SYLLABUS
ЗӘР ШЫҒАРУ ЖҮЙЕСІНІҢ ПАТОЛОГИЯСЫ ЖӘНЕ ГОМЕОСТАЗ/
ПАТОЛОГИЯ МОЧЕВЫДЕЛИТЕЛЬНОЙ СИСТЕМЫ И ГОМЕОСТАЗ/
PATHOLOGY OF THE URINARY SYSTEM AND HOMEOSTASIS

1.	**General information about the discipline**		
1.1	Faculty/School: Medicine and Healthcare Department of Internal Medicine	1.6	Credits (ECTS): 3 credits – 90 hours, of which 60 are contact hours (practical training)
1.2	Educational program (EP): **6B10114 Медицина** **6B10114 Медицина** **6B10114 Medicine**	1.7	SIW/SPM/SRD (qty): 15 hours
1.3	Agency and year of accreditation of the EP	1.8	SRSP/SRMP/SRDP (number): 15 hours
1.4	Name of discipline: **Зәр шығару жүйесінің патологиясы және гомеостаз/** **Патология мочевыделительной системы и гомеостаз/** **Pathology of the urinary system and homeostasis**	1.9	**Prerequisites:** 1. Жалпы патология/Общая патология/General pathology 2. Науқас және дәрігер/Пациент и врач/Patient and doctor **Postrequisites:** Ішкі аурулар/Внутренние болезни/Internal medicine. Педиатрия және неонатология /Педиатрия и неонатология /Pediatrics and neonatology. Хирургия /Хирургия /Surgery. Клиникалық зертханалық диагностика /Клиническая лабораторная диагностика /Clinical laboratory diagnostics
1.5	Discipline ID: **90298** Discipline code: **PMS 3307**	1.10	***Required -*** *the basic discipline*
2.	**Description of the discipline**		
	The studying this discipline, students will study the following aspects: The discipline includes the study of immunopathogenesis, pathomorphology, clinical presentation of problems (clinical syndromes), and clinically oriented pharmacology of urinary system pathology and homeostasis. The main syndromes are edematous, urinary, painful, renal insufficiency, arterial hypertension, nephritic, and nephrotic syndromes, also the main topics are the male reproductive system, and nephrological aspects in pregnant women. A well-founded syndromic diagnosis and principles of treatment, taking into account the age of the patient.		
3	**Purpose of the discipline**		
Mastering basic knowledge and skills in the diagnosis and management of patients with pathology of the **urinary** system			
4.	**Learning outcomes (LO) by discipline (3-5)**		
	LO disciplines	LO according to the educational program, with which the LO is associated by discipline (LO No. from the EP passport)	
1	Apply knowledge on immunopathogenesis of pathology of the urinary system in the process of diagnosis and treatment	Proficiency	1.Apply and integrate in practice knowledge in the field of biomedical, clinical, epidemiological and social-behavioral sciences, including

		level -3	generally accepted, evolving and constantly updated knowledge to solve clinical problems and into the care of individuals and populations.
2	Be able to conduct targeted questioning and physical examination of the patient, taking into account age characteristics and determining diagnostic and therapeutic interventions related to common diseases of the urinary system	Proficiency level -3	2. Use interpersonal and communication skills to effectively share information and collaborate with patients, their families and healthcare professionals, including using information technology to provide safe and effective patient care;
3	Identify diagnostic and therapeutic interventions related to common diseases affecting the urinary system.	Proficiency level -3	3. Provide effective patient-centered medical care, including appropriate activities aimed at the diagnosis, treatment and prevention of diseases using the principles of evidence-based medicine;
4	Interpret the basic data of laboratory and instrumental examination in the pathology of the urinary system	Proficiency level -2	4. Integrate clinical knowledge and skills to ensure an individual approach in the treatment of a particular patient and improve his health in accordance with his needs, based on the analysis of the rationality of diagnosis and treatment, the principles of evidence-based and personalized medicine;
5	Integrate knowledge to identify the main syndromes of the urinary system: edematous, urinary, pain, renal failure, arterial hypertension.	Proficiency level -3	5. Timely and effectively provide medical care in emergency and life-threatening conditions, including emergency situations, natural and man-made disasters, pandemics, on the principles of humanity, safety and efficiency;
6	Describe the social, economic, ethnic and racial factors that play a role in the development, diagnosis and treatment of cardiac diseases;	Proficiency level -2	6. Demonstrate professionalism and commitment to conscientious performance of professional duties based on high standards of ethics and humanism;
7	Apply the classification of diseases of the urinary system, understand the mechanism of action, pharmacokinetics, analyze side effects, indications and contraindications for the use of drugs that affect the kidneys, antibacterials, immunosuppressants (glucocorticosteroids, cytostatics), diuretics, antihypertensives, antivirals, erythropoietin drugs, calcimimetics, etc.	Proficiency level -3	7. Demonstrate the qualities necessary to maintain continuous personal and professional growth, continuous improvement in the quality of medical care based on continuous self-assessment and lifelong learning;
8	Demonstrate the ability to effectively conduct medical interviews, taking into account the rules and norms of the doctor-patient relationship and knowledge of the basic principles of human behavior at different age periods, in normal and abnormal behavior, in different situations;	Proficiency level -2	8. Responsibly carry out their activities within the framework of the existing legal and regulatory framework of the health care system and be guided by them in their practical activities to ensure optimal medical care;

9	Demonstrate commitment to the highest standards of professional responsibility and integrity;	Proficiency level -2	9. Analyze the results of the treatment of their patients, critically evaluate and implement the principles of treatment based on scientific evidence;
10	To observe ethical principles in all professional interactions;	Proficiency level -3	10. Analyze and maintain the necessary documentation in healthcare organizations using modern information and digital technologies and healthcare information systems to solve professional problems and conduct scientific research;
11	To demonstrate the need for continuous professional training and improvement of one's knowledge and skills;	Proficiency level -3	11. Apply knowledge of a complex of factors that determine health and disease in order to prevent, promote health and promote a healthy lifestyle.
12	To demonstrate the skills of conducting scientific research, the desire for new knowledge and the transfer of knowledge to others.	Proficiency level -3	12. Work effectively and improve the healthcare system, paying attention to the quality, safety and value of patient care.
5.	**Summative assessment methods** (mark (yes – no) / specify your own):		
5.1	MCQ testing for understanding and application	5.5	Scientific project SSRW (student's scientific research work)
5.2	Practical skills – Miniclinical exam (MiniCex)	5.6	360 score - behavior and professionalism
5.3	SIW- **creative task**	5.7	Midterm control: Stage 1 - MCQ testing for understanding and application Stage 2 – passing practical skills (miniclinical exam (MiniCex)
5.4	Medical history	5.8	Exam: Stage 1 - Testing on MCQ for understanding and application Stage 2 - OSCE with NP

6.	**Detailed information about the discipline**		
6.1	Academic year: 2024-2025	6.3	Schedule (days of classes, time): From 8.00 to 14.00
6.2	Semester: 5 semester	6.4	Place (educational building, office, platform and link to the DOT learning meeting): City Clinical Hospital №1, City Clinical Hospital №7, Emergency City Clinical Hospital
7.	**Discipline leader**		

Position	Full name	Department	Contact information (tel., e-mail)	Consultations before exams
Senior lecturer	Baidauletova Zhuldyz	Internal medicine	8-701 716 40 95	Before the examination session within 60 minutes

8.	**The content of the discipline**		
	Name of the discipline	Quantity of hours	Conducting form
1.	Syndromes in nephrology: edematous, urinary, pain, renal failure, arterial hypertension	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Participation in clinical rounds
2.	Nephrotic syndrome	12	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Work in the department of functional diagnostics 4. Training in the simulation center
3.	Nephritic syndrome	12	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center
4.	Kidney failure syndrome: acute kidney injury	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center
Midterm control 1	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2-stage – mini clinical exam (MiniCex) - 60%		
5.	Kidney failure syndrome: chronic kidney disease	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center
6.	Urinary tract infection. Urolithiasis disease	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

7.	Male reproductive system	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center
8.	Nephrological aspects in pregnant women	6	Formative assessment: 1. Using active learning methods: TBL 2. Working with a patient for at least 20% of the study time 3. Participation in clinical rounds
Midterm control 2	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2-stage – mini clinical exam (MiniCex) - 60%		
Final control (Exam)	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2- stage – OSCE with NP - 60%		
Total			**100**

9.	**Methods of teaching in the discipline** (briefly describe the approaches to teaching and learning that will be used in teaching) Using active learning methods: TBL, CBL	
1	**Methods of formative assessment:** TBL – Team Based Learning (https://classroom.google.com/w/MzM5OTU5MjU0OTM0/t/all)	
2	**Summative assessment methods (from point 5):** 1. MCQ testing for understanding and application 2. Passing practical skills – miniclinical exam (MiniCex) for the 3rd year 3. SIW (case, video, simulation OR research thesis, report, article) – assessment of a creative task 4. Medical history 5. Portfolio of scientific papers 6. Curation, clinical skills	
10.	**Summative assessment**	
№	**Forms of control**	**General % from total %**
1	Curation, clinical skills	20% (estimated by the checklist)
2	SIW (case, video, simulation OR research thesis, report, article) – assessment of a creative task	10% (estimated by the checklist)
3	Border control	70% (1-stage – MCQ testing for understanding and application - 40%;2- stage – mini clinical exam (MiniCex) - 60%)
Final mark- 1		20%+10% +70% = 100%
1	Patient history defence	20% (estimated by the checklist)
2	SIW (case, video, simulation OR research thesis, report, article) – assessment of a creative task	10% (estimated by the checklist)
5	Border control	70% (1-stage – MCQ testing for understanding and application - 40%; 2- stage – mini clinical exam (MiniCex) - 60%)
Final mark- 2		20+10+ 70 = 100%
9	Exam	**2 stages:** 1st stage - testing on MCQ for understanding and application - 40%

		2nd stage - OSCE with NP - 60%
10	**Final score:**	ORD 60% + Exam 40%

10. Score

Rating by letter system	**Digital equivalent**	**Points (% content)**	**Assessment Description** (changes should be made only at the level of the decision of the Academic Committee on the quality of the faculty)
A	4,0	95-100	**Excellent.** Exceeds the highest job standards.
A-	3,67	90-94	**Excellent.** Meets the highest job standards.
B+	3,33	85-89	**Good.** Very good. Meets high job standards.
B	3,0	80-84	**Good.** Meets most of the job standards.
B-	2,67	75-79	**Good.** More than enough. Shows some reasonable ownership of the material.
C+	2,33	70-74	**Good.** Acceptable. Meets the basic standards of the task.
C	2,0	65-69	**Satisfactory.** Acceptable. Meets some basic job standards.
C-	1,67	60-64	**Satisfactory.** Acceptable. Meets some basic job standards.
D+	1,33	55-59	**Satisfactory.** Minimally acceptable.
D	1,0	50-54	**Satisfactory.** Minimally acceptable. The lowest level of knowledge and completion of the task.
FX	0,5	25-49	**Unsatisfactory.** Minimally acceptable.
F	0	0-24	**Unsatisfactory.** Very low productivity.

11. Educational resources (use the full link and specify where you can access the texts/materials)

Literature

Main
Available in the library

Author	**Name of the book, publisher**	**Year of publication**
Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal medicine	Elsevier. 3d edition, Chapter 8,9 p 153-228 – **1 экземпляр**	2014
Brenner GM, Stevens CW	Pharmacology. 568p.	2018
C.Ronco.	Critical Care Nephrology, 3rd Edition**.** 1456p	2019
Alexandr J. Howie	Handbook of renal biopsy pathology, Third edition, 297p	2020

Перевод Бобковой И.Н., Буланова Н.М., Захарова Е.В и др.	Клинические практические рекомендации KDIGO 2021 по лечению гломерулярных болезней, 298 с.	2021
Ассоциация нефрологов РФ	Клинические рекомендации: Хроническая болезнь почек (ХБП), 233 с.	2021
Ассоциация нефрологов РФ	Клинические рекомендации: Поражение почек при АНЦА ассоциированных васкулитах (АНЦАассоциированный гломерулонефрит)	2021
Эрман М.В.	Симптом-синдром-диагноз. Болезни почек и мочевыделительной системы у детей, 2020. 118 с	2020

Additional
Available in the library

Author	**Name of the book, publisher**	**Year of publication**
Ішкі аурулар пропедевтикасы Әдістемелік оқу құралы 2013		2015
Ішкі аурулар пропедевтикасы: оқулық — М.: ГЭОТАР-Медиа,2015.		2016
Пропедевтика внутренних болезней: учебник / Мухин Н.А., Моисеев В.С., М:,Геотар Медиа 2020г.		2016
Кишкун, Алексей Алексеевич. Клиникалық лабораториялық диагностика : оқу құралы / А. А. Кишкун ; қазақ тіл., жауапты ред. А. Ж. Сейтембетова, 2017. - 957, [2] б. - Текст : непосредственный.		2017
Кишкун, Алексей Алексеевич. Клиническая лабораторная диагностика : учеб. пособие / А. А. Кишкун, 2019. - 996, [2] с. - Текст : непосредственный		2019
Дифференциальная диагностика внутренних болезней / Российское научное медицинское общество терапевтов, 2018. - 927, [1] с. - Текст : непосредственный.		2018
Косарев, Владислав Васильевич. Клиническая фармакология и рациональная фармакотерапия : учеб. пособие / В. В. Косарев, С. А. Бабанов, 2019. - 235, [1] с. - Текст : непосредственный.		2019
Ішкі аурулар пропедевтикасы Әдістемелік оқу құралы 2013		2015
Ішкі аурулар пропедевтикасы: оқулық — М.: ГЭОТАР-Медиа,2015.		2016

Available at the department (link to Classroom)

	Author	Name of the book, publisher	Year of publication
	Lippincot	Lippincot Illustrated Reviews: Pharmacology, 7th Edition, 2019.	2020
	Wada T., Furuichi K., Kashihara N	USMLE Step 2 CK Lecture Notes 2020. Internal Medicine	2020
	Joseph Loscalzo, MD, PhD	Harrison's Principles of Internal Medicine 20th Edition 2018	2018
	Macleod	Macleod's Clinical Examination 14th Edition	2017
	Robbin	Robbins Essential Pathology	2021
	Henry R. Black, William J. Elliott	Hypertension A Companion to Braunwald's Heart Disease SECOND EDITION	2013
	Nicholas J Talley, Brad Frankum & David Currow.	Essentials of Internal medicine Elsevier. 3d edition	2015
		Harrisson's Manual of Medicine/ 20th Edition	2020
	Jonathan Gleadle	History and Clinical Examination at a Glance	2012
	Lippincot	Lippincot Illustrated Reviews: Pharmacology, 7th Edition, 2019.	2020
	Wada T., Furuichi K., Kashihara N	USMLE Step 2 CK Lecture Notes 2020. Internal Medicine	2020

Electronic resources

Internet resources:

1. Medscape.com - https://www.medscape.com/familymedicine
2. Oxfordmedicine.com -https://oxfordmedicine.com/
3. Uptodate.com **- https://www.wolterskluwer.com/en/solutions/uptodate**
4. **Osmosis - https://www.youtube.com/c/osmosis**
5. **Ninja Nerd - https://www.youtube.com/c/NinjaNerdScience/videos**
6. **CorMedicale - https://www.youtube.com/c/CorMedicale - medical video animations in Russian language.**
7. **Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHz8gi2ugiXr0Q**
8. **SciDrugs - https://www.youtube.com/c/SciDrugs/videos - video lectures on pharmacology in Russian language.**
9. **https://geekymedics.com/category/osce/clinical-examination/cardio/**

Simulators in the simulation center	1. SAM (Student auscultation manikin) is a student mannequin for the ascultation of the pathology of organs and systems (including the digestive system) 2. Dummy simulator for teaching percussion skills, palpation of abdominal organs (liver, spleen)
Special software	1. Google classroom - available in the public domain. 2. Medical calculators: Medscape, Physician's Handbook, MD+Calc - freely available. 3. Directory of diagnostic and treatment protocols for medical workers from the RCHD, the Ministry of Health of the Republic of Kazakhstan: Dariger - available in the public domain.

12.	**Tutor Requirements and Bonus System**

A student in accordance with an individual internship plan:

1) supervises patients in organizations providing pre-medical medical care, emergency medical care, specialized medical care (including high-tech), primary health care, palliative care and medical rehabilitation;
2) participates in the appointment and implementation of diagnostic, therapeutic and preventive measures;
3) conducts documentation and sanitary and educational work among the population;
4) participates in preventive examinations, medical examinations, is present at consultations;
5) participates in clinical rounds, clinical reviews;
6) participates in duty at least four times a month in medical organizations (duty is not taken into account when calculating the workload of an internship student);
7) participates in clinical and clinical-anatomical conferences;
8) is present at pathoanatomical autopsies, participates in the research of autopsy, biopsy and surgical materials;
9) under the supervision of a scientific supervisor, collects material and analyzes data for a scientific project.

Bonus system:

For extraordinary achievements in the field of future professional activity (clinical, scientific, organizational, etc.), additional points up to 10% of the final assessment can be added to the student (by the decision of the department)

13.	**Discipline policy (части, выделенные зеленым, пожалуйста, не изменяйте)**

Discipline policy is determined by the University's Academic Policy and the University's Academic Integrity Policy. If the links do not open, then you can find the relevant documents in IS Univer.

Rules of Professional Conduct:

1) Appearance:

- ✓ office style of clothing (shorts, short skirts, open T-shirts are not allowed to attend university, jeans are not allowed in the clinic)
- ✓ Clean and ironed coat
- ✓ medical mask
- ✓ medical cap (or a neat hijab without hanging ends)
- ✓ medical gloves
- ✓ changeable shoes
- ✓ neat hairstyle, long hair should be gathered in a ponytail, or a bun, for both girls and guys. Neatly short cut nails. Bright, dark manicure is prohibited. It is permissible to cover the nails with transparent varnish.
- ✓ badge with full name (full name)

2) Mandatory presence of a phonendoscope, tonometer, centimeter tape, (you can also have a pulse oximeter)

	3) Properly executed sanitary (medical) book (before the start of classes and must be updated on time) **4) * Possession of a vaccination passport or other document confirming a fully completed course of vaccination against COVID-19 and influenza** **5) Mandatory observance of the rules of personal hygiene and safety** **6) Systematic preparation for the educational process.** **7) Accurate and timely maintenance of reporting documentation.** 8) Active participation in medical-diagnostic and public events of the departments. **A student without a medical book and vaccination will not be allowed to see patients.** **A student who does not meet the requirements for appearance and / or from whom a strong / pungent odor emanates, since such a smell can provoke an undesirable reaction in the patient (obstruction, etc.) - is not allowed to the patients!** **Преподаватель в праве принять решение о допуске к занятиям студентов, которые не выполняют требования профессионального поведения, включая требования клинической базы!** **Study discipline:** 1. Being late for classes or the morning conference is not allowed. In case of being late, the decision on admission to the lesson is made by the teacher leading the lesson. If there is a good reason, inform the teacher about the delay and the reason by message or by phone. After the third delay, the student writes an explanatory note addressed to the head of the department indicating the reasons for being late and is sent to the dean's office to obtain admission to the lesson. If you are late without a valid reason, the teacher has the right to deduct points from the current grade (1 point for each minute of delay) 2. Religious events, holidays, etc. are not a valid reason for skipping, being late and distracting the teacher and the group from work during classes. 3. If you are late for a good reason - do not distract the group and the teacher from the lesson and quietly go to your place. 4. Leaving the class ahead of time, being outside the workplace during school hours is regarded as absenteeism. 5. Additional work of students during study hours (during practical classes and shifts) is not allowed. 6. For students who have more than 3 passes without notifying the curator and a good reason, a report is issued with a recommendation for expulsion. 7. Missed classes are not made up. 8. The internal regulations of the clinical bases of the department are fully applicable to students 9. Greet the teacher and any senior by standing up (in class) 10. Smoking (including the use of vapes, electronic cigarettes) is strictly prohibited on the territory of medical facilities (out-doors) and the university. Punishment - up to the annulment of boundary control, in case of repeated violation - the decision on admission to classes is made by the head of the department 11. Respectful attitude towards colleagues regardless of gender, age, nationality, religion, sexual orientation.

	12. Have a laptop / laptop / tab / tablet with you for studying and passing MCQ tests for TBL, boundary and final controls. 13. Taking MCQ tests on phones and smartphones is strictly prohibited.. The behavior of the student at the exams is regulated by the "Rules for the final control", "Instructions for the final control of the autumn/spring semester of the current academic year" (the current documents are uploaded to the Univer IS and are updated before the start of the session); "Regulations on checking text documents of students for the presence of borrowings." Decision of the Department of Clinical Disciplines (protocol No. 2 of September 5, 2023): **In addition to the requirements for the academic discipline:** If you miss a class without a good reason, the teacher has the right to deduct points from the current control - 10 points for each missed lesson for 4-5 year disciplines
14	1. **Constantly preparing for classes:** For example, backs up statements with relevant references, makes brief summaries Demonstrates effective teaching skills, assists in teaching others **2. Take responsibility for your learning:** For example, manages their learning plan, actively tries to improve, critically evaluates information resources 3. **Actively participate in group learning:** For example, actively participates in discussions, willingly takes tasks **4. Demonstrate effective group skills** For example, takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts. 5. **Skillful communication skills with peers**: For example, he listens actively, is receptive to nonverbal and emotional signals Respectful attitude **6. Highly developed professional skills:** Eager to complete tasks, seek opportunities for more learning, confident and skilled Compliance with ethics and deontology in relation to patients and medical staff Observance of subordination. **7. High introspection:** For example, recognizes the limitations of his knowledge or abilities, without becoming defensive or reproaching others **8. Highly developed critical thinking:** For example, accordingly demonstrates skills in performing key tasks, such as generating hypotheses, applying knowledge to cases from practice, critically evaluating information, making conclusions aloud, explaining the process of reflection **9. Fully complies with the rules of academic behavior with understanding, offers improvements in order to increase efficiency.** Observes the ethics of communication – both oral and written (in chats and appeals) **10. Fully follows the rules with full understanding of them, encourages other members of the group to adhere to the rules** Strictly adheres to the principles of medical ethics and PRIMUM NON NOCER
15.	**Distance/Online Learning – Prohibited in Clinical Discipline** (части, выделенные зеленым, пожалуйста, не изменяйте)

1. According to the order of the Ministry of Education and Science of the Republic of Kazakhstan No. 17513 dated October 9, 2018 "On approval of the List of areas of training with higher and postgraduate education, training in which in the form of external studies and online education is not allowed". According to the above regulatory document, specialties with the discipline code of health care: bachelor's degree (6B101), master's degree (7M101), residency (7R101), doctoral studies, (8D101) - training in the form of external study and online education - is not allowed.
Thus, students are prohibited from distance learning in any form. It is only allowed to work out a lesson in a discipline due to the absence of a student for reasons beyond his control and the presence of a timely confirming document (example: a health problem and presenting a confirming document - a medical certificate, a signal sheet of the PHC, an extract from a consultative appointment with a medical specialist - a doctor)

16.	**Approval and review**	
Department head		Sadykova Sh.S.
Committee of the Faculty of Medicine and Healthcare		Kurmanova G.M.

Topic plan and content of classes

№	Topic	Content	Literature	Conduct form
	2	3	4	5
1	Syndromes in nephrology: edematous, urinary, pain, renal failure, arterial hypertension	**Learning outcomes:** – Apply knowledge of the pathogenesis of edema, proteinuria, hematuria in the process of diagnosis and treatment; – Able to identify symptoms and syndromes of diseases of the urinary system when interviewing a patient; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with a pathology of the urinary system; – Integrate knowledge for the detection and differential diagnosis of edematous syndrome, proteinuria and hematuria; – Integrate knowledge for the identification and differential diagnosis of primary and secondary hypertension, renal failure syndrome: – Substantiate and prescribe methods of examination, with the interpretation of the results of laboratory diagnostics; – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate; – Substantiate the preliminary diagnosis using medical terminology; – Prescribe treatment for a patient with edema, hypertension, taking into account the individual characteristics of the patient, pharmacodynamics and pharmacokinetics of drugs (diuretics, antihypertensives). – Demonstrates adherence to professional values such as altruism, compassion, empathy, responsibility, honesty and confidentiality;	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725. 2. Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p 320-323 (Электронный ресурс). 3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 54-77с; 175-181. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. – 58-79. 5. Harrisson's Manual of Medicine/ 20th Edition, Section 6, chapter 40, p. 249-253, p. 2209-2220. 6. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. . Chapter 1-3, 19, 21, 30, 46-50. 7. Эрман М.В. Симптом-синдром-диагноз. Болезни почек и мочевыделительной системы у детей, 2020. 41-110 с. 8. https://app.geekymedics.com/osce-stations/renal-system-examination-1/ 9. https://geekymedics.com/urinalysis-osce-guide/	1. TBL 2. Working with a patient for at least 20% of the study time t 3. Participation in clinical rounds

		Demonstrates the ability and need for continuous professional training and improvement of their knowledge and skills of professional activity;		
2	Nephrotic syndrome (NS)	**Learning outcomes:** – Apply knowledge of pathogenesis to identify nephrotic syndrome;Проводить целенаправленный расспрос и физикальное обследование с учетом возрастных особенностей при обследовании пациента с нефротическим синдромом; – Determine edema according to the degree of gradation: 1+, 2+, 3+; – Assign an examination plan for patients with NS; – Interpret laboratory data (OAC, OAM, ACR, BAC - total protein, albumin, cholesterol, glucose, creatinine, urea, electrolytes, coagulogram, ELISA immunoblotting, ELISA for viral hepatitis, HIV, anti PLA2R); instrumental (ultrasound of the kidneys); – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate; – Interpret the results of a kidney biopsy: light microscopy, immunofluorescence, electron microscopy to clarify the morphological variant of NS; – Establish nephrotic syndrome and a list of the most likely diseases that may be accompanied by NS based on the results of clinical, laboratory and morphological data; – Integrate knowledge for the identification and differential diagnosis of primary and secondary NS (minimum change disease, focal segmental glomerulosclerosis, membranous nephropathy); – Able to determine indications and contraindications for nephrobiopsy; – Substantiate the preliminary diagnosis using medical terminology;	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс). 3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 81-102с. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. – 84-107. 5. Шилов Е.М. Нефрология: клинические рекомендации, 2023, с.78-144. 6. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 4, 26, 30-32. 7. KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases. Kidney International, 2021 Vol: 100, Issue: 4, Page: S1-S276 8. Nephrology secrets, fourth edition edited by Edgar V. Lerma, 2019, Part IV. 9. Harrison's Nephrology and Acid- Base Disorders, 3rd Edition, J. L. Jameson; J.Loscalzo. 2017, 162-189 p. 10. Handbook of renal biopsy pathology Alexandr J. Howie, Third edition, 2020, 297p.	1. TBL 2. Working with a patient for at least 20% of the study time 3. Work in the department of functional diagnostics 4. Training in the simulation center

		– Prescribe treatment for a patient with NS, taking into account the individual characteristics of the patient, pharmacodynamics and pharmacokinetics of drugs (diuretics, glucocorticosteroids, cystostatics, anticoagulants). – Demonstrates communication skills, skills of independent work, teamwork, organization and management of the diagnostic and treatment process; – Apply knowledge of the principles and methods of forming a healthy lifestyle for a person and family; Demonstrates basic research skills.	11. History and Clinical Examination at a Glance Third edition Jonathan Gleadle 178-179 стр 12. Graham Douglas , Fiona Nicol . Macleods Clinical Examination. 13th Edition – 2013 year 137-165 Step-up_to_ Medicine_ 4th_edition_2016, 79-88 pages 13. https://geekymedics.com/measuring-recording-urine-output/	
3	Nephritic syndrome (NiS)	**Learning outcomes:** – Apply knowledge of pathogenesis to identify nephritic syndrome; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with nephritic syndrome; – Determine edema according to the degree of gradation: 1+, 2+, 3+; – Assign an examination plan for patients with NIS; – Interpret laboratory data (OAC, OAM, ACR, BAC - total protein, albumin, cholesterol, glucose, creatinine, urea, electrolytes, coagulogram, ELISA immunoblotting, ELISA for viral hepatitis, HIV, anti PLA2R); instrumental (ultrasound of the kidneys); – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate; – Interpret the results of a kidney biopsy: light microscopy, immunofluorescence, electron microscopy to clarify the morphological variant of NS; – Integrate knowledge for the identification and differential diagnosis of primary and secondary NIS (post-streptococcal	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс). 3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 81-102с. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. – 97-113, 131-146. 5. Шилов Е.М. Нефрология: клинические рекомендации, 2023, с. 156-226. 6. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 4, 26, 30-32. 7. KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases. Kidney International, 2021 Vol: 100, Issue: 4, Page: S1-S276.	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

		glomerulonephritis, RPGN, MPGN, granulomatosis with polyangiitis, Sjögren's disease, etc.); – Conduct differential diagnosis of hematuria - glomerular and non-glomerular origin; – Substantiate the preliminary diagnosis using medical terminology; – Prescribe treatment for a patient with NIS, taking into account the individual characteristics of the patient, pharmacodynamics and pharmacokinetics of drugs (diuretics, glucocorticosteroids, cystostatics, anticoagulants, antibiotics, ACE inhibitors, CCBs, etc.); – Integrate knowledge and skills to ensure an individual approach in the treatment of a particular patient; – Demonstrates communication skills, skills of independent work, teamwork and information resources; – Possesses basic skills in maintaining current accounting and reporting medical documentation, including in information systems; Demonstrates adherence to professional values such as altruism, compassion, empathy, responsibility, honesty and confidentiality;	8. Nephrology secrets, fourth edition edited by Edgar V. Lerma, 2019, Part IV. 9. Harrison's Nephrology and Acid- Base Disorders, 3rd Edition, J. L. Jameson; J.Loscalzo. 2017, 162-189 p. 10. Handbook of renal biopsy pathology Alexandr J. Howie, Third edition, 2020, 297p. 11. History and Clinical Examination at a Glance Third edition Jonathan Gleadle 178-179 стр 10. Graham Douglas , Fiona Nicol . Macleods Clinical Examination. 13th Edition – 2013 year 137-165 Step-up_to_ Medicine_ 4th_edition_2016, 79-88 pages	
4	Kidney failure syndrome: acute kidney injury (AKI)	**Learning outcomes:** – Apply knowledge of pathogenesis for detection and differential diagnosis of renal failure; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with renal insufficiency; – Determine edema according to the degree of gradation: 1+, 2+, 3+; – Identify and differentiate options for acute kidney injury; – Identify and differentiate the symptoms of acute and chronic renal failure - clinical, laboratory and instrumental (ultrasound of the kidneys, ultrasound of the vessels of the kidneys, ECG);	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс). 3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 264-293 б. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. – 334-366.	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

		– Interpret the results of general clinical tests and acid-base balance (blood gases); – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate; – Able to identify indications and contraindications for nephrobiopsy in RPGN; – Substantiate the preliminary diagnosis using medical terminology; – Prescribe conservative therapy for patients with AKI, taking into account the individual characteristics of the patient, comorbidities, complications - hypotensive, renoprotective, antibacterial, corticosteroids, cytostatics, drugs for the correction of metabolic acidosis, electrolyte disorders, etc.; – Determines the indications and contraindications for renal replacement therapy (acute hemodialysis, acute peritoneal dialysis); – Prescribe treatment for emergency conditions, such as hyper- and hypokalemia, hyper- and hyponatremia, edematous syndrome, etc. – Assign therapeutic nutrition to patients with AKI - nutritional support; – Improves interpersonal communication and patient counseling skills; Primary delivery of a medical history with correction of errors, followed by delivery by the end of the discipline.	5. Шилов Е.М. Нефрология: клинические рекомендации, 2023, с. 561-617. 6. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 4, 26, 30-32. 7. Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 358-363 (Электронный ресурс). 8. Harrison's Nephrology and Acid- Base Disorders, 3rd Edition, J. L. Jameson; J.Loscalzo. 2017, page 43-58. 9.Harrisson's Manual of Medicine/ 20th Edition, p. 2433-2449.	
5	Kidney failure syndrome: chronic kidney disease (CKD)	**Learning outcomes:** – Apply knowledge of pathogenesis for detection and differential diagnosis of AKI and CKD; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with CKD;	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс).	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

		– Determine edema according to the degree of gradation: 1+, 2+, 3+; – Identify and differentiate the stages of CKD; – Identify and differentiate the symptoms of CKD using clinical, laboratory and instrumental studies (ultrasound of the kidneys, ultrasound of the vessels of the kidneys, MRI of the vessels of the kidneys); – Interpret the results of general clinical tests (OAC, OAM, ACR, biochemical blood test - total protein, albumin, creatinine, urea, serum iron, ferritin, transferrin, calcium, phosphorus, parathyroid hormone, potassium, sodium, vitamin D, viral hepatitis B and C , KShchS - blood gases) and instrumental (ultrasound of the kidneys, ultrasound of the vessels of the kidneys, MRI of the vessels of the kidneys, ECG, EchoCG); – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate; – Substantiate the preliminary diagnosis using medical terminology; – Identify complications of CKD depending on the stage: hypertension, anemia, mineral and bone disorders, metabolic acidosis; – Assign therapeutic nutrition to patients with CKD - nutritional support; – Prescribe conservative therapy for patients with CKD, taking into account the individual characteristics of the patient, concomitant diseases, complications - hypotensive, renoprotective, diuretics, EPO drugs, calcimimetics, drugs for the correction of metabolic acidosis, electrolyte disorders, etc.; – Determines the indications and contraindications for renal replacement therapy (chronic hemodialysis, chronic peritoneal dialysis);	3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 293-307 б. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. –367-425. 5. Шилов Е.М. Нефрология: клинические рекомендации, 2023, с. 633-770. 6. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 4, 27, 51-68. 7. Harrison’s Nephrology and Acid- Base Disorders, 3rd Edition, J. L. Jameson; J.Loscalzo. 2017, page 43-58. 8. Harrisson’s Manual of Medicine/ 20th Edition, p. 2332-2342, p. 2347-2405. 9. Davidson’s principles and practice of Medicine, 22nd edition, pgs 928, 943	

		Demonstrates communication skills, skills of independent work, teamwork, organization and management of the diagnostic and treatment process;		
6	Urinary tract infection. Urolithiasis disease.	**Learning outcomes:** – Apply knowledge of pathogenesis for detection and differential diagnosis of complicated and uncomplicated urinary tract infections; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with UTI; – Identify and differentiate the symptoms of complicated / uncomplicated when interviewing a patient (pyelonephritis, cystitis, urethritis); – Assign an examination plan to a patient with UTI, ICD; – Interpret and generalize the data of physical and laboratory-instrumental examination obtained during the examination of the patient - UAC, OAM, BAC, urine culture, ultrasound of the kidneys, bladder, CT-OBP, MRI-OBP; – Calculate the glomerular filtration rate; – Diagnose the ICD and provide emergency assistance in case of an attack; – Substantiate the preliminary diagnosis using medical terminology; – Build a treatment strategy for complicated and uncomplicated UTIs: antimicrobials, uroseptics, litholytics, antispasmodics; – Improve interpersonal communication and patient counseling skills; Demonstrates the ability and need for continuous professional training and improvement of their knowledge and skills of professional activity;	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс). 3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 213-233 б. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. –257-292. 5. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 36-38, 48, 72 6. Nephrology secrets, fourth edition edited by Edgar V. Lerma, 2019 Part I, VIII (Chapter 44). 7. Harrisson’s Manual of Medicine/ 20th Edition, Section 6, chapter 45, p. 276-281, p. 2342-2347, 2422-2433. 8. Bickley L. Bates' Guide to Physical Examination and History-Taking. Lippincott Williams & Wilkins; 2012	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

7	Male reproductive system	**Learning outcomes:** – Apply knowledge of pathogenesis to identify and differential diagnosis of diseases of the reproductive system: acute and chronic prostatitis, urinary incontinence (stress, imperative, nocturnal incontinence, situational urinary incontinence), urinary retention when interviewing a patient; – Carry out targeted questioning and physical examination taking into account age characteristics when examining a patient with a pathology of the male reproductive system; – Identify and conduct differential diagnosis and treatment of pain syndrome: pain in diseases of the urinary syndrome, prostate gland, diseases of the testicle and epididymis; – Be guided by the basic principles of diagnosis of urological causes of hematuria; – Interpret the results of the examination (CBC, biochemical, Coagulogram, PSA, ultrasound, kidneys, bladder, prostate, CT/MRI, small pelvis); – Substantiate the preliminary diagnosis using medical terminology; – Prescribe treatment for patients with pathology of the male reproductive system; Demonstrate adherence to professional values such as altruism, compassion, empathy, responsibility, honesty	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178. 2. Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 384-400 (Электронный ресурс) 4. Harrisson's Manual of Medicine/ 20th Edition, Section 6, chapter 44, p. 272-276, p. 281-285, p. 2405-2414. 5. Talley and O'connor's Clinical Examination 8th edition. Chapter 14, 274-276 стр. 6. Клинические рекомендации. Недержание мочи, 2020, 63 с. 7. Под редакцией Д.Ю. Пушкаря. Урология, 2-е издание, переработанное и дополненное, 31-51 с.	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center
8	Nephrological aspects in pregnant women	**Learning outcomes:** – Apply knowledge of pathogenesis to identify and differential diagnosis of physiological and pathophysiological changes during pregnancy when interviewing a patient; – Carry out a targeted questioning and physical examination, taking into account the timing of pregnancy and the pathology of the MVS;	1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 649-725 . 2. & David Currow. Essentials of Internal medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс).	1. TBL 2. Working with a patient for at least 20% of the study time 3. Training in the simulation center

		– Identify and differentiate the variants of complicated and uncomplicated UTI, glomerular diseases, renal failure; – Interpret and generalize the data of physical and laboratory-instrumental examination obtained during the examination of the patient - CBC, biochemical, urine culture for flora, ultrasound of the kidneys, substantiate the preliminary diagnosis using medical terminology; – Calculate the albumin-creatinine ratio; – Calculate the glomerular filtration rate – Prescribe treatment for pregnant women, taking into account individual characteristics, gestational age, pharmacodynamics and pharmacokinetics, and the effect on the fetus; – Determine indications for prolongation of pregnancy with kidney pathology; – Improve interpersonal communication and patient counseling skills; Resubmission of the medical history with correction of errors and assessment of the student's skills	3. Нефрология. Оқулық. /Қанатбаева А.Б, Қабулбаев К.А ред – М: Литтера, 2016. – 197-208 б. 4. Нефрология. Учебник/ Канатбаева А.Б., Кабулбаев К.А., 2021. –234-245. 5. Brenner and Rector's The Kidney, 2-Volume Set, 11th Edition, Alan Yu et al. 2020. Chapter 36-38, 48, 72 6. Nephrology secrets, fourth edition edited by Edgar V. Lerma, 2019 Part I, VIII (Chapter 44).	

RUBRICATOR FOR ASSESSING LEARNING OUTCOMES
with summative assessment

Rating calculation formula

For the 4th course as a whole- overall admission rating (OAR)

Curation, clinical skills	20%
SIW (case, video, simulation OR research thesis, report, article) – assessment of a creative task	10%
Border control	70%
Total for BC-1	100%
Medical history	20%
SIW (case, video, simulation OR research thesis, report, article) – assessment of a creative task	10%
Border control 2	70%
Total for BC -2	100%

Final score: OAR 60% + exam 40%

Exam (2 stages) – MSQ testing (40%) + OSKE (60%)

Team based learning – TBL

	%
Individual -- (IRAT)	**30**
Group -- (GRAT)	**20**
Appeal	**10**
Case rating -	**30**
Companion rating (bonus)	**10**
	100%

Point-rating assessment of practical skills at the bedside (maximum 100 points)

№	Criteria (evaluated according to the point system)	10	8	6	4	2
		Excellent	***Good***	***Satisfactory***	***Need correction***	***Bad***
	INTERVIEWING THE PATIENT					
1	Communication skills in interviewing a patient	Introduced himself to the patient. He asked how to address the patient. He spoke in a friendly tone, his voice was sonorous and clear. Polite wording of the questions. He showed empathy for the patient - the doctor's posture, approving of "fading". I asked open-ended questions.	Introduced himself to the patient. He asked how to address the patient. He spoke in a friendly tone, his voice was sonorous and clear. Polite wording of the questions. He showed empathy for the patient - the doctor's posture, approving of "fading". I asked open-ended questions.	Introduced himself to the patient. He asked how to address the patient. He spoke in a friendly tone, his voice was sonorous and clear. Polite wording of the questions. Few open-ended questions have been asked	He did not fully introduce himself to the patient, did not ask the patient's name, the student's speech was slurred, and his voice was not legible. Open-ended questions are not asked, the patient answers in monosyllables. The student did not pay attention to the convenience of the patient, did not show empathy.	Communication with the patient is negative. The basic requirements for communicating with the patient are not met, there is no manifestation of empathy for the patient.
	Collecting complaints	Identified the main and secondary complaints of the patient. Revealed important details of the disease (for example, is there nausea, vomiting, abdominal pain? What kind of character?). He asked questions about the differential diagnosis.	Identified the main and secondary complaints of the patient. Have you identified important details of the disease (for example, nausea, vomiting, abdominal pain? What kind of character?).	Identified the main complaints of the patient. Revealed important details of the disease.	The student cannot distinguish the main complaints from the secondary ones. Did not reveal important details of the disease. He asks chaotic questions.	He did NOT reveal any details of the disease. The collection of complaints is limited only by the subjective words of the patient himself.

	Collecting anamnesis of the disease	Revealed the chronology of the disease, important details of the disease (for example, when do abdominal pains appear?). I asked about the medications taken for this disease. He asked questions about the differential diagnosis.	Revealed the chronology of the disease, important details of the disease (for example, when do abdominal pains appear?). A student asked about the medications taken for this disease.	Revealed the chronology of the disease development. A student asked about the medications taken for this disease.	The student cannot build a chronology of the development of the disease. He asks chaotic questions.	The stage was skipped by the student. There is only information given by the patient himself.
	Anamnesis of life	The student revealed an allergic anamnesis, chronic diseases, operations, blood transfusions, medication taken on a regular basis, family history, social status of the patient, occupational hazards, and epidemiological history.	Revealed allergic anamnesis, chronic diseases, operations, medications taken regularly, family history, social status of the patient, occupational hazards, epidamnesis	Revealed an allergic anamnesis, chronic diseases, family history.	Revealed an allergic anamnesis, a family history.	The stage was skipped by the student. There is only information given by the patient himself.
2	The quality of the patient survey	The patient's survey was conducted sequentially in order, but depending on the situation and the patient's characteristics, the student changed the order of the survey. In the end, he sums up – summarizes all the	The patient is interviewed sequentially in order. In the end, he summarizes - sums up all the questions and receives feedback from the patient (for example, let's summarize - you got sick a week ago when nausea with repeated	The survey sequence is broken, but the quality of the information collected allows us to suggest a probable diagnosis. Does not use a problem sheet - does not know	The survey sequence is broken. The student repeats the same questions. The information collected is of poor quality and does not allow for a probable diagnosis.	The survey is not conducted consistently, the student asks random questions that are not related to the patient's case or does not ask questions at all.

		questions, and receives feedback from the patient (for example, let's summarize - you got sick a week ago when nausea with repeated vomiting first appeared, then diarrhea appeared, is that right?). High-quality detailed information has been collected, leading to a probable diagnosis. Uses a problem sheet – can identify major and minor problems.	vomiting first appeared, then diarrhea appeared, is that correct?). High-quality detailed information is collected, leading to a probable diagnosis. Uses a problem sheet - knows how to highlight the main and secondary problems.	how to identify major and minor problems.	Does not use a problem sheet – does not know how to identify major and minor problems.	Does not use a problem sheet - does not know how to identify major and minor problems.
3	Time management of patient interview. Control over the situation.	Minimal time in the group was spent on interviewing the patient. The student is self-confident, fully controls the situation, and manages it. The patient is satisfied.	The survey was conducted fairly quickly. The student is self-confident and in control of the situation. The patient is satisfied.	The time of questioning the patient is prolonged but does not cause discomfort to the patient. The student does not lose his composure. There is no negativity on the part of the patient.	Long survey, the student is wasting his time. The patient expresses discomfort with the drawn-out survey. The student is not confident and is at a loss when communicating with the patient.	The survey is completed without revealing any important information. The survey is taking too long, and the atmosphere of communication is negative. Conflict with the patient is possible.
PHYSICAL EXAMINATION OF THE PATIENT						
		10	**8**	**6**	**4**	**2**
		Excellent	***Good***	***Satisfactory***	***Need correction***	***Bad***
4	Communication skills during physical	Asked the patient (or relatives, parents, or guardians) for consent to	Asked the patient (or relatives, parents, or guardians) for consent to	Asked the patient (or relatives, parents, or guardians) for consent	Asked the patient (or relatives, parents, or guardians) for consent	Contact with the patient's body

	examination of a patient	conduct a physical examination. Explained to the patient what and how he will check (for example, I will listen to your lungs with a stethoscope, check your abdomen with my hand)	conduct a physical examination. Explained to the patient what and how he will check (for example, I will listen to your lungs with a stethoscope, check your abdomen with my hand)	to conduct a physical examination. Explained to the patient what and how he will check (for example, I will listen to your lungs with a stethoscope, check your abdomen with my hand)	to conduct a physical examination.	without prior consent.
5	Assessment of the patient's level of consciousness using the Glasgow scale.	Calculated the points on the scale correctly. Correctly uses medical terminology to indicate the level of consciousness.	Calculate the points on the scale correctly. Correctly uses medical terminology to indicate the level of consciousness.	The error in the assessment on the scale is no more than 2 points. Knows the terminology for indicating the level of consciousness.	The error in the assessment on the scale is more than 3 points. Confused in medical terminology.	Does not know the Glasgow scale criteria. Does not know how to use it. Does not know how to differentiate the level of consciousness.
	Assessment of the patient's vital signs - heart rate, respiratory rate, blood pressure, body temperature, body mass index.	Measured vital signs technically correctly. Correctly uses medical terminology when assessing vital signs (e.g., tachypnea, tachycardia, hypoxia, etc.)	Measured vital signs technically correctly. Correctly uses medical terminology when assessing vital signs (e.g., tachypnea, tachycardia, hypoxia, etc.)	Minor errors in the technique of measuring vital signs. The results of the measurements are not distorted. The student can correct the errors in the use of medical terminology himself.	Gross errors in the technique of measuring vital signs, distortion of results. Cannot independently correct errors in medical terminology.	Does not have the technique for measuring vital signs. Does not know the standard data for assessing blood pressure, pulse, respiratory rate, saturation, and body temperature.
6	Technique for conducting a physical	Conducted a physical examination of the patient by systems, in the established order, the	The physical examination of the patient was carried out systematically in order, the technique of palpation,	The physical examination of the patient was conducted in violation of the	Physical examination was not performed systematically, the patient stood up, lay	Gross violations during physical examination - does not know the

	examination of a patient.	technique of palpation, auscultation, and percussion is correct. Explain to the patient what changes were detected and what the norm should be. All important physical data (both pathological and normal) for making a probable diagnosis were identified. The student knows how to change the order of examination depending on the symptoms identified. Details the symptoms identified (for example, have you noticed swelling in your legs? How long have you noticed this? Does the swelling increase in the evening or in the morning?) At the end, summarizes - the correspondence of the changes identified during the physical examination	auscultation and percussion is correct. Explain to the patient what changes were detected and what the norm should be. All important physical data (both pathological and normal) were identified to establish a probable diagnosis. Details the symptoms identified (for example, have you noticed swelling in your legs? How long have you noticed this? Does the swelling increase in the evening or the morning?)	systemic order, but without causing inconvenience to the patient. The technique of palpation, auscultation, and percussion is satisfactory but requires minor corrections from the teacher. The main violations were identified, sufficient for making a probable diagnosis.	down, changed position several times, and experienced discomfort. Only individual systems were covered, The technique of performing palpation, percussion, auscultation - required significant correction by the teacher. Confused in determining normal and pathological changes. The main disorders were NOT identified. Insufficient data to make a probable diagnosis.	procedure and technique for conducting a physical examination of a patient. Does not know the norm and pathology of physical data. Cannot identify any violations.

		to the complaints and anamnesis of the patient.				
7	Making a preliminary syndromic diagnosis Laboratory and visual examination plan (BT, UT, biochemical test, pathological fluids, visualization methods)	The most complete justification and formulation of a preliminary diagnosis with the justification of complaints and physical examination data, conducted differential diagnostics for the main syndromes based on complaints data, disease development and detected physical abnormalities. Understand the problem as a whole, link it to the patient's characteristics. Correctly prescribed laboratory and instrumental examination, taking into account the differential diagnosis (that is, named what he prescribes, for what, and expected changes). Explained to the patient important points in preparation for the examination (for example, if the glucose	The most complete justification and formulation of the preliminary diagnosis with the justification of the complaints and physical examination data Correct and justified in terms of the underlying pathology. Conducted differential diagnostics for the main syndromes. Correctly named the necessary laboratory and instrumental examination for diagnosis, named the expected changes. Explained to the patient important points in preparation for the examination.	Justification of the preliminary diagnosis based on complaints and physical examination in terms of the underlying pathology. Determined the main examination for diagnosis.	A template or intuitive formulation of a preliminary diagnosis cannot justify (i.e., link complaints, chronology of symptom development, and physical data). The prescribed examination does not allow to confirm the diagnosis.	Formulation of diagnosis at random does not understand and does not see the connection between the complaints and the patient's medical history. The prescribed examination does not allow to confirm the diagnosis. The prescribed examination can harm the patient's health.

		test is on an empty stomach, then do not drink, do not eat, do not brush your teeth, etc.)				
8	Interpretation of laboratory and instrumental examination results (BT, UT, biochemical test, biopsy, visualization methods FGDS, X-ray, CT, MRI, Elastometry, PET, ultrasound, etc.)	Accurate and complete interpretation using medical terminology, understands the relationship/or discrepancy of the detected deviations with the preliminary diagnosis	Accurate and complete interpretation using medical terminology	Identifying major deviations in tests, correct use of medical terminology	Incomplete or not entirely correct interpretation, lack of knowledge of normative data, errors in the use of medical terminology	Does not use medical terminology, does not know regulatory data
9	Formulation of the final syndromic diagnosis, with justification based on the examination results	The student formulates the underlying disease. When formulating the underlying disease, use the clinical classification of the disease. Assesses the severity of the disease. Names the complications of the underlying disease. The student substantiates his/her opinion on objective data (anamnesis, examination results).	The student formulates the underlying disease. When formulating the underlying disease, use the clinical classification of the disease. Assesses the severity of the disease. Names the complications of the underlying disease. The student substantiates his/her opinion on objective data (anamnesis, examination results). For example: Community-acquired lobar pneumonia, is typical.	The student formulates the main disease. The clinical classification is not complete. The student substantiates his opinion on objective data (anamnesis, examination results). For example: Community-acquired pneumonia, is typical.	The student can formulate only the main disease. Cannot fully explain the rationale for the diagnosis. For example: pneumonia (or such answers as lung tissue compaction syndrome, obstructive syndrome, acute respiratory failure syndrome, etc. are perceived as equivalent).	The student cannot formulate a diagnosis. Or cannot explain the rationale for the diagnosis (name the diagnosis at random following the topic of the lesson)

		For example: Community-acquired lobar pneumonia, is typical. Moderate course. (or severe course, complication - pleural empyema	Moderate course. (or severe course, complication - pleural empyema)			
10	Treatment principles	Knows the groups of main, i.e. the main drugs for the treatment of a given disease, their mechanism of action, and the classification of these drugs. Makes a reasonable choice of drugs: taking into account the indications and contraindications for a given patient. Informs the patient about the most important side effects of the prescribed drugs. Informs the patient about the features of taking the drug (for example, after meals, with plenty of water, etc.) Determined the criteria for the effectiveness of treatment, and the expected time frame for	Knows the groups of main, i.e. the main drugs for the treatment of a given disease, their mechanism of action, and the classification of these drugs. Determines the indications and contraindications for a given patient. Informs the patient about the most important side effects of the prescribed drugs. Informs the patient about the features of taking the drug (for example, after meals, with plenty of water, etc.) Determined the criteria for the effectiveness of treatment.	Knows only the basic principles of treatment. Names only a group of basic drugs for the treatment of a given disease (for example, broad-spectrum antibiotics). Knows the mechanism of action of basic drugs.	Knows only the basic principles of treatment. Can only name the class of drugs (for example, antibiotics or bronchodilators). Does not know the classification of drugs. Explains the mechanism of action in general terms at the layman's level (for example, antibiotics kill bacteria, etc.)	

		improvement of the patient's condition. Named the terms and methods of monitoring treatment, subjective and objective data, laboratory and visualized data on monitoring treatment.				
	ИТОГО	100	80	60	40	20

Point-rating assessment (check-list) of medical history management (maximum 100 points)

№	Criteria (evaluated according to the point system)	10	8	6	4	2
		Excellent	***Good***	***Satisfactory***	***Need correction***	***Bad***
1	Patient complaints: primary and secondary	Complete and systematic, with an understanding of important details	Accurate and complete	Basic information	Incomplete or inaccurate, some details are missing	Misses the important thing
2	Collection of anamnesis of the disease					
3	Anamnesis of life					
4	Objective status - general examination	Complete, efficient, organized, with an understanding of important details	Consistently and correctly	Identifying key data	Incomplete or not quite correct, not attentive to the patient's comfort	Inconsistent data
5	Respiratory system	Complete, effective, technically correct	Complete, effective, technically correct	Basic data identified	Incomplete or inaccurate	Missing Important Data
6	Cardiovascular system					

7	Digestive system	application of all skills of inspection, palpation, percussion and auscultation	application of all examination skills, physical examination with minor errors, or corrected during performance	Physical examination skills learned	Physical examination skills require improvement	Inappropriate Physical Examination Skills
8	Urogenital system	Complete, effective, technically correct application of all special examination skills				
9	Musculoskeletal system	Complete, effective, technically correct application of all special examination skills				
10	Presentation of medical history	The most complete description and presentation Understood the problem as a whole, connects it with the patient's characteristics	precise, focused; choice of facts shows understanding	The entry form includes all the basic information;	Many important omissions, often includes false or unimportant facts	Lack of control over the situation, many important omissions, many clarifying questions

Point-rating assessment (check-list) of the ISW (independent student's work) - creative task (maximum 90 points) + bonuses for English and time management

		10	8	4	2
1	**Problem solving**	The organized concentrated, allocates all questions which are falling into to the main revealed problem with a comprehension of a concrete clinical situation	Organized, the concentrated, allocates all questions which are falling into to the main revealed problem, but there is no comprehension of a concrete clinical situation	Not the concentrated, Derivation on the questions which are not falling into to the main revealed problem	Inaccurate, misses the main thing, disharmonious data.

2	**Information**	All necessary information on a subject in the free, serial, logical manner is completely conveyed The product form is adequately chosen	All necessary information in a logical manner, but with shallow inaccuracies is conveyed	All necessary information on a subject is explained chaotically, with not gross errors	Important information on a subject, gross errors is not reflected
3	**Significance**	Material is chosen on the basis of authentically established facts. Manifestation of a comprehension on the level or quality of proofs	Some conclusions and the conclusions are formulated on the basis of assumptions or the incorrect facts. There is no complete comprehension of level or quality of proofs	Not the sufficient comprehension of a problem, some conclusions and the conclusions are based on the inexact and not proved data – doubtful resources are used	Conclusions and the conclusions are not proved or irregular
4	**Logic**	logical and well reasoning, has internal unity, provisions in a product follow one of another and are logically interdependent between themselves	Has internal unity, provisions of a product one of another follows, but there are inaccuracies	There is no sequence and logicality in statement, but it is possible to keep track of the main idea	Jumps from one on another, it is difficult to catch the main idea
5	**Recourses**	Literary data are submitted in logical interrelation, show deep study of the main and padding informational resources	Literary data show study of the main literature	Only ordinary recourses	Inconsistency and randomness in statement of data, an inconsistency There is no knowledge of the main textbook Using of Google
6	**Practical application**	High	Good	moderate	no
7	**Patient focusing**	High	Good	moderate	no
8	**Applicability in future practice**	High	Good	moderate	no
9	**Presenation**	Correctly, to the place all opportunities of Power Point or other e-softs, the free	It is overloaded or are insufficiently used visual	Visual materials are not informative	Does not own material, is not able to explain it

		possession of material, a sure manner of statement are used	materials, inexact possession of material		
bonus	**Time management***	10 For before deadline	In time	Good quality but a little late Minus 2-4	After deadline more than 24 hours Minus 10
bonus	**Rating****	10 points additional	Outstanding work, for example: The best work in group Creative approach Innovative approach to realization of a task According to the proposal of group		
	* The deadline is determined by the teacher, as a rule - the day of the boundary control ** thus, you can get 90 points as much as possible, to get above 90-you need to show a result higher than expected				