



Educational institution  
"Royal Metropolitan university"

Quality Management System  
Syllabus of the discipline "Endocrinology"  
Specialty 560001 "General Medicine" EI "RMU"

**Ministry of education and science of Kyrgyz Republic**  
**EI "Royal Metropolitan University"**  
**Department of clinical disciplines**



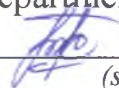
**SYLLABUS**

**of the discipline "Endocrinology"**  
**for students of specialty 560001 "General Medicine"**

Form of study	full-time
Course	3
Semester	6
Credit	2
Total credits in the curriculum	2
Total hours according to the curriculum	60
Lectures	18
Practical lessons	18.
Independent work	24

Curriculum developers:  
Mustapakulova A.M.

Reviewed and approved at a meeting of the  
Department of Clinical Disciplines  
Protocol No. 1 from "9" 09 2024  
Head of the Department, PhD Bekibaeva B.S.

  
(signature)

**Bishkek 2024**



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**Teacher:**

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**Department Assistant**

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### **Name and difficulty of the discipline**

Well	Semester	Number of weeks	Number of academic watch		Number of hours of independent work		Total hours	Number of modules
			Lectures	Practical classes	SIV	SIVT		
3	6	9	18	18	12	12	60	2

### **Abstract of the academic discipline**

#### **Annotation academic discipline**

The curriculum for the discipline "Endocrinology" is compiled in accordance with the requirements of the reform of the system of higher medical education, meets the strategy of integrating the goals and objectives of training. Teaches the basics of clinical examination of an endocrinological patient with subsequent determination of damage to the endocrine system, knowledge of the main endocrinological symptoms and syndromes. And also knowing the basics of etiology, clinical picture, classification, treatment of the main, most common diseases of the endocrine system.

#### **Objectives and tasks of the discipline:**

##### **Learning Objective:**

Formation of professional competencies in clinical thinking, the ability and readiness to independently diagnose the most common endocrinological diseases, the ability to professionally provide assistance in emergency situations in clinical neurology and know the methods of treatment and the basics of prevention of these diseases.

##### **Learning Objectives:**

- To study the etiological and clinical structure of the most common diseases of the endocrine system.
- To teach students to recognize patients with endocrine system diseases.
- To study methods of diagnosing endocrine diseases.
- To teach students how to provide first aid in emergency situations in endocrinology.

After mastering the discipline " Endocrinology " the student:

Will know:



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- main symptoms and syndromes in diseases of the endocrine system
- basic methods of laboratory and instrumental examination of a patient with endocrine pathology
- the main nosological forms of frequently encountered endocrine diseases and criteria for diagnosis in accordance with the classification (ICD).
- General principles of providing medical care to patients with endocrine pathology in outpatient and day hospital settings.
- The main groups of drugs used to treat endocrine diseases.
- basic principles of management and treatment of patients with various nosological forms of endocrine diseases.

*will understand:*

- Methods of conducting emergency measures in acute endocrine conditions and indications for hospitalization of patients of different age groups;
- Basic methods of laboratory and instrumental diagnostics of endocrine diseases, including indications and contraindications for use, theoretical foundations of methods and interpretation of their results.

*able to use:*

- Methods of maintaining medical records and reports in medical and preventive institutions of the healthcare system for patients with endocrine diseases;
- Algorithms for performing basic medical diagnostic and therapeutic measures in acute and life-threatening conditions in endocrinology.

*is capable of carrying out:*

- Interpretation of examination results, making a preliminary diagnosis and prescribing additional studies to clarify the diagnosis;
- Formulation of a clinical diagnosis based on examination data of patients with endocrine system diseases;
- Evaluation and treatment of patients with endocrine disorders, including thyroid disease, diabetes, adrenal disease and other diseases;
- Conducting an endocrinological examination, including assessment of the condition of patients with acute endocrine conditions (diabetic ketoacidosis, hypertensive crises in endocrine diseases, etc.).

*able to analyze:*

- Medical documentation, including laboratory and clinical data, in outpatient and inpatient institutions;
- Identification and analysis of risk factors for endocrine diseases, including multifactorial diseases;
- Signs and symptoms of inherited endocrine disorders, including the use of appropriate terminology to describe the clinical picture (phenotype).

*is capable of synthesizing:*

- Knowledge of medical devices and diagnostic methods intended to



provide medical care to patients with endocrine diseases;

- Use of modern medical technologies, including information systems, to solve professional problems in endocrinology.

