supplementary reading:

1 Diagnostics and treatment of internal diseases in outpatient department = Диагностика и лечение терапевтических заболеваний на амбулаторном этапе : пособие для студентов учреждений высшего образования, обучающихся по специальности 1-79 01 01 «Лечебное дело» : manual for students of higher education institutions studying in the specialty 1-79 01 01 / E. H. Кежун, Н. С. Слободская, Д. В. Пицко, К. В. Гончар. - Гродно : ГрГМУ, 2020. - 200 с. - ISBN 9789855953198. - Текст : электронный // ЭБС "Букар" : [сайт]. - URL : <https://www.books-up.ru/ru/book/diagnostics-and-treatment-of-internal-diseases-in-outpatient-department-11950033/>

2. Внутренние болезни, эндокринология и физиотерапия = Internal diseases, endocrinology and physical medicine : manual : учебно-методическое пособие для студентов 4 и 5 курса, обучающихся по специальности «Лечебное дело», на английском языке-посреднике / А. А. Тарасов, Е. В. Калинина, А. Л. Емельянова, И. В. Лекарева. - Волгоград : ВолГМУ, 2018. - 80 с. - Текст : электронный // ЭБС "Букар" : [сайт]. - URL : <https://www.books-up.ru/ru/book/vnutrennie-bolezni-endokrinologiya-i-fizioterapiya-12448531/>

3. Сахарный диабет в таблицах и схемах = Diabetes mellitus in the tables and diagrams : учебное пособие / Т. Н. Панова, А. А. Демидов, О. Н. Дьякова, Е. М. Дьякова. - Астрахань : Астраханский ГМУ, 2017. - 72 с. - ISBN 9785442402186. - Текст : электронный // ЭБС "Букар" : [сайт]. - URL : <https://www.books-up.ru/ru/book/saharnyj-diabet-v-tablicah-i-shemah-11261456/>

##### Educational and methodical literature:

1 Slobodnyuk N. A.


Methodological recommendations for practical studies and independent work of students on the discipline «Endocrinology» for specialty 31.05.01 «General medicine» / N. A. Slobodnyuk, M. V. Frolova; Ulyanovsk State University. - Ulyanovsk : ULSU, 2022. - 32 p. - Неопубликованный ресурс; На англ. яз. - URL:

<http://lib.ulsu.ru/MegaPro/Download/MObject/11544>. - Режим доступа: ЭБС УлГУ. - Текст :

электронный.

AGREED:

Leading specialist of the scientific library of ULSU: *I. Smoz*  
/Stadolnikova D.R.

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## Appendix 2

### *Профессиональные базы данных, информационно-справочные системы*

#### **1. Электронно-библиотечные системы:**

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2024]. – URL: <http://www.iprbookshop.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство «ЮРАЙТ». – Москва, [2024]. - URL: <https://urait.ru> . – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2024]. – URL: <https://www.studentlibrary.ru/cgi-bin/mb4x>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2024]. – URL: <https://www.rosmedlib.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО «Букап». – Томск, [2024]. – URL: <https://www.books-up.ru/ru/library/> . – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС «Лань». – Санкт-Петербург, [2024]. – URL: <https://e.lanbook.com>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС Znanium.com : электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2024]. - URL: <http://znanium.com> . – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

**2. КонсультантПлюс** [Электронный ресурс]: справочная правовая система. / ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2024].

**3. eLIBRARY.RU**: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2024]. – URL: <http://elibrary.ru>. – Режим доступа : для авториз. пользователей. – Текст : электронный

**4. Федеральная государственная информационная система «Национальная электронная библиотека»** : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2024]. – URL: <https://нэб.рф>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.


**5. Российское образование** : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: <http://www.edu.ru>. – Текст : электронный.

**6. Электронная библиотечная система УлГУ** : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL: <http://lib.ulsu.ru/MegaPro/Web>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

Инженер ведущий



Щуренко Ю.В. 2024

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Appendix 3.

Name of sections / subject	Type of SSW	Total number of hours	Current control
Diabetes mellitus	Study of the educational material, preparation for passing the test.	6	Survey in the classroom, solving situational problems
Diffuse toxic goiter. Hypothyroidism. Thyroiditis. Endemic and nodular goiter	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Itsenko-Cushing's disease and syndrome. Acromegaly, gigantism Diabetes insipidus	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Pheochromocytoma. Chronic adrenal insufficiency	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems
Metabolic syndrome and obesity. Hypoparathyroidism, hyperparathyroidism	Study of the educational material, preparation for passing the test.	4	Survey in the classroom, solving situational problems