*able to evaluate:*

- Algorithms for performing basic medical diagnostic and therapeutic measures when providing first aid in endocrinology;
- Assessment of the severity of endocrine diseases, prediction of the course and outcomes of thyroid diseases, diabetes and other disorders.

*is capable of carrying out:*

- Use of medical devices and diagnostic methods for patients with endocrine diseases;
- Work with computer technology and medical equipment for the diagnosis of endocrine diseases;
- Conducting a study of glucose levels, thyroid hormones, adrenal glands and other hormonal indicators;
- Methods of research and monitoring of patients with diseases requiring hormone replacement therapy;

### Contents of the academic discipline

No	Name sections and topics disciplines (lectures and practical classes)	Auditory lessons				Total number of hours on	With military	S IW	Used educational technologies, methods and techniques teaching	Current shapes and intermediate control academic performance
		lectures	Seminars	practical	laboratory					
1.	Diabetes mellitus: etiopathogenesis, classification, clinical features, diagnostics, treatment	2		2		4	1	2	Problematic lecture Oral survey, training using simulators	Assessment of the acquisition of practical skills (abilities)
2.	Late complications of diabetes. Acute complications of diabetes. Treatment	2		2		4	2	1	Lecture - visualization . Oral survey, training using simulators	Assessment of the acquisition of practical skills (abilities)
3.	Acute complications of diabetes. Treatment	2		2		4	1	1	Lecture using video materials ; Oral survey , role-playing educational game	Solving situational problems
	Thyroid diseases. Iodine deficiency	2		2		4	1	2	Problematic lecture . Oral Questioning,	Assessment of the development of



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	diseases. Hypothyroidism							Clinical Case Based Learning (CBL)	practical skills (abilities).
4.	Graves' disease. Thyrotoxic crisis. Module №1.	2		2		4	1	1	Lecture- visualization . Oral survey , classes using simulators .  Testing/ oral survey
	Acute and chronic adrenal insufficiency.	2		2		4	1	1	Problem lecture . Oral survey , role-playing educational game  Assessment of the acquisition of practical skills (abilities)
	Hypercorticism : Itsenko-Cushing syndrome and disease	2		2		4	1	1	lecture using video materials; Oral survey, team work  solving situational problems
	Growth pathology: Acromegaly, gigantism. Diabetes insipidus, hypopituitarism	2		2		4	1	1	Problem lecture .  Oral survey, team work  Assessment of the acquisition of practical skills (abilities)
2	Obesity. Classification . Pathological changes in internal organs, basic methods of obesity treatment. Module 2.	2		2		4	1	1	Lecture- visualization . Oral survey, team work .  Testing/ oral survey
	Total number of hours by discipline:	1 8		1 8		36	1 2	12	

### Methodological recommendations for practical classes.

Before each seminar, the student studies the lesson plan with a list of topics and questions, as well as a list of literature. For student recommended the following outline for preparing for a seminar:

- study the topic of the lesson, using the main and additional literature recommended for the section being studied;
- make a summary of the main provisions, terms, information
- answer the questions from the seminar lesson plan;



- study the topic and select literature for preparing presentations, writing reports, etc.;
- all types of independent work require preparation according to the specified list of literature;
- If you have any difficulties, ask your teacher questions.

#### 1.4.2. Organization of independent work of students

No .	Topic of the student's independent work: (in accordance with the thematic plan )	Assignment for independent work	Recommended literature on the topic	Submission deadlines (week number)
1.	Gestational diabetes	Preparation of presentation/abstract	1. Aled Rees, Miles Levy, Andrew Lansdown / Endocrinology and Diabetes at a Glance, 2017 2. Oxford Handbook of Endocrinology and Diabetes Fourth Edition, 2022 3. Harissons Principles of Internal Medicine, 21st Edition 2022 4. Williams Textbook of Endocrinology, 14th Edition, 2020 5. Oxford Handbook of Endocrinology and Diabetes Fourth Edition, 2022 6. ABM Abdullah, MN Alam MRCP, "Long Cases in Clinical Medicine" First Edition: 2013 7. Davidson's Principles & Practice of Medicine, 23rd Edition 2018	2
2.	Insulin pump therapy	Preparation of presentation/abstract		2
3.	Thyroiditis	Preparation of presentation/abstract		3
4.	Hyperparathyroidism	Preparation of presentation/abstract		3
5.	Hypoparathyroidism	Preparation of presentation/abstract		4
6.	Pheochromocytoma	Preparation of presentation/abstract		5
7.	Conn's syndrome	Preparation of presentation/abstract		5
8.	Bariatric surgery: indications, methods and results.	Preparation of presentation/abstract		6
9.	Hyperprolactinemia	Abstract on the topic		7
10.	Incidentaloma	Preparation of presentation/abstract		7
11.	Pharmacotherapy of obesity: mechanisms of action of drugs and their use in clinical practice.	Preparation of presentation/abstract		8
12.	ACTH ectopic syndrome	Preparation of presentation/abstract		8

#### Methodological recommendations for preparing independent work

**Independent work** is a planned work of students, carried out according to instructions and with the methodological guidance and direct participation of the teacher. The main task of the teacher is to teach the student to work independently with the material, to search for the necessary material, the ability to process and interpret it.



The main types of independent work of students with the participation of teachers are:

- On on-site consultations;
- completing independent assignments during seminar classes;
- conducting experimental, educational and scientific research work;
- defense of abstracts and presentations.

**A presentation** is a set of slides designed to convey information to the audience in a clear and effective manner. A presentation allows you to supplement information with images, tables, and diagrams.

Requirements for presentation design:

- The presentation is created on the specified topic;
- The presentation volume is at least 15 slides;
- The background of the slides is plain or matches the theme of the presentation;
- Text alignment: left, headings: centered;
- The font of the text on the slide is 28–30 pt ; It is recommended to place drawings or illustrations, diagrams, tables on the slide;
- When creating a presentation, you can use both recommended literature and Internet resources, indicating the source of information at the bottom of the slide or a list on the last slide;
- When defending, the clarity of presentation, content and relevance of the material to the topic of the report are taken into account.

Presentation evaluation criteria:

- compliance of the presentation with the given topic;
- preparing a presentation according to requirements;
- clarity of presentation of the topic;
- use of graphic images (photographs, pictures, etc.) that are relevant to the topic.

**An abstract** is a short written summary of the content of a scientific paper on a given topic. This is an independent research paper in which the student reveals the essence of the problem being studied with elements of analysis on the topic of the abstract. Presents different points of view, as well as personal views on the problems of the essay topic. The content of the essay should be logical, the presentation of the material should be of a problematic and thematic nature.

Requirements for writing an abstract:

The volume of the abstract can be 9-10 printed or handwritten pages.

Main sections: table of contents (plan), introduction, main content, conclusion, bibliography.

The text of the abstract should contain the following sections:

- a title page indicating: the name of the university, department, topic of the abstract, full name of the author and full name of the teacher
- introduction, relevance of the topic
- main section



–Conclusion (Analysis of literature search results)

conclusions

–The list of references must contain at least 10 bibliographic titles, including online resources.

The text part of the abstract is formatted on a sheet of paper in the following format:

–top margin – 2 cm; left margin – 3 cm; right margin – 1.5 cm; bottom margin – 2.5 cm;

–text font: Times New Roman, font height – 14, spacing – 1.5;

–Page numbers are at the bottom of the sheet. There is no number on the first page.

The abstract must be formatted correctly, observing the culture of presentation. References to the literature used, including periodicals for the last 5 years, must be included.

Abstract evaluation criteria:

–Relevance of the research topic;

–relevance of content to the topic;

–depth of material processing;

–correctness and completeness of disclosure of the questions posed;

–the significance of the results obtained for further practical activities;

–correctness and completeness of use of literature;

–compliance of the abstract design with the standard;

–the quality of the message and answers to questions when defending the abstract.

## List of primary and secondary literature

*a) basic literature;*

1. Aled Rees, Miles Levy, Andrew Lansdown / Endocrinology and Diabetes at a Glance, 2017

2. Williams Textbook of Endocrinology, 14th Edition, 2020

3. Oxford Handbook of Endocrinology and Diabetes Fourth Edition, 2022

4. Shlomo Melmed, The Pituitary, Fourth Edition. 2017

5. Michael T. McDermott, MD Endocrine Secrets, Seventh Edition, 2020

*b) additional literature;*

1. ABM Abdullah, MN Alam MRCP, "Long Cases in Clinical Medicine" First Edition: 2013

2. Davidson's Principles & Practice of Medicine, 23rd Edition 2018

3. Harrison's Principles of Internal Medicine, 21st Edition 2022

*c) software and Internet resources.*

1. <https://www.idfdiabeteschool.org/resourcelibrary/dailyupdates>

2. <https://diabetesjournals.org/>

3. <https://www.thyroid.org/professionals/ata-publications/>

4. [https://www.eurothyroid.com/guidelines/eta\\_guidelines.html](https://www.eurothyroid.com/guidelines/eta_guidelines.html)





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### Evaluation criteria

Students' knowledge is assessed using a point -rating system in accordance with the approved "Instructions for assessing knowledge in cross-cutting disciplines and system (clinical) modules" of the ISM MUK.

Evaluation criteria	Module 1,2,3
Attendance	20 points
Classroom work (activity in discussions, oral surveys, work with a glossary, availability of notes, etc.), independent work: abstract, presentation	40 points
Total per module (testing)	40 points
Total for the discipline (exam):	100 points

### Evaluation criteria:

#### Seminar assessment criteria:

An **"excellent"** grade means that the student presents the material in full (answers the question), gives the correct definition of the main concepts; demonstrates an understanding of the material, is able to substantiate his/her judgments, apply knowledge in practice, provides the necessary examples not only from the textbook, but also those compiled independently; presents the material consistently and correctly;

**Rating: "good"** – the student gives an answer that meets the same requirements as for an "excellent" grade, but makes 1–2 mistakes, which he corrects himself, and 1–2 shortcomings in the sequence and language of the presentation;

**Rating "satisfactory"** – the student demonstrates knowledge and understanding of the basic principles of the topic, but presents the material incompletely, makes inaccuracies in defining concepts or formulating rules; is unable to sufficiently deeply and convincingly substantiate his/her judgments and provide examples; presents the material inconsistently, makes mistakes in the language of presentation;

**Rating "unsatisfactory"** – the student demonstrates ignorance of most of the issues on the topic, makes mistakes in the formulation of definitions and rules that distort their meaning, and presents the material in a disorderly and vague manner.

#### Abstract evaluation criteria:

**Excellent grade** – the paper contains an introduction, main part and conclusion, there is a logical transition from one part to another; the content of the report corresponds to the topic, clear conclusions are made; the student demonstrates a broad outlook when answering questions and good public speaking skills.

**The grade is "good"** – the abstract is not divided into parts, but the content corresponds to the topic, the conclusions are more vague and illogical, the questions are answered well.

**The grade "satisfactory"** means that the essay has no parts, there is no logic, the student presents information uncertainly, relying on the text, and has difficulty answering questions.



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**The grade "unsatisfactory"** – the content of the abstract does not correspond to the chosen topic, does not focus attention on the abstract, cannot draw conclusions, does not answer questions.

**Presentation evaluation criteria:**

**The grade "excellent"** is given to a student if:

- presentation corresponds given topic ;
- a title slide with a heading (topic, goals, plan, etc.) is designed;
- the formulated topic is clearly stated and structured;
- graphic images (photographs, pictures, etc.) that correspond to the topic are used;
- compliance with the speech culture of presentation of the material;
- presence of conclusions;
- compliance with the rules 5-7 min.

**The grade "good"** is given to a student if:

- presentation corresponds given topic ;
- a title slide with a heading (topic, goals, plan, etc.) is designed;
- the formulated topic is not entirely clearly stated and structured;
- graphic images (photographs, pictures, etc. of low quality) that correspond to the topic were used;
- the material is presented in an accessible manner and complies with the time regulations

**The grade "unsatisfactory"** is given if the work is incomplete or contains material not related to the question. In all other cases, the work is graded "satisfactory".

**MSQ assessment criteria :**

"Excellent" - 90-100% correct answers

"Good" – 76–89% correct answers


"Satisfactory" – 60–75% correct answers

"Unsatisfactory" - less than 60% correct answers

Scale of correspondence between grades and points on the final control (test)	
Glasses	Grade
90-100	"Big"
76-89	"Great"
60-75	"satisfactorily"
0-59	"unsatisfactory"

**Academic Discipline Policy:**

1. Regular attendance of practical classes is mandatory.
2. For each missed lesson, 2 points are deducted from the grade calculation.
3. Mandatory implementation of SIV in various forms.
4. Submission of assignments for independent work within the specified deadlines in accordance with the subject plan no later than one week corresponding to the given section.

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5. Passing the intermediate test on the subject plan.
6. Active participation in the educational process.
7. Making up missed classes (less than 40% of classes) is possible only with the permission of the dean's office, indicating the exact number of classes during the period established by the dean's office.
8. If a student misses more than 40% of classes, he/she is not allowed to attend classes and receives a failing grade.
9. Not be late on classes .
10. Have a clean, ironed, white coat and be neatly dressed.
11. Respectful attitude towards the teaching staff, teaching personnel (educational and support staff) and students.
12. Careful attitude towards the department’s property: furniture, equipment, flowers, chemical glassware, etc